Real Strength Real Muscle-
Ebook version v1.0 10/05/2020

A disclaimer by the compiler

John Christy died young, unexpectedly and left behind a wealth of knowledge in books and training articles. Unfortunately, over the years most of his work was lost. Floating around the internet were some compilations of his work from the excellent “Hard-gainer” magazine, but his book 'Real strength real muscle' became very rare and impossible to find.

With Coach Christy's death, the book went out of print and was lost on the bookshelves forever. Thankfully with the help of somebody who owned the book, the books owner was able to photograph the articles that did not make it into the hard-gainer compilations found online, so I could finally read the rest of Coach Christy's work.

Some of the photographs were easily transcribed using OCR software, other articles did not and were hand typed up over a period of several years in my spare time and first posted on David Gentle's website : https://davidgentle.com/forum/viewtopic.php?f=17&t=1138

With over 20,000 views as of today and many many reposts on other forums, the calls to compile this into an e-book were constant.

So, here it is. **Bear in mind many pages were typed up by hand and any spelling mistakes or slight differences will be present but 99% of the message will be there.**

Also I am aware John Christy changed some of his articles from the Hardgainer magazine originals. The articles were edited before publication in hardgainer, so minor differences will be present between the published book and this ebook. Hardgainer articles are clearly marked at the top of the pages.

It was a labour of love over a few years whilst having a busy family.

Enjoy what was once lost and now is found.

THIS EBOOK IS FREE OF CHARGE UNDER FAIR USE

Please make sure if you have any other “rare” Physical culture writings that need to be preserved to get in touch with websites such as https://davidgentle.com/forum where willing participants will gladly preserve such information.

(Please note David Gentle did not approve or have any part of this compilation)

All credit to John Christy, so I will remain anonymous.

RIP John Christy

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Designing Your Own Training Program

From Hardgainer #52 - January/February 1998

If you have been a reader of HARDGAINER for a while, *and have studied the material*, you should have no problem designing your own training program. I average five calls per week from readers wanting me to take them on as consultation trainees. Some of these people can benefit from my personal instruction, but many don't need it. If you want my instruction – or any other author's – instruction just study the magazine.

In this article I am going to cover all the considerations of designing an effective training program. Keep in mind that these recommendations are based on 23 years of lifting experience, and 11 years of professional strength coaching. There are, however, very good coaches who may have different but effective approaches.

KEEP THINGS SIMPLE

An effective training program doesn't have to be, and shouldn't be complicated. So don't try to find or develop some super-secret program that is more effective than anything ever used before. As a matter of fact, let me let you in on the biggest secret in all of weight training – *there are no secret programs*.

THE TWO MOST IMPORTANT FACTORS

The most important design considerations of any program are that it can be performed consistently and progressively. If you don't train *consistently*, your body won't get the stimulation it needs to get stronger and hence bigger. If you don't train *progressively*, your body won't get the stimulation it needs to get stronger and bigger. So, for any program to be effective, it has to allow you to train as consistently as possible, and add weight to the bar on a planned basis.

The *frequency, volume* and *intensity* of a training program are determined based on maintaining consistency and progression. You need to be able to recover from workouts so that you don't overtrain and end up getting hurt, or sick. If either of these occur, you will miss workouts.

If your workouts are too frequent, your joints will take a beating and you'll likely end up with some form of long-term joint inflammation, and you'll miss workouts. If your workouts are too frequent, your immune system won't be able to recover and you'll end up getting sick all the time and, once again, you'll miss workouts. And if you are not training consistently, you can't add weight to the bar, so then you're not being progressive.

I hope you're getting the point. *You can't afford to miss workouts, period!*

FREQUENCY

The frequency of workouts has to be based on several factors, the most important being the ability to recover between workouts. Your ability to recover between workouts is influenced by a number of factors, including the type of job you have (or don't have if you're young enough, or rich enough), family responsibilities, how much rest you get every night, how well you eat, and if you're involved in any strenuous sports.

For someone who has a job and family, I have found that two workouts per week works great. Although I've had others who handle three per week and make progress, these workouts have to be specially limited in the number of exercises.

For the trainee who is in high school or college, three workouts per week works well, although two may still be more effective over the long haul. The two weight-training workouts per week also allow for 2-3 bouts of aerobic work and/or sports activities each week.

It still amazes me that HARDGAINER readers can't believe that I (at 5-10 (178 cm) and my current weight of 235 lbs (106 kg)) only train two times per week. This allows me to do aerobics two times per week as well as wind sprints and baseball skill work (I still play semi-professional baseball during the summer). I also should mention that I don't believe in training someone to become just big and strong. I believe people should become big and strong *athletes*. What I mean by this is that they should be able to run and jump and move in different direction. In essence I believe that your strength and size should be functional.

Weight training two times per week will allow you the physical time, as well as the recovery time, to do aerobic work. It also gives you the flexibility to move a workout if you have to miss for family or work, or if you simply haven't recovered from the previous workout. For instance, if you usually work out on Tuesday and Friday, and you can't make Friday's workout, you can easily move it to Saturday and stay on track. This way you get Sunday and Monday to rest, and can still be recovered by Tuesday's workout.

The goal of training is not to see how much torture the body can withstand, but to stimulate the body and then let it recover. So why tolerate training three times per week and make gains, just because you think more is better? If you can train two times per week and continually get as strong (or stronger) as you would training three times per week, with less chance of injury, and hence maintaining consistency over the long haul, what benefit does three-times-per-week weight training

offer?

VOLUME

How much training should you do? Well, this is based on the number of exercises you do, the number of sets, and the rest interval between sets.

You should be keeping a good pace throughout the workout, and even though you are resting 4-5 minutes between live (work) sets, you should be able to complete a workout in about one hour, *or inside 90 minutes without question*. This time does not include initial warmup time or stretching. The clock starts at the beginning of your first exercise and stops at the conclusion of your last live set. When I say a good pace, I mean that you're not sitting around shooting the breeze between exercises. But you need to take the proper rest interval between sets.

When a trainee is at the point where he or she is training hard, I don't feel any more than 2 live sets of any exercise is necessary to stimulate growth.

As far as the number and type of exercises is concerned, I feel that a compound leg movement (squat, deadlift, leg press), a compound upper-body pressing movement (bench press, overhead press, dip), a pulling movement (row, pulldown, high pull), a crunch (for the abs), and some grip work should cover it. You also need to include calf work and some direct biceps work, once a week. That does it. *Designing a program is not hard, but maintaining the effort and consistency is!* I think what happens is that many of you are under the illusion that you will find a better way. Well let me tell you – there isn't one!

INTENSITY

How hard should you train? This subject has been battered around for eons. So, I'm going to give you my opinion. I've had tremendous success with putting this opinion into practice. My definition of training hard is training to the point where there is *possibly* one more rep left in you. In other words, I feel you should train right up to the edge of momentary muscular failure, but not over the edge. *The goal of weight training is to lift progressively more weight each training session, not to go to failure.* After 23 years of training (reaching a maximum weight of 252 lbs (114 kg) at 5-10 (178 cm)) combined with 11 years of training over 600 people, *I know for an absolute fact* that you can get progressively stronger and hence bigger without going to complete failure. *But, you have to get to the point where the last rep in a set threatens to make you fail.*

Another way to say this is that you need to challenge yourself to make your prescribed reps and *beat failure*. And then the real challenge is to train at this level for many months by adding a small dose of iron to the bar every workout.

STARTING WEIGHTS AND RATE OF PROGRESSION

At the start of a program you should use a weight that allows you to complete 5 reps more than the goal of the set. For instance, if you want to perform 2 live sets of an exercise at 5 reps each, you want to start with a weight that allows you to do 10 reps if you went to failure, but stop at just 5 reps. Then over the next 6-8 weeks you need to build up the weight slowly until you could complete about 6 or 7 reps *if* you went to failure, but stop at 5. At this point you should slow the rate of progression to what I feel is the maximum that the body can compensate for on all of your exercises. These are 2.5 lbs (1 kg) on squats, deadlifts and leg presses, and 1 lb (0,5 kg) on benches, dips, presses, chins, rows, pulldowns, curls and crunches. The curls will eventually have to go down to half a pound (0,25 kg) per workout. By the sixteenth week you should be at the point where there is only one more rep left in you after you have made your fifth rep.

There are instances that I have seen where someone who is eating and recovering to their utmost ability will be at the sixteenth week and *still* have 2 or 3 reps left in them beyond their goal number. This is fantastic and shows that their body is recovering from this rate of progression. At this time I would suggest a bigger load increase over the next several workouts so that they are training with just one rep left in them beyond their goal number for the set. Then I would have them go back to adding the small doses of iron to the bar.

You don't have to use 5 reps as your goal number for a set. Use any rep count that you think will bring results for you, or that you enjoy. Just start out with reserve reps left in you and slowly build to the point that you are training with just one rep left in you. Then, settle in for a long and very productive training period.

But don't start looking for other ways to train, *look for ways to recover between workouts*, so that you can stay consistent. *Look for ways to concentrate during your workouts* so that you can train harder and with better form.

You would be surprised at the number of trainees that surpass all their previous training records simply by following what I have outlined in this paragraph.

THE TEMPLATE

What follows is a twice-a-week weight training template. I know for a fact that I can get anyone strong and big with this program. So, if you have the guts to follow the rules that I have outlined in this article,

and do not get distracted by the garbage information that is out there, you can get yourself very big and strong with this program.
Only live sets are listed. Do 2 or 3 progressive warmup sets prior to each of the big exercises, and just one for each of the smaller exercises. For multiple warmup sets for an exercise, take 2-3 minutes rest between them. But always take the full 4-5 minutes rest prior to the first live set.

Day one

1. Crunch: 1 x 15
2. Squat: 2 x 6
3. Stiff-legged deadlift: 1 x 10
4. Bench press: 2 x 6
5. Pulldown: 2 x 6
6. Static grip: 1 x 60 seconds

Day two

1. Side bend: 1 x 15
2. Deadlift: 2 x 6
3. Military press: 2 x 6
4. Curl: 2 x 6
5. Calf raise: 1 x 10

I've never had a trainee experience any problem recovering from stiff-legged deadlifts on day one, and (bent-legged) deadlifts on day two, along with squats on day one. But the critical proviso is that the total number of sets per exercise must be limited. For instance, on day one, two live sets of squats are performed and only one live set of stiff-legged deadlifts. On day two, only one or two live sets of deadlifts are performed. Keep the total volume of work for the lower back very limited, to avoid overtraining that area.

EXERCISE TECHNIQUE

You must perform all of your exercise with good technique. To do this subject justice I would have to write a whole book. There is not enough space in an article to do a good job. I strongly suggest you buy Stuart McRobert's book on technique, and study it. It contains all you need to know on the subject.

FINAL THOUGHTS

Being consistent and putting out the effort necessary for many workouts over a long period of time is a hard part of weight-training success. Getting the proper amount of rest and food consistently is a hard part. Staying focused on every set you do so that you can concentrate on combining all the effort that you can muster while maintaining perfect form is a hard part. Being patient, because you know that getting strong and big take time, is a hard part. Having blind faith in what I am saying (until it proves itself to you) so that you are not constantly jumping from one program to another, is a hard part. But designing a training program is the easy part.
You can do this yourself. You don't need any help. All you need is knowledge. The magazine that you hold in your hands will provide that. Now get to work – not on designing your program but on putting out the effort to stay consistent and train progressively.
"The strongest of all warriors are these two: Time and Patience."

– Leo Tolstoy

Complete Training, Part 1

From Hardgainer #63 – November/December 1999

Any of you who have read my material for a while know that I feel weight training in and of itself is not enough to make a "complete" training program. Everyone should do aerobic work regardless of training goals. But there's additional training you can do to make your body more responsive to your weight training, as well as more resistant to injury. Now don't start questioning, "If I do more training won't I overtrain?" The answer is a resounding "No!" If you follow what I'm going to lay out for you, not only will you not overtrain, but it will actually help with your recovery from your weight workouts. Overtraining is something all trainees must consider, but you should not get so concerned about it that you hit the weights then run home to eat and lay motionless on the couch. You should not get to the point that you feel any activity beyond your weight training will cause you to overtrain.

I've talked to trainees who actually quit participating in sports they enjoy because they didn't want to "sacrifice" their workouts. They were afraid that an outside activity would cause them to overtrain. In particular, one trainee I worked with stopped playing in a recreational basketball league on Saturdays because he was "so tired" he couldn't finish a game. This trainee blamed it on overtraining. He felt that his two-times-per-week workouts were draining all his energy, resulting in the exhaustion he felt while playing. This was far from the truth. What happened was that he was simply out of shape! It had nothing to do with overtraining! I started this trainee on a aerobic program to be done two times per week, and told him to start playing basketball. He was to stop when he started to feel too tired to continue. After about six weeks of aerobic work and playing on Saturday, he could complete an entire game with no problem. And what about his workouts? They improved! He said he recovered faster between sets, and felt more flexible and limber. Now get this: He also said that the workouts didn't make him as fatigued as they used to. Overtraining – no. Out of shape – yes!

This leads me to another point. HARDGAINER magazine has done the world of weight training a great service in making the training public aware of the harm of training to the point where the body can't recover, i.e., overtraining. It has published many great articles on how to set up programs to avoid overtraining. But I feel some readers have taken the concept of overtraining too far. I've read about trainees that lift only two times per month because they are so wiped out after training. To me this is ridiculous. The reason they're so wiped out is because they're so out of shape, and I don't mean only aerobic shape; I mean "lifting shape." They lift so infrequently that their bodies don't develop the necessary biochemicals to handle, and recover from, a workout. This is why they feel so drained after a workout.

Even if you're on a properly constructed program, when you're training hard you'll be tired after a workout and possibly sore the next day or two – period! This doesn't mean that you need to wait 10-15 days to train again, or that you should remain motionless on the couch till your next workout. If you're eating and getting adequate rest, and have built up your weights at a rate your body can handle, you'll be ready to go in 72 hours without question!

The Karvonen Formula

220 - age = Maximum Predicted Heart Rate
Maximum Predicted Heart Rate - Resting Heart Rate = Heart Rate Reserve
(Heart Rate Reserve x 0.50) + Resting Heart Rate = your 50% training heart rate in beats/minute
The 0.50 computation produces the bottom end of the training zone, i.e., your 50% training heart rate. Now, you need to do this again except multiply by 0.65 (instead of 0.50) to
determine your 65% training heart rate. After doing this you'll now have your 50-65% training zone based not only on your age but also your conditioning level.
As an example, suppose you're age 40 with a resting heart rate of 76...
220 - 40 = 180
180 - 76 = Heart Rate Reserve of 104
(104 x 0.50) + 76 = 128 (This is the 50% bottom end of the training zone.)
(104 x 0.65) + 76 = 144
The 65% level of the training zone is therefore 144 beats per minute.
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I'm going to outline some outside-the-weight-room activities that will get you in shape, make you more mobile, more athletic (thus allowing you to participate in sports), prevent injuries, and help you to recover between workouts. There's much to say, so I'm going to spread the information over more than one issue.

ACITIVITY #1: Aerobic conditioning

You've heard me say this before: Everyone, I mean *everyone*, should perform aerobic work. The minimum I recommend is twice a week for 20 minutes each time. Now this is the absolute minimum. I would strongly urge someone to try to *slowly* (there's that word again) build up to 45 minutes twice a week. This will not cause you to overtrain.

Now what about timing of weight-training sessions and aerobic sessions? If you weight train on Tuesdays and Fridays, for example, good days to do aerobics would be Thursday and Sunday. Two days after the weight-training sessions, for aerobic work, has worked great for the trainees I've worked with. (Actually, another less demanding aerobic training day can be performed on Monday – reduce the training time by 30%, for the "extra" day, relative to the two other aerobic days each week.)
Aerobic training can be performed on weight-training days *if enough time between the two types of exercise is allowed* -- e.g., if you do aerobics at 8 am, you can hit the weights at 6 pm. Putting both types of training on the same day wouldn't be my first recommendation though. But it can be done if someone is in good cardiorespiratory condition and is eating correctly.
If you haven't been doing any aerobic work, then start with just 10 minutes at 50-65% of your age/conditioning level – Your adjusted maximum heart rate. Let me explain the calculations here. You need to use what's known as the Karvonen Formula – see the box above. (Don't get concerned, it's a simple formula that's easily applied.)
First, find your resting heart rate. Do this by either taking your heart rate the moment you wake in the morning while still lying in bed, or take it after lying down for at least five minutes. Now you're ready. Plug your resting heart rate number, and age, into the formula.
Working with all the trainees I have over the past 14 years, I know almost anyone can handle starting this way. Every workout, add just one minute to your aerobic training time. You're probably thinking that you could add more than one minute easily – and you know I think you could too – but don't! Remember that you 're trying to incorporate a *new* stressor into your program and you want to do this so that it helps your training instead of hampering it. So, *be disciplined!* Just add the one minute per workout!
In five weeks (ten aerobic workouts) you'll be up to 20 minutes, you'll feel great, and you'll start to notice a difference in your workouts. I promise you that if you go any faster than I recommend, you may compromise your weight-training workouts.
The changes you'll notice in your workouts are that it'll be much easier to warm up, you'll feel more limber, and you won't feel as tired between workout days. Mentally you won't feel as stagnant, because instead of your body (and your brain) experiencing an increase in circulation only twice in one week, it gets it four times with the inclusion of the twice-a-week aerobic work. If you keep the intensity of the aerobic work at the 50--65% range, there's no way it will hamper your recovery ability, because at this level it doesn't stress your body systemically like lifting does. In other words, your nervous system and endocrine system don't take a hit. This is especially the case if you build it up slowly, as I recommend.
Later on, you can take your aerobic conditioning further, if you desire, without it taking anything away from your weight workouts. In fact, this increased conditioning will help your weight workouts! All it requires is patience and discipline. Once you've maintained the low-level (50-65%) aerobics at 45 minutes, twice a week, for at least two months, then you can slowly increase intensity to the mid-level range (70-80%). Why would you want to do this?
Low-level aerobics derive almost all of their required energy from your body's fat stores (which is perfect for losing fat, or minimizing fat gain) and also give your cardiorespiratory system a mild workout (which is perfect for someone who has done no aerobic work). If you want to get in great cardiorespiratory "shape" – and benefit your weight training even more – you should slowly transition to mid-level aerobics. Here's how you do it: During *one* of your low-level sessions, perform the first five minutes at the 70-80% range. Then add 1-2 minutes (don 't add more than two!) to that session every week. It will take you anywhere from 20-40 weeks to attain this goal. This is a perfect rate that your body can adapt to, and, once again, will only help your weight training.
Keep one of the aerobic sessions at the low-level while you build the other to the 45 minutes at the mid-level range. Once that's accomplished, you can build the remaining session up to the mid-level range, but you must consume a large number of calories to accomplish this *without* taking anything away from the weights. Mid-level aerobic work taxes the glycogen stores and this may compromise the weight-training sessions *if* the period of adaptation to two mid-level sessions each week isn't long enough and progressive enough. The low-level aerobics don't tax the glycogen stores nearly as much.

If you want to build up to 45 minutes of mid-level aerobics, and have done no aerobic conditioning at all, or not for along time, you need to plan on the process taking about one year. If you currently have already been performing aerobic work, then of course it will take much less time. As far as what type of aerobic exercise to do, it really doesn't matter as long as it's safe for your joints, and you follow the heart rate and time guidelines stated above.

ACTIVITY #2: Sports participation/ physical recreation

If you enjoy participating in a sport, you don't have to give it up because you're afraid it might interfere with your weight-training goals. Let me offer an example. A couple of years ago I was training a 37-year-old former professional baseball player, to build maximum mass for bodybuilding, but he still wanted to participate in a summer semi-pro baseball league. His team played 45 games in 75 days.

Not only did he enjoy a productive season (15 home runs and a 0.380+ batting average) against much younger competition – average age of 26 – but when we tested his strength at the end of the season, his maximum bench went from 315 pounds to 335, and he was just as muscular as when the season started. This is only one example. I could give you many. If you want to participate in a sport, by all means do so. Also, don't stay away from a physical activity you enjoy doing because you think it'll take away from your workouts. If your buddies want to take a two-hour hike and you would like to go along – go! Just pack enough food to keep up your energy stores. If something like this wipes you out for your workout the next day, take an extra day's rest – and work on getting in better shape so this doesn't happen again!

My point is that, with a few adjustments, you don't have to give up everything to reach your weighttraining goals. *The key is to regulate weight-training volume. This is accomplished by performing a minimum number of basic compound exercises.* A good "in-season" routine is as follows:

Workout A

1. Crunch: 1 x 5
2. Squat: 1 x 5
3. Row or pulldown: 1 x 5

Workout B

1. Side bend: 1 x 5
2. Deadlift (sumo, conventional or stiff-legged): 1 x 5
3. Bench press or dip: 1 x 5
4. Calf raise: 1 x 5

All you need is one "live" set to keep the gains coming. Of course, perform adequate warm up sets. If you want some variety, alternate between doing five-rep sets one week and ten-rep sets the next. You may have to fluctuate your workout days depending on what days your competition/activity falls. This is okay; just try to get in the two workouts in no more than a ten-day period. If, for example, your competition falls on the same day every week, you've the opportunity to weight train on the same days every week.

The wrap up

I want to impress upon you that your body is capable of adapting to a variety of stimuli and, if executed slowly enough, a surprising amount of volume. Don't misinterpret what I'm saying and think you can start a twice-a-day, six-days-a-week weight-training routine. That would certainly overtrain you. Overtraining your body can happen. But if you train correctly, give your body time to adapt to a new stimulus, and get in good cardiorespiratory condition, you 'll be able to enjoy many activities or sports and still make good progress in the weight room.

Next issue I'll address flexibility training and medicine ball/plyometric training. I know I just mentioned the dreaded "P" word. Don't worry, the program I'll outline is tried and true. It will not injure you. It will add to your conditioning level and improve your performance in the weight room.

Complete Training, Part 2

From Hardgainer #64 – March/April 2000

In issue #63 I had the first installment of this two-part series. In it I noted, "I'm going to outline some outside-the-weight-room activities that will get you in shape, make you more mobile, more athletic (thus allowing you to participate in sports), prevent injuries, and help you to recover between workouts." In that article, along with an introduction, I covered aerobic conditioning and sports participation/physical recreation.

ACTIVITY #3: Flexibility training

To me this is a "no brainer." It has been proven over and over again that developing and maintaining a normal range of motion around all major joints absolutely prevents, and helps rehabilitate, injuries. I know you've probably heard the stretching "nay-sayers" give the scenario that if we were all sitting in a room and someone yelled "Fire!" we would sprint as fast as we could to exit and no one would pull a muscle. That may or may not be true. In my experience, the lack of stretching doesn't cause acute injuries as often as it causes the type of injury that comes on slowly and can become debilitating for a long period of time. So, if the people that are "sprinting away from the fire" do it over and over again for many years (like weight training), I know that not only could they "pull" muscles, but I'm sure that they will develop some form of tendonitis.

I can tell you from my own experience over the last fourteen years in working with many different types of trainees – and many different types of injuries – that stretching has to be part of everyone's training program, *period*.

About sixteen years ago I tried an experiment on myself using the Bulgarian theory that stretching disrupts the "stretch reflex." In simple terms, the stretch reflex is supposed to help you lift heavier weights. Well, I stopped stretching, and in about six weeks I had tendonitis in both patella tendons and both elbows. I actually looked liked a walking ice bag since I had to ice four joints. Did the lack of stretching help the stretch reflex and help me get stronger? Who knows, and who cares! The tendonitis was so bad I couldn't train for four weeks! Stretch reflex or not, you can't get strong unless you're able to lift!

Now, in developing your own stretching program you don't need to go overboard and try and turn yourself into a human pretzel. Our basic stretching program consists of just eleven stretches. We perform this program before and after every workout and it takes about 7-10 minutes. The key is not to try to do every stretch imaginable, or to expect to gain good flexibility in one session (you can't anyway). Instead, do a few basic stretches, and do them consistently. This is what produces results over the long haul. I don't have the space to try and explain how to do our stretching program in this article. I recommend what's in Stuart's book on weight-training technique with the option of a few stretches that I've included as follows.

I recommend a three-position neck stretch (pictures 1a, 1b and 1c). Never neglect stretching your neck muscles! If you do, you'll end up eventually having problems in the cervical area. As you can see in the pictures, we apply manual assistance when performing this stretch. Do not pull too hard or you'll hurt yourself.

Photos 1a, 1b, 1c

The next stretch I would add is the side bend (pictures 2a and 2b). This is important for stretching out the internal and external obliques as well as the quadratus lumborurn. If you perform the side bend exercise, you need to perform this stretch.

The stretch I recommend for the lats and upper back muscles is in picture 3. Hold onto a pole and "hang back." Performed correctly you should feel that if you let go of the pole you would fall on your butt.

Photos 2a, 2b, 3

In picture 4 is my recommended pec stretch. I like to perform this stretch one arm at a time (verses both at once), as there's usually a difference in the amount of flexibility in the shoulders in almost all trainees that I've worked with. By performing it this way you can give each shoulder joint individual attention without one shoulder possibly hindering the other.

Stretch before and after every weight workout and every aerobic session. Hold each stretch for 30 seconds, only one "set" per stretch unless some special case or limitation dictates otherwise. You should feel a *mild* stretch. *Do not* try to stretch so hard that you feel as if you're going to rip the tendon off the bone! Stretching has to be done at a moderate intensity. If you try to stretch too hard, the body retaliates by contracting the muscle, which is exactly the opposite of what you're trying to achieve.

The stretches should be held in a static manner – no bouncing. I always

recommend a warm up prior to stretching, of at least 5 minutes of light aerobic work. Personally, I do 10-12 minutes before workouts to get a good sweat. But don't tire yourself out – it needs to be light, but enough to get a little sweat going. So start a basic stretching program immediately. I guarantee you that you'll feel the results in a couple of months, and there's nothing like feeling that something is working.

ACTIVITY #4: Medicine ball training/ plyometrics

I bet that last word made some of you run. The dreaded "P" word. Guys, doing plyometric training, when abused, can hurt you (just like anything else). But if you follow my instructions, it will only help. By the way, my application of "plyos" is different than what most advise. Also, I'm limiting my scope of application to adjunct work (which will not affect you systemically) verses using plyos to increase speed and explosiveness.

Medicine ball training is great for increasing functional range of motion. It will also help you recover from workouts, help you to gain functional strength through different planes of motion (which helps to prevent injuries), and it's fun to do. There are hundreds of different medicine ball/plyometric exercises, which are usually variations of throws and jumps (hops). Many of these movements are inherently dangerous. So, what I've done is included my "basic four." These movements are safe for most trainees *if* you work into them *slowly*. If they cause you any pain, don't do them – period. All the med ball work is done throwing the ball into a wall or with a partner retrieving the throw on the other side.

The first movement is the "abdominal throw" (pictures 5a and 5b). Plant your feet a little wider than shoulder width. Take the medicine ball and slowly reach behind your head *as far as is comfortable* on the shoulders, low back, and abdominals – *this is extremely important so that you don't get hurt*. Dan Foy (the model in the pictures) has very good shoulder, low back, and abdominal flexibility and can reach pretty far back. He's also been doing these for years. At first I would recommend to go no further than the top of your head. From this position try to throw the ball with your whole body, concentrating particularly on generating the force with your abdominals. Done properly this exercise will make your

Photo 4

abdominals sore. Once again I want to reiterate that you do not need to take the ball far behind the head to gain the benefits of the movement.

The second movement is the "side throw" (pictures 6a and 6b). Once again, get a good solid stance. Slowly rotate your torso to one side. Go as far as it's comfortable. If you go too far at first, you'll get hurt! Concentrating on generating force from the opposing side of the body. Rotate the other direction and throw the ball using your torso – *not* your arms! Do not try to throw the ball too hard at first; instead, try to get the feel of the movement.

The third movement is the "chest throw" (pictures 7a and 7b). Start the ball at the chest with your elbows flared, and try to "pop" the ball out. If flaring the elbows out causes shoulder pain, try it with the elbows at your sides.

The fourth movement (pictures 8a and 8b) is the "box hop." This is real simple. Start behind a three to four inch stable platform (Dan is using a four-inch, 44-pound "bumper plate"), and jump up and down off of the platform. Once you master the movement you should try to perform it as quickly as possible; but you *must* start slowly. If this causes any knee pain whatsoever, don't do it.

Now the rules. If you follow the rules you'll not overtrain or get hurt, so stay with me and finish the article. Do your med ball/plyo training either on one of your aerobic days (before the aerobics), or on a separate day. Now, don't freak out with the overtraining

thinking. Yes I can do the math. Two days of weight training, two days of aerobic work, and one day of med ball/plyos, that's training five days a week – but only two of which are taxing the body systemically. The others do no more than help you get in better shape (known as General Physical Preparedness) and recover from workouts, but only as long as you break into them slowly. Trust me. If you follow the program as I say, it will only help you.

As far as the med ball goes, start with a six-pound ball. After a minimum of three months you can move up to a nine-pounder if you desire; if not, just stay with the six pounder. With the plyos, keep the jumps to no more than four inches off the ground for at least three months, till your tendons and ligaments get used to it. If you want to move on, add height by no more than two inches at a time. By all means, if you've any knee problems or are susceptible to them, lay off the lower-body plyo movement.

For the plyos, perform 2 sets of 10 reps on each movement. Rest a minimum of two minutes between sets. Rest longer if it starts to tire you out. Keep in mind that this training is *not* intended to tire you out. *Start slowly.* Do not try to throw the med ball as hard as possible, or do the lower-body hops very fast. Once you get conditioned to them you'll find that you'll be able to perform them as quickly and as hard as possible.

Photos 5a and 5b (top), 6a and 6b (middle), and 7a and 7b (bottom).

The new year

By the time you read this we will be into a new year. After all the "celebrating" has died down, what are you going to do with this new year? Let me pose a couple of questions. How long have you been training? A year? Two years? Five? Ten? Have you derived all the results that you would have liked so far? I'm sure most of you would answer "No." What would you specifically like to accomplish this year? Most people answer this question in a "drunken state" at about 12:30 am January 1st. Then by the end of the month it's been forgotten.

Why don't we make this year different? Instead of some "new year's resolution" that gets forgotten, I challenge you to set just three "real" goals as pertaining to your training for the next 52 weeks. Set a "real" goal instead of just some "wish list" in your head you must never lose track of it. To do this you must write it down on a piece of paper. This practice makes it more real. Keep this goal sheet by your bed and read it several times before going to bed, and several times when you get up in the morning. You must also read it before you train. I'm not kidding about this! I challenge you to do this every day this year – without missing. This will remind you of your goals every day. If you don't keep yourself on track, who's going to do it for you? No one!

So whatever you're doing right now, *stop* and write down what you want to accomplish. *Set yourself apart from everyone else (who doesn't accomplish their goals) by taking action instead of just "wishing" but doing nothing.*

Photos 8a and 8b

Enhancing Your Technique

From Hardgainer #51 - November/December 1997

I have been consulting with hardgainer readers for several years now, and during this time I have learned of many of the areas you need help with. Since the beginning of 1997 I require that all my students have to send me a video recording of themselves training. This has revealed many mistakes in *basic technique* that need to be corrected. In this article I will address the major mistakes that I hear about and see most often. But before we get started I strongly suggest that all of you purchase Stuart McRobert's book on weight-training technique and *take the time to really study it and then put it into practice*. With that said, let's get to work.

BENCH PRESS

The mistake I see most often is the lack of a proper foundation. What I teach as a good foundation is having the upper back retracted, the lower back flexed, and the feet planted firmly on the floor.

By retracting the upper back (i.e., pulling the scapulae together), and holding this position throughout the lift, you are creating a very stable position for safe shoulder functioning, and optimum leverage. To get more technical, this good foundation stabilizes the glenohumeral joint which enlarges the acromioclavicular space, preventing impingement of the bicipital tendon.

As long as you don't have back problems, the lower back needs to be flexed to help stabilize the hip area. In most cases I don't believe in keeping the lower back *completely* flat against the bench. I have even seen *excessive* flattening of the lower back cause back problems because the lumbar spine is unstable due to the spinal erectors not being flexed. The ideal lumbar positioning for the bench press resembles that for a deadlift. If this flexed position causes discomfort to the muscles your lower back, then you probably need to strengthen those muscles. If after strengthening the lower back muscles you continue to get discomfort (which I have never seen after the muscles have been properly strengthened), you should place your feet on boxes 4-6 inches (10-15 cm) in height on each side of the bench. If this doesn't remove back discomfort, then you may have a disc herniation, or your genetics dictate a flat-back approach. For trainees with a disc herniation, I start them out with a flatback bench program, but progress all of them to flexing their lower backs once the herniation has regressed, and their erectors are strong enough.

I want to stress that flexing the lumbar spine *does not* mean exaggerating the arch in your back. It simply means preserving the natural curvature in your back.

Another error I often see is dancing feet. Your feet have to be planted firmly and flat on the floor at the sides of the bench. This creates lateral stability. When your feet aren't planted properly, the bar moves your torso side to side, creating a loose foundation. *You don't want the bar moving around. You want to move it around – you're the one in control!*

This brings to mind another mistake – not gripping the bar tight enough. Without a tight grip on the bar, the bar can control you instead of vice versa. You have to grip the bar very tightly when you bench, or on any exercise for that matter. You want to grip like your life depends on it!

I teach my students that intensity starts with the grip. If you're serious about physically moving something, you're really going to have to get a hold of it. That's why you do (or should do) grip work.

Another thing that many people are not interpreting correctly is the arc of the bar, or the bar's path from the chest to arm's length. Many of you are over-emphasizing this arc, and not only are you losing leverage, but you may be damaging your shoulders by forcing the bar to travel back to above your eyes. This extreme arc may work for some, but it is not for everyone. You have to let your body find its own particular arc. I have my students lower the bar to the pec-ab line and then push. Offering myself as an example, the bar ends up over my mid-chest. I don't try purposely to push it there. That's just the endpoint that my body has developed after 23 years of bench pressing. Yours may not be the same as mine, but find what comes naturally to you.

SQUAT

There are several glaring problems here. The first is improper bar placement. Many of you are riding the bar too high on the back/neck area. Forget the high-bar stuff and how Olympic lifters squat (at least until you can squat 350 lbs (158 kg), or unless you are an aspiring Olympic lifter).

Place the bar on top of your posterior delts. These muscles will stick out when you retract your scapulae and put your hands around the bar. A higher bar placement will force you to bend over more than you should, and could be damaging to your seventh cervical vertebra.

When you get the bar in the correct place for the first time it will feel as if it's going to roll down your back. That's exactly how it should feel. *But don't let the bar roll down your back!* Grip the bar as hard as you can to hold it in place, and squeeze your shoulder blades together. This will be hard to do at

first, but do it – don't get lazy and make excuses for why you can't. Another thing that you will immediately feel is the tremendous leverage advantage that you now possess when coming out of the bottom of the lift. You will practically spring to the top! *Once again, concentrate on holding onto the bar*

and squeezing the shoulder blades together – no excuses!

SHOULDER PRESS

Most of the trainees I've had contact with are not allowing a proper bar groove. They are pushing the bar from their collar bones to a position in front of their heads. But you should not push the bar forward! Done properly, the bar will naturally end up over your head – I mean straight up from the middle of your head. So in essence, the bar will travel in an arc (similar to the bench press) starting from your upper chest and moving up and then back over your head. You should not have to force this bar path.

Most trainees are not keeping their bodies solid enough. You need a solid foundation on all exercises. So when you are performing the shoulder press, spread your feet to form a solid base, and flex/tense your legs and lower back, and retract your scapulae. Keep everything tight. *Trying to perform an exercise without a good solid foundation is like trying to shoot a cannon out of a canoe. You can shoot it but you'll have no idea where the ball's going to go, and you'll limit the power output of the cannon.*

STANDING CURL

There are two main things here. Number one, quit trying to curl the bar to your neck or the top of your shoulders. *All you have to do to perform a proper curl is to close the elbow joint*. What I often see is that as the bar is curled up, the elbow joint closes completely without much movement of the upper arm (which is good), *but then* the bar is forced to the neck, pulling the upper arm forward (which is not desirable), and bringing into play the anterior deltoid without creating much more biceps flexion. Once the elbow is closed, that's it, the movement is done. The bar will actually finish a few inches in front of the shoulders – this will vary from person to person. The thing to remember is to close the elbow joint, that's all.

Number two, most trainees' bodies are too loose when they are curling. You have to flex your legs; heck, you have to flex your whole body! The body should move only slightly when you curl. Don't get lazy, keep your body tight, and always start with a good foundation.

DEADLIFT

The major mistake I see most often is trying to keep your hips too low at the start of the movement. Now don't get me wrong, your hips definitely need to be lower than your shoulders, but many of you have your hips so low that you can't flatten (flex) your lower back properly, and it is causing not only limitations in how much weight you can lift, but it can also cause lower back problems. In my experience, whether you use the conventional or the sumo style, a straight bar or Trap Bar, your torso will have a forward tilt anywhere from approximately 60 degrees from the horizontal (for the most upright of styles), to approximately 30 degrees. Most of you will fall somewhere in between.

An extremely low hip position for the start resembles the bottom position of a front squat, where most of the emphasis is placed upon the quads. This is contrary to where the stress of the exercise should be. I feel that the stress of this movement should be dispersed throughout the hip flexors, quadriceps glutes, and spinal erectors as the prime movers.

This lifting stuff is not as complicated as some of you are making it! Yes, you absolutely must have good form, but the techniques that are required on the basic exercise are natural to human movement. I think many of you are trying to contort your bodies to achieve some theoretically perfect model of technique. But a theoretically perfect model of technique is actually not achievable for many of us because we are all so different (length of bones, muscles attachments, muscle bellies, etc.)

Set your body properly, concentrate on the few basic lifting techniques of each exercise, get very aggressive, and push or pull the bar period! Let your body learn all the little things from actually doing the lifts. Actually, when I teach the deadlift I keep it as simple as it gets. Once the feet are properly positioned, I tell my student to flex his lower back *hard*, bend his legs, and pick the damn barbell off the floor. If it looks good, and most times it does, I don't suggest any other technique modification. You'd be surprised how well this works. And as a matter of fact, it is surprising that when you keep the technique simple, how the body takes care of all of the micro techniques of an exercise.

PREMATURE THICK-BAR WORK

I feel that everyone should perform grip work from the start of their very first workout. But I feel that the thick-bar work should wait until you can deadlift at least 350 lbs (158 kg), bench press at least 250 lbs (113 kg), shoulder press at least 175 lbs (79 kg), and curl at least 120 lbs (54 kg).

As far as grip work is concerned *before* you have developed the ability to lift these numbers, you should perform exercises that specifically train your grip, e.g., barbell or dumbbell holds, grip devices such as plate-loaded grip machines, hand-held spring-loaded grippers, farmer's walk, or wrist roller devices.

I believe that if you use a thick bar on your deadlift, bench press, military press, or curl before you are ready for it, it will actually take away from the primary benefits of those exercises, and could distort a beginner's technique. But I want to reiterate that I feel grip work is very important from the start, but

the thick-bar work (which is very beneficial *at the right time*) should wait until you have first achieved the above numbers.

KEEP IT SIMPLE

Concentrate on the basics of each exercise. Work on the things that I mentioned in this article. They are the techniques that are basic to lifting (whether the thing you are lifting is a barbell, rock, steel I beam, or a person). Learning the proper form of the basic exercises is not that hard. Each basic movement has a few techniques that you need to concentrate on*, so work hard on those and then get busy lifting the bar!*

The Keys to Success, Part 1

From Hardgainer #82 – January/February 2003

I hope this article finds you in good health and getting stronger. This is the first installment of a multipart series on what it takes to be successful in your quest for size and strength. What you can expect out of this series is a hard-core, detailed look at all the basics. I'm going to leave no stone unturned. Here are some of the topics I'm going to cover: Train for Strength, The Science of Resistance Exercise, The Basics of Progressive Resistance, The Right Exercises, The Right Routine, What Comprises Good Technique, Consistency – The Magic Ingredient, General Physical Preparation, Flexibility, Nutrition and Recovery, Mental Preparation, Variety – A Simple Application, Advanced Training – Reaching Your Potential.

Don 't expect any "magic" program, for no such thing exists. If implemented properly (and with enough time), many of your family, friends and those you train with *will* think a "magic" program *does* exist when they see the results you achieve.

I'm going to use my formal education in biochemistry and exercise physiology, my 16 years of experience in working with every kind of trainee imaginable, and the 28 years I've been under the iron myself. I'm going to give you the best I've got – period.

I'm going to get a little more in-depth than usual, but I'm going to keep it simple. I'm absolutely confident that if you listen, learn and apply what I have to say, you'll achieve success.

Train for strength

Regardless of your goal, you need to train to get stronger. I know this seems like an oversimplification, but it's dead-on accurate. Let's look at opposite ends of the spectrum of training goals to help explain. The goal of the powerlifter in the squat is to lift as much weight as possible for one repetition. So, the lifter who generates the most force in this movement will win. The goal of a marathon runner is to cover 26 miles as fast as possible. So, the runner who creates the most force every time his/her foot pushes off the ground will win. There are many physiological factors that must support the production of force that figures into both of these examples, but the bottom line is that both athletes need to weight train to increase their ability to produce force. And the ability to produce force is absolutely based on strength. In these examples it's strength for one rep (the powerlifter) verses strength for thousands of reps (the marathon runner).

Another example: What about muscular size? You may have read (through the steroid-filled bodybuilding magazines) or been taught (by a steroid-filled instructor) that you need to use a program that consists of many exercises and sets per bodypart – that you need to "pump-up" the muscles, "bomb and blitz," pre-exhaust, and make sure the stars are aligned properly. "You need to concentrate on the 'burn '; the amount of weight on the bar has nothing to do with getting big!" What a bunch of trash. Getting bigger muscles is all about getting stronger. Take two identical human beings (twins are as close as it comes). The one who can bench press the most weight in perfect form for, eight reps is going to have more muscle in the pecs, delts and triceps – end of story.

Let's talk about what getting stronger does to your body. I want to talk about this because I know there has been a lot of questions about training for strength verses training for size. The answer is that training for strength in the 1-4 rep range will make you stronger and bigger, and that training for strength in the 5-8 rep range will make you stronger and bigger, and training for strength in the 9-20 rep range will make you stronger and bigger. (These lines of demarcation are not this cut and dry, and vary with each individual, but I want to keep things simple.) "What kind of answer is that?" you might ask. Let me explain.

Science of resistance exercise

First, let's define what "bigger" means. Muscular hypertrophy, in simple terms, means that the circumference of your muscles increases – i.e., the girth of your chest and upper back, thighs, or upper arm, to name a few – because there 's more "stuff" inside the muscles. Now bear with me, as I'm going to get a little scientific on you; but pay attention, because understanding this material will give you faith in the good programs that exist, and help dispel the myths promoted by the bad programs.

Training for strength in the 1-4 rep range will teach the body to recruit (use) more of the muscle that it already has. The actual contractile elements of your muscles are called myofibrils. These myofibrils are actin and myosin, and are the components of the muscle that provide the mechanical force to lift the weight. There are several types of myofibrils. Type II are known as the fast twitch fibers and have the greatest potential for strength production and muscular size. So, if you want to get big and strong, these are the fibers (especially the IIb ones) you want to work on.

As you get stronger in the 1-4 rep range you 're actually teaching the central nervous system (CNS) to utilize more and more of the fast twitch fibers. So, as far as the development of strength goes, training in the 1-4 range will elicit the greatest development of absolute strength possible. Now,

as far as hypertrophy (muscular growth) goes – in theory – training in this range will not induce much muscular hypertrophy because the stimulation and adaptation is mostly through the CNS. This training doesn't "disturb" the protein content of the actin and more specifically the myosin (of the fast twitch fibers) enough to elicit an increase in the cross-sectional diameter or perhaps even quantity of the fibers. This is great for trainees who want to get stronger without getting bigger; but there seem to be exceptions to every rule.

In practice, I've had some trainees make gains in hypertrophy while working in this low rep range (especially while on a protein rich and calorically dense diet) – although not as rapidly as in other rep ranges. So, training in the 1-4 range doesn't directly make a trainee gain much in hypertrophy, *but* strength gains from this range can be used indirectly to help trainees reach their genetic limits for size, muscular endurance or power. I'll let you know how to apply this in the next issue.

Training in the 5-8 rep range will make you bigger by increasing the cross-sectional diameter of the fast twitch fibers, and perhaps their number too. Secondary to this, the body will also add extra support cells (mitochondria, mRNA, etc.) and fluid (sarcoplasmic, and water) and energy substrates (glycogen, ATP, creatine phosphate) into the muscle so that the body can support the work and repair (and hence the supercompensation) of the myofibrils. The addition of all this "stuff" inside the muscle takes up space and makes the muscle enlarge. There's also a considerable effect on the CNS (enhancing recruitment) that promotes gains in absolute strength. So, the bottom line is that for most trainees (once again, though, there are always exceptions) training in this range has the greatest potential for producing gains in size, and can also greatly effect your absolute strength.

To understand the mechanisms of how skeletal muscle may increase in cross-sectional diameter through the addition of new contractile proteins – new muscle fibers – one must have a little understanding of microanatomy and microbiology.

Adult skeletal muscle fibers are biologically incapable of undergoing cell division to increase their number. The number of these specific muscle fibers is set at about 24 weeks of gestation in humans. So, although these mature fibers can 't undergo cell division, there are other cells that may, to form new functional myofibers. It's thought that the source of these new fibers is the satellite cells that are adjacent to the basal lamina of the mature muscles fibers. These cells are "awakened" upon a disruption (as through progressive weight training) of the mature muscle cell membrane. Once "awakened" these cells may begin a process of cell differentiation that may perhaps lead to the creation of new myofibers. What's really fascinating is that these small, immature fibers express proteins which are normally found only in embryological development. Talk about weight training reversing the aging process! Microanatomists refer to these new fibers as type IIc. In time, these fibers may enlarge and eventually fuse with one another and with the mature fibers in the local environment, to increase the cross-sectional area.

Training for strength in the 9-20 rep range will cause sarcoplasmic hypertrophy. This is when your body reacts to the stress imposed by primarily increasing the number of support components – cells responsible for providing energy and repair to the myofibrils (mitochondria, mRNA, etc.), fluid (sarcoplasmic and water), and energy substrates (glycogen, ATP and creatine phosphate). Secondarily, and at a reduced level relative to the 5-8 rep range, the body may add new myofibrils (mostly type IIa, which don 't have nearly the size potential of the type IIb fibers). The addition of all this material inside the muscle takes up space and makes the muscle enlarge.

Does training in this 9-20 rep range make you stronger? Yes – it makes you stronger in *that* specific rep range. Does it directly increase absolute strength? No, but after a "conversion period" of training in the 5-8 range, and then the 1-4 range, it can benefit the production of absolute strength.

What about volume and frequency? Volume means the number of sets, and frequency means the number of times you perform a particular exercise per week (or whatever length of training rnicro-cycle you use). The common misconception is that you need to increase the volume and frequency of training in the 5-8 rep range to increase gains in hypertrophy. This is completely false and will only result in overtraining and probably injury. Volume and frequency shouldn't be any different than training in the 1-4 or 9-20 rep ranges. Performing a big, basic movement for 2-3 "live" sets, once a week will lead to success for almost any trainee. Once again, the key to success is getting stronger – over time handling more weight in good form, period.

The wrap-up

Regardless of what the mainstream muscle magazines teach (from where the largest number of trainees in the world get their training information), you don't need to use multi-angular training, preexhaust training, double- and triple-split training, quasi-molecular training, training according to the planets' alignment (and a whole host of other bull), in order to get bigger and stronger.

You can make weight training as complicated as you want – you can study it down to the cellular level (as I have)-but your success in this activity is going to come from one simple and basic premise: You must get stronger on a group of big basic human functions. You might be thinking, "Thanks for the science lesson, John, it all makes sense – but how do I put it all together?" If you've been a reader of

HARDGAINER for a while, and particularly a reader of my material, you should already know how to do this. But if you don't, I'll put it all together for you in the next issue. In the meantime, add a dose of *iron to the bar every workout you can, train smart, and no matter what your goal, train to get stronger.*

The Basic Keys to Success Part 2

In the first part of this series, I covered why any trainee needs to train for strength, no matter what their goal, and the science of resistance training. In this part I'm going to cover : The basics of Progressive resistance, the right exercises and the right routine

The Basics of progressive resistance

“Progressive resistance” is the most used, abused, and misunderstood phrase in the strength training world. Anyone who lifts weights (or lifts anything for that matter) is using resistance, but what about the “progressive” part? Believe it or not very few trainees employ any system of progression, And its not because its a complex procedure, as a matter of fact it is, and should be for a majority of trainees one of the simplest parts of a weight training program. And one of the major players that turns what should be a simple procedure, into a complex matter, are the self named experts out there who are no more than very good marketers (con men is better). As usual, in order to suck the money right out of you, and take advantage of your dreams, these people want you to think that it is a highly complicated “top secret” procedure. They're willing to sell you a “system” that will make you bigger and stronger (and faster and better looking and give you the ability to leap tall buildings in a single bound) virtually over night. I can tell you from experience that 99% of the “systems” out there are utterly useless. You will not improve your strength or size, more than likely you will get hurt, and most importantly- you will waste valuable training time. You are too intelligent to be fooled by these people. Make decisions based on your own intellect not your emotions.

A harsh lesson in reality

Here is a little story- --unfortunately a common one – to illustrate the point made above. You've been squatting consistently for the past six months, adding 2 ½ pounds to the bar for your once a week squat workout. You've added 60 pounds to the bar, and are now squatting with 250lbs for 6 reps- you're on a roll, stronger on this lift then you've ever been. But due to the input of a former lifting buddy who thinks your progress is too slow, along with the convincing advertisement he shows you with the picture of the steroid phony benching 700 lbs, you're convinced to try the new “wonder program”. So, you purchase the **Russian Volume Training- Program" which has you squatting, benching, and dead-lifting three times per week and doing nothing else. For the first couple of weeks you are able to handle this, and you feel that you are progressing due to the fact that the lifts feel easier (due to performing the lifts three times per week for many, many sets your motor skills will improve only to be shut down by what will happen next), by the fourth week your low back, shoulders, elbows and knees are starting to scream due to excessive volume, frequency, and an imbalanced training program. It's imbalanced because it doesn't promote strength between agonists and antagonists. By week six your body has had it and you're probably spending most of your non-working day like a big ice cube due to the number of ice bags on your joints. You end up spending (if you're lucky) another four to six weeks as the "human ice cube" getting the inflammation down without the ability to even touch a weight. By week 13, you're able to do some very, very light weight training most of which is rehabilitation. Well, this goes on for another four weeks. By week 17 you're able to squat. with 175 lbs. for six reps pain free. You're ecstatic that it doesn't hurt and then immediately angered beyond belief because you were squatting 250 pounds for six reps before you started that stupid new "wonder program". By week 25, you're up to 215 lbs, still 351bs pounds from where you were. So, 25 weeks after starting the "wonder program" which was supposed to bring the powerlifting world to its knees for you, have you much weaker than when you started, And the most disgusting part is that you are much, much, weaker then where YOU could have been in 25 weeks on the simple program utilizing Micro-loading that you started with. During those 25 weeks you would have increased your squat to at least 310 lbs. for six repetitions! What a waste of time!

My only hope that after this one lesson this trainee is a lot smarter and doesn't attempt any programs that promise things that the body can't accomplish. Unfortunately, most trainees will not learn their lesson and have to make this mistake multiple times. The biggest travesty is that by this time many years of valuable training is lost in which the trainees goals would have already been achieved. If you're lucky or smart---I'm not sure which-when you come to realize that you need to stick to the basics and not some advertised “wonder program” that your joints will still be in good enough condition to continue on your quest for size and strength

Back to the basics of Progressive Resistance

My bottom-line definition of progressive resistance is to add resistance to the bar (machine, sandbag, rock etc.) at a rate that the human body is capable of adapting to. What is this rate? It depends. Take a trainee

who has several years of training experience, who is not in the build-up phase of a cycle, and is trying to gain as much bodyweight as possible by consuming a diet that is creating a caloric overload, he should be able to sustain for a period of 12 months the following rate of progression on the big basic exercises while working in the 5 to 6 rep range:

Exercise Rate of progression
Squat 2.5lbs per week
Deadlift (bent knee) 2.5lbs per week
Power clean 2.5lbs per week
Stiff leg deadlift 1-2lbs per week
Bench press, dips 1-2lbs per week
Row,pulldown, chin 1-2lbs per week
Shoulder press 0.5 to 1lb per week
Barbell curl 0.5 to 1lb per week
Pushdown 0.5 to 1lb per week
CGBP 0.5 to 1lb per week
Grip, forearm work 0.5 to 1lb per week
Crunch, sit-up, leg raises 0.5 to 1lb per week
Rotator cuff work 0.25lbs every four weeks
Neck flexion 0.5lbs per week
Standing calf work 1-2lbs per week
Single leg calf work 0.5 to 1lb per week
Back extension 0.5 to 1lb per week
Side-bend 1lb per week

Note: If you choose to use dumbbell varieties of the exercises listed the progression would be cut in half and applied to both dumbbells

It is stunning what big numbers this rate of progression adds up to. For example, in one year a trainee who can squat 300lbs for 5 hard reps (repetition 6 would fail) would be able to squat 420lbs for five reps. This rate of progression is not some theory of what is possible. It is something that I have personally coached many a trainee to do (and personally watched them do). These achievements are based on real world examples, not something concocted in a fantasy land in order to play on your emotions and sell you something. I know what you're thinking: “John, you can't keep progressing at this rate indefinitely”. You're right, but there are ways to prolong this rate until the time would come (when you are so big and strong that no one recognises you) when you will have to settle for a slower rate of progression. Let me take this example further to show you what happens next.

A real life scenario

Lets say that at the 12 month mark the trainee above starts to plateau. In other words he completes three workouts (whilst keeping all the out of gym factors the same- nutrition, rest ect) and cannot make his five reps at 422.5lbs- he fails at rep 4. At that point I'll drop his rep goal to 3 reps and continue at 2.5lbs per week which he should be able to sustain for another 3 months. Lets be conservative and say he makes it 12 workouts until he plateaus again. At this point he is now squatting 450lbs for 3 reps. At this point I'll usually do one of two things. I'll drop his progression to 1lb per week and keep his rep goal at 3 reps. (and add a back off set of 8 to stimulate more gains in the actual contractile elements- as explained in the first part of this series)/ This trainee would be able to sustain this rate of progression for at least another three to six months bringing his squat to somewhere between 464 to 476.5lbs for three reps. My other option is to drop his rep goal to one rep (working singles) for three to five sets (with a back off set of 8) and keep the progression at 2.5lbs per week. He will be able to sustain this for about 10 weeks bringing his squat to around 480lbs for a perfect single repetition.

Here is the tally. In less than two years of training this trainee can now squat near 500lbs (and I'm confident that he could easily squat 400lbs for 8 to 10 reps). Anyone who hasn't seen this trainee during this time won't recognise him as he now resembles a gorilla.

It makes me wonder why any trainee wouldn't want to follow this simple regimen, and I always come back to the simple reason that most trainees lack patience- they don't want to wait two years to get the aforementioned results. So, instead they play around with five or six different routines and end up two years later exactly as they were when they started- its really pathetic.

If a trainee is new to lifting. or really trying to pack on the mass by consuming a large amount of calories, the

rates presented above will be higher. if a trainee is not trying to gain any bodyweight., just pure strength; the rate could be lower depending on the rep goal of the program they are using. But this is also dependant, on fibre type and workout rep range. I don't want to make this more complicated than it has to be. The point is adding resistance is not complicated. Once a trainee starts a program based on single progression they will learn through experience what rate they can progress at. The human body can only get so big so fast. How fast? If you do things correctly right from the start and have average genetics. three years will make your friends accuse you of steroid use. Trainees under my guidance have gained 40 to 80 pounds of bodyweight in a couple of years. That's going from a 14 inch arm to a 17 inch arm (many to 18+), that's building up to a 50 inch chest. and 30 inch legs. What about strength in this time? It's routine for me to have trainees squat or deadlift double their bodyweight for multiple reps, and bench press one and a half times their :body weight for multiple reps in that time period.

Systems of Progression

There really are only several good systems of progression. They are single progression, double progression and periodization based on percentages of a one rep max. These systems can take on a variety of forms.

Single progression is simply Micro-loading for a fixed number of repetitions. For instance. adding two pounds to the bar every workout while performing two to five sets of five reps for the squat. Micro-loading can also be used when a trainee is a Program in which they train to failure. For instance if a trainee is performing one Set of squats to failure, and achieve the goal of ten reps, the trainee would simply. Ad 2.5 pounds to the bar and train to failure again the next workout trying to make ten reps again. For this system to work effectively, Micro-loading at the proper rate (as detailed above) is essential. Double progression is where you add weight after achieving the "top end" of a predetermined rep range. Since the trainee is trying to get as many reps as possible so that they can achieve their rep goal (so that they can add weight) the sets are usually performed to failure. For instance, after successfully completing two sets of 8 reps utilizing the squat, the trainee adds (depending on the actual weight lifted) anywhere from two to five percent to the bar and starts over at five reps again.

Periodisation programs (based on % of a one rep max) can also be effective if implemented properly. The problem here is that most of the “marketers” of this type of program recommend an inordinate amount of volume and frequency. If you choose to go this route, just make sure that you weight train two to three times per week. Much of the material that has been written about periodization has the trainee lifting four or more times per week, with many of the exercises performed three times per week. Performing any exercise at advanced levels of volume, more than twice a week really tears up the joints quickly.

I prefer a single progression system utilizing micro-loading. This method of progression really brings home the bacon. It epitomises one of the basic premises to success in anything- making consistent “small” achievable accomplishments. It's amazing that when you keep things this simple, many of the variables of resistance training that can get complicated take care of themselves. Micro-loading promotes a positive mind-set. While using this approach, the trainees' goal of any non-warm-up set is to complete a desired number of reps "beating" failure-verses a goal of going to failure. This is not to say that double progression systems or systems that promote "going to failure" don't work. Many have proven that they do. After working with both systems I just feel that over the long haul single progression utilizing Micro-loading has many more advantages, and less risk. One of these advantages is that it promotes a tremendous amount of confidence that you will succeed in making your rep goal. For instance, after a trainee has been successfully completing three sets of five reps for five months while adding two pounds to the bar every squat workout, he knows that he will make it again the next workout. To many of you, this rate of progression seems impossible with a "system" that is SO simple—but I, and many, many of my trainees can testify that it works just as described above, This system focuses on the "meat and potatoes" of success, not the frills. The”meat and potatoes" being extreme effort directed at achieving realistic workout to workout weight increases over the long haul.

The Right Exercises and the Right Routine

The right exercises are the ones that work the most muscle tissue for the desired strength function and / or body area (part) that you want to work. They also require the body to use biomechanical "motions" that promote maximum leverage and reduce risk. Here is a list of functions and their corresponding exercises.

These exercises should comprise nearly 95% of all routines that you use.

Function Exercise
Pushing with the arms, horizontal plane Bench press, close grip bench press
Pushing with the arms, vertical plane Overhead press, behind neck press, dips, pushdowns
Pulling with the arms, horizontal plane Rowing
Pulling with the arms, vertical plane Pulldowns, shrugs, curls
Pushing with the legs Squats, bent leg deadlifts, leg press, lunges, step ups, power cleans. Snatches
Pulling with the legs Glute hamstring raises, leg curls, SLDL
Bending at the waist, forward Supported crunches, sit ups
Bending at the waist, rearward Back extensions, SLDL
Bending at the waist, lateral Side bends, 45 degree sidebends
Pushing with the toes Calf raises
Bending the wrist Wrist curls
Squeezing the hands Barbell and DB static holds, gripping devices

The right routine

The right routine is one that allows you to stimulate the body to change to its maximum capacity each workout, while allowing time for it to recover before stimulating it again. Doesn't sound too complicated, does it? Its amazing how people can complicate such simple things. And what usually creates this are unrealistic expectations. I'm not talking about unrealistic “long term” expectations, because most trainees are unrealistic about what can be accomplished in the short-term. The outlook that most trainees have, is one of achieving incredible strength and size developments in the short term and at the same time undermining what can be accomplished in the long term. Unfortunately this is more the rule than the exception in many areas of life. The fact of the matter exists that as long as people want something in an unreasonable capacity or time frame there will be shrewd “marketers” out there that will sell you (lie to you) on the fact that “it” indeed can happen for the right price

Here is a great analogy
Most college students realize and accept the fact that it is going to take four years to get a bachelors degree. If they sacrifice much (summer breaks and no social hie) and are extremely dedicated, they could possibly finish it in two and a half years. But are they going to get that degree in a year? No way. So, why would the development of strength and size be looked at any differently? Almost anyone can build a physique, and the strength to match that would turn heads anywhere, in a four year period. Some, who are willing to sacrifice greatly, practice dedication beyond the norm, will be able to attain this development in two and a half years. Let me clarify. In four years will you be bigger and stronger than anyone who walks the planet? No. Will you be as big. or even bigger and stronger than all your friends who train? Yes. If you train properly for eight to ten years you will have a level of development and strength as compared to someone of your same bone structure that will be in the top one percent. Unfortunately, this rarely happens because most are fooled to think it can happen overnight. And this is as ridiculous as thinking that you can get a four year degree in one year. This "overnight" thinking, is what causes you to make mistakes (train and eat incorrectly) and really slows your results to the point that what should have taken four years will take you eight to ten (or more if you don't learn the lesson soon enough).

You should only hit the weights two to three times per week. Yes, only "two or three" times per week. Yea, I can hear you now, "this champ or that champ trains much more than that". Well, those so-called "champs" are so full of drugs (steroids and others) they have no idea how to train themselves or anyone else who isn't taking them. It takes a drug-free body two to three days to recover from a properly conducted workout. And I'm not just talking about the replenishment of muscle glycogen or the repairing of muscle tissue. It takes a minimum of two days for your body to replenish/ repair two other systems of the body that are much more important to your ability to perform at your maximum at your next workout. These are your nervous system and your endocrine system. These "systems" can take up to three to four days to recover. And without them working at their peak it doesn't mean diddly it you have replenished your glycogen stores or not.
Put your program together as follows:

Day one:
Crunch 1x5-20
Squat 2x5-15
SLDL 1x10-15
Bench press 2-5 x 5-15
Pulldown, chin or row 2-5 x 5-15

Calf raises 1x5-20
Static grip 1x 60- 90 seconds

Day two

Sidebend 1x5-15
Deadlift 2-5 x 5-15
Military press 2-5 x 5-15
Barbell curl 2-5 x 5-15
CGBP 1-3 x5-15
Wrist curl 1x 15-20
Reverse wrist curl 1x 15-20

Here are two effective templates for training 3 times per week, Monday, Wednesday and Friday. Recommended sets and reps are the same as the two times per week template

Day 1
Squat
SLDL
Bench press
Pulldown,chin or row

Day two
Crunch
Barbell curl
Military press
Calf raise

Day three
Side bend
Deadlift
CGBP
Static grip

This template spreads the “big” exercises, the squat, bench and pulldown,chin or row over 2 days. Some trainees feel they cant do the bench or a pulldown, chin or row justice after squatting hard

Day 1
Crunch
Squat
SLDL
Barbell curl

Day 2
Bench Press
Pulldown, chin or row
Calf raise
CGBP

Day 3
Sidebend
Deadlift
Military press
Static grip

You will notice that I gave you a broad rep range to choose from. Your rep goal, or rep target, depends on what stage of training you're at and what your goals are. General guidelines are that if you are a beginner you should start out with a rep target somewhere between 8 and 12 reps for 2 to 3 work sets on the big exercises and one to two sets on the smaller. A work set is simply a set that is not a warm up set. This set and rep range is good for beginners because it requires many “total” reps per exercise which allows the trainee to practise and learn good technique. For instance two sets of twelve is a total of 24 reps, whereas if the trainee starter their program at two sets of five they would only be performing 10 total reps.

For the trainee that has a good foundation of training (intermediate level) who has developed good technique and wants to increase their absolute strength along with their size I would recommend utilizing three to five sets of five reps on the big exercises and one to three on the smaller.

For the trainee who is interested in powerlifting competition. I would recommend a three week cycle in which the rep goal is changed every week for three weeks. It looks like this:

Week 1: five rep goal
Week 2: Three rep goal
Week 3: One rep goal

On week four the is back to performing sets of five reps with the goal of adding the proper increment (Micro-loading) to those work sets. Each of the major exercises is performed for two to five "live" sets (non warm-up). This routine really helps prepare the trainee to demonstrate their maximal strength. There are many variations to this routine which are dependent on the trainees goals.

Many trainees have had tremendous success with the routines presented above. It's certainly not fancy, but it brings home the bacon. As a trainee becomes more advanced, or as their goals change, or as their sport specific needs dictate, the routine can be altered in an inordinate amount of ways, I'll discuss this later when I get into advanced training routines.

The application of Micro loading into a single progression program

Now that you know how to put a routine together, lets apply the simplest method of increasing the resistance.

If you are new to weight training, or are in the beginner stages, you must start a Program with some 'reserve reps.' left in you. What I mean by this is that when a set is completed you would have been able to complete two to three more reps dependent on the rep goal chosen. What many start thinking and this is what usually is the first thing that stops trainees from achieving what could be tremendous gains. in their first several vears of training is that they are selling themselves short in the gains department if they don't push a set right up to their limit by training to failure. This is incorrect. The reason is that as a relatively new trainee the body wont require the same level of stimulation to set off the mechanisms to make it stronger and bigger as it would a trainee who has been hitting the iron for a while. So, although they're not pushing to the limit, as long as there is more weight on the bar (and their technique is perfect) than at the previous workout they will be making gains. And most importantly, as new trainees, if they expect to achieve their strength and size goals its going to take a number of years training consistently, and they wont be able to train consistently if they are hurt as a result of poor technique. The effort required to push into the two or three “rep reserve” (approaching failure) will compromise the trainees concentration on on maintaining perfect biomechanics- which as a new trainee, have not become automatic yet. What happens is that the trainee completes these “reserve reps” with poor technique. They rely on aggression alone- and the heck with good technique. What develop over time then are poor motor skills, resulting in an inefficient use of ones levers, resulting in having to use less weight for a prescribed number of reps. That is actually the least that happens. Usually an injury develops and training has to be stopped until the injury heals. And it is obvious that if a trainee cant train then they aren't going to make any progress. The truth of the matter is that this initial period (of keeping reps in reserve till perfect motor skills develop) is very short, usually no more than four to six weeks. At this point in time, a trainee should be able to push right up to their limit with the most efficient technique that their body is capable of.

The bottom line is that the technique one develops by slowly closing in on their limit as described above is unique to their own length of levers. What I mean by this is that although there are biomechanical basics of each exercise that can be taught, the body must develop its own “fingerprint” of micro techniques that are specific to each trainees particular make-up (i.e., length of bones, connective tissue etc.) This may be the most important factor to ensure a trainee will reach their strength and size potential. There is no better way to allow the body to develop these “micro techniques” then properly utilizing micro loading through a program of single progression.

Like anything else, the 'basics' always bring home the bacon, but you have to know what the “basics” are first. If you've understood the material presented in this two part series, you now know what the basics are, but they wont do you a bit of good if you don't put them into practise. Put them to work for you today- you wont be disappointed.

Warm-up Sets aren't supposed to 'Warm you up'

I just recently completed a phone consultation WIth one of my trainees and he had questions concerning "warm up" sets This turned into about ten minutes of conversation (dissertation is more accurate) and he felt that most trainees were similar to him in that he didn't have n good understanding of what 'warm up" sets really are supposed to do. He thought it would be a good idea if I covered this topic since there is not really any precise information available concerning this important topic.

Getting the Body "Warmed-up"

Let's simplify this. A general warm-up is simply getting more blood from the internal organs, tissues, and "systems" of the body and moving it to the muscles. This is an absolute necessity if you expect the muscles to perform at their best and to avoid injury. This is easily accomplished but in my experience, it is rarely done properly. What you need to do is to perform a minimum of five minutes of continuous exercise. This can be a number of things such as walking, jogging. bike riding, rope jumping, general calisthenics, etc. At the conclusion of the five minutes you should be breathing fairly hard and have started to sweat and is what most trainees fail to do correctly. They simply don't warm-up hard enough. What I have seen is that most trainees (if they warm-up at all) will walk on a treadmill or hit the stationary bike for a few minutes at a pace that would be more appropriate for a stroll through the park while holding their girlfriends hand. What the heck is that supposed to do? You have to approach your warm-up as though you are preparing for battle. It should be a serious time. You need to be focused on transitioning from your everyday world to your workout world. And you cannot "blow it off" with the excuse that you've been on your feet all day and you are "plenty warmed-up". That just doesn't cut it. If you have been involved in a manual labor Job or activity you still need to go through a general warm-up to get some of the "Waste products" out of your muscles from the days work. You must also use this time to get the "waste thoughts" out of your mind so that you can concentrate On your workout. You must also consider the time that has elapsed since you got off of work. in most cases It will be much more than an hour which means the blood has "receded" hack into the "depths" of the body.

The last few minutes of your general warm up should have you in your mid level aerobic zone which is approximately 70 to 85% of your maximal heart rate To determine this check out the article complete Training part 1. When you achieve this heart rate level you will" be sweating and have an elevated respiratory rate (you'll be breathing fairly hard). Also. don't feel as though you need to keep the warmup time at five minutes. Lengthen It to ten if you need to just don't turn the warm up Into a full blown aerobic workout as it will then start to deplete the energy substrates that are needed for your weight Workout.

After the General Warm-up

Now that more blood is in the extremities, you need to go through a general stretching program. Now I know that some of you have read that stretching before your workout doesn't prevent injury and may actually impair performance. All I have to say about that is that in my 32 years under the iron, and after logging over 60 000 hours training others, I have conclusively determined from the anecdotal evidence that this is a bunch of B.S! And to be honest with you I feel that most trainees will use this misinformation (there is very little against stretching and much more supporting it) as an excuse not to stretch. If you want to get as big and as strong as possible you CAN'T get hurt-getting hurt stops progress-and you need to progress steadily for many years to achieve your dream of great size and great strength. So if you really "want it" then you will do what is necessary, and if you won't, then you don't really "want it" in the first place.

Your stretching program shouldn't be complicated, and it shouldn't take long to do! You don't need to turn into a yoga master to get the benefits of stretching The stretching program that we use takes about seven minutes and covers all the major joints / muscle groups of the body. Refer to the article Complete Training Part II to get all the details on the stretching program. After the general warm-up and the stretching, you are now ready to go.

The "Warm-up Sets"

Again. the main purpose of the warm up sets is not to get you warmed up per say. The term "warm-up sets" is actually a misnomer. In other words the term doesn't accurately describe its purpose. Actually, a majority of the sets that you perform before the "live" sets should be called "recruitment sets", or "motor learning sets". If you've performed the general warm-up properly, your body (and more accurately, your muscles) is already "warm". To state this better, there is more blood in your muscles and there is increased "generalized" or

“whole body” nervous system activity. So. the purpose of performing multiple warm-up sets is to achieve an increase in "localized” or “specific” nervous system activity. For instance, to practice improve the specific motor skills and progressively recruit the specific muscle fibers for the various exercises that you will perform for a specific workout.

Before I describe how to do this properly, let’s take a look at how warm-up sets are generally performed and why they actually hinder performance. Let’s say a trainee is going to bench press with a working weight of 250 lbs for three sets of five reps. He’ll start off with the empty bar (45 lbs.) and do 15 reps or so. Next will come the traditional 135lbs (a 45 lb. plate on each side for convenience) for anywhere from 12 to 15 reps. Next comes 185 lbs. (also for convenience-throw a 25 lb. plate on each side) for 6 to 8 reps. At this point the trainee is feeling a thorough pump, mistakenly believing that he is getting good and warmed-up. Two hundred and twenty five pounds is now loaded (how convenient again-two 45 lb. plates on each side) and performed for 3 or 4 reps. Finally, 250 pounds is loaded for the work sets. At this point the muscles responsible for benching are fatigued. Much “fuel” has been wasted on all of those repetitions and plenty of waste products are already built-up which will hinder the performance of the nervous system. The reason I am being sarcastic about the selection of “convenient” weights is that, first of all, this is what really happens in most gyms. And second you shouldn’t base your warm-up attempts on weights that are just convenient to load (and are easy on your “barbell" math skills). If the trainee above had performed his warm-up sets properly he wouldn’t be as fatigued entering his “live” or “work” sets. Performing the warm-up sets properly he would be performing his work sets with at least 260 lbs. And this is a significant difference when it comes to stimulating size and strength increases.

Okay, let me offer a better way. Take the same trainee mentioned above. I would start out his first warm-up set with approximately 60% of his starting weight. This turns out to be 150 lbs, and I would have him perform no more than 5 reps. Next, we would jump to around 80% (200 lbs.) for another 5 reps. His final warm-up would be with 90 to 95% (225 to 235) for 1 or 2 reps. This trainee would then rest 3 to 4 minutes and go after the work sets. This proper warm-up has the trainee only performing approximately 12 reps compared to the 40 or so in the first example. Instead of prematurely putting his benching muscles and nervous system in a state of fatigue he has progressively recruited the right amount of fibers putting the body in a more efficient state so that the working weight doesn't shock (feel extremely heavy to) him while preserving his energy substrates as well as the nervous system biochemicals that Will help him to perform at his max. Also he has performed enough total reps (10) so that he was able to enhance his motor skills for this particular exercise.

This is not the only way to do it. and it doesn't have to be based on the percentages that I have given above but they are a good place to start. Everybody is different. Some trainees just don't feel ready to go without more of a pump or “feel" of the exercise than what would be achieved with the suggestion given above. In this case I would recommend an additional warm-up set before the 60% set. This set would be performed with 50% of the Work weight for the day for 10 to 12 reps. Some trainees may need an additional set or two between the 90 and 97% range. This is especially the case when it comes to handling heavier weights during the work sets. If someone is squatting with 500lbs for 5 reps then to complete the last warm-up with 90%--450lbs-will not be adequate enough to prepare the body for the working weight. It would be better to complete another set, for only 1 rep, with 95%--475lbs. This will do a better job of preparing (making more efficient) the body’s nervous and muscular systems to handle the 500 lbs.

Some trainees may find that the jump from the 60% set to the 80% set is just too much ofa shock-the 80% set feels much too heavy. If so, perform another set with 70% for 3 to 5 reps.

The bottom line here is to keep in mind the purpose of the warm-up sets. They are to help you progressively recruit more muscle fiber so that the body is in its’ most efficient state to attack the work sets with all it can. They are also to be used as a tool to help practice the specific motor skills for the exercise that you are preparing to perform. The last thing that you want to do is to wear yourself out, or at the least put your body in a less than optimal state for the working sets.

I’m confident that if you try the approach that I have recommended above, you’ll be using heavier weights for your working sets and after a few weeks you will notice 3 “jump” in your strength and muscle mass.

The "curl challenge" series

You've got eight weeks till the next issue of
HARDGAINER comes out. That's eight curl workouts. At one pound per workout that's 8 pounds to your "live" sets of curls. I challenge you to do this, for this is exactly what Danny will be doing (with his *18+ inch arms). Just do this, and you will start a great story of your own.*

By the way. Did you perform the curl experiment I asked you to? Did you add a pound a week since the last issue of HARDGAINER? That's 8 pounds. Your arms should be a little bigger.
Now, I challenge you to do it again. Yep, that's right. See if you can add one pound a week to your curl till you receive the next issue of HARDGAINER. Then that'll be 16 pounds since we started this little experiment in the previous issue. Maintain great form and eat enough healthy calories, and those 16 pounds will make your arms noticeably bigger! This is exactly what I'll be doing, and with the next *issue we'll compare results. Okay, let's get to work!*

So, have you been adding the pound per week on your barbell curl as I challenged you to do several issues ago? Well, if you followed what I suggested, your curl weight will now be 16 pounds heavier than it was when we started.
This is what I've done, and my arms are an eighth of an inch bigger. Not bad for four months of training. Now, I'll be doing this again over the next eight weeks until you receive the next issue of HARDGAINER. I challenge you to do the same and we'll compare results again. If you stick with this, your curl weight will be up a total of 24 pounds by the next issue! That's very, very good for a half year of training! Pretty amazing how the weeks, the pounds, and the results add up, isn't it? All you need is *faith, effort, and patience.*

Twenty-four weeks have passed since I issued the curl challenge. My curl weight is up 24 pounds. Is yours? I hope it is because then it will have proven to you how this simple means of progression can produce great results.
My arms have gained just over a quarter of an inch in this time. And this is after twenty-four years of training. If you've just started out with your training, you should have gained even more, if you've been as dedicated as I have. Now, you need to keep this up for the next eight weeks. This is what I'll *be doing.*

If everything always went as planned, I'd have 25-inch arms by now. About a month ago my curls were "rolling along" at a pound a week, and then I came down sick with an upper-respiratory infection. When I was in my teens or twenties this would have thrown me for a loop, but being an experienced trainee I knew that this was just a temporary set back. I was forced to miss a couple of curl workouts. So, what did I do after missing two weeks of curls? I put my old weight back on and being the "bad ass" that I am, I hammered out the reps – only to cause an injury to my elbow! *Just kidding.* I took 90% of my last curl weight and started over by using that. The next week 95%; and the third week 100%. So, four weeks after getting over the infection I'm into "new territory" again. No big deal. Listen, this sort of thing is going to happen from time to time – don't let it throw you.
To update the scoreboard I'll be up 27 pounds for 6 reps (instead of the 32 pounds if I hadn't been sick). Not bad progress for 32 weeks of training. I expect that all of you are up 32 pounds if nothing has side-tracked you. For the next issue I should be up another 8 pounds (as well as another notch or two on my arm size), along with many of my students; and so should you be if you've accepted this *challenge.*

The Principle of Variety

From Hardgainer #86 – September/October 2003

If you're a student of the Iron Game -- whether in a formal sense (undergraduate or graduate level), or informal (reading everything about exercise physiology you can get your hands on) – you'll have heard of one of the most important principles that contributes to the stimulation of strength and size: injecting variety into your program. Webster's dictionary defines variety as: "being of different sorts," in other words, doing something different.

How do you do something different in your workout to promote the stimulation for continued gains? (Most trainees really mess this one up.) I know some so-called authorities in the steroid-ridden magazines recommend "instinctive training," where you change exercises for a given bodypart when you feel like it. This is absurd because it discards the most important principle of strength training: progressive overload. If you're regularly switching to the "flavor of the month" pec exercise, for example, you're not going to make progress, because one month isn't enough to allow substantial progressive overload to take place.

If a trainee is working at a level that promotes change, he'll be able to add only a pound or two to the bar per workout. For instance, if a trainee is using 200 pounds on the bench press for two work sets of five reps, and he's giving his all to get those five reps, he'll be able to add only one to two pounds to the bar each workout. So, in one month, he'll be able to bench press 204 to 208 pounds for five reps. This is great progress, but it's not going to turn him into a gorilla after one month. But, do this for several years, and you'll build bigger muscles. If you're switching exercises all the time, you'll not give progressive overload enough time to work its magic.

Variety in its most basic form

If we define variety as "something different," then 201 pounds is different than 200 pounds. There you have it, variety in its most simple form – a variation of load. When I start trainees out, the only change from workout to workout is more weight on the bar. The addition of more weight is enough of a change to allow the body to continue to be stimulated from workout to workout. At this level of development – beginner to intermediate -- the body's nervous system continues to get enough stimulation from the change of weight on the bar, and hasn't developed to the point where it also requires the stimulus of learning a new motor skill.

The body will eventually get to the point where great efficiency – great motor skills on a particular lift -- will not allow the highest levels of stimulation. In my experience, this won't happen for some time, probably not until after training properly for five to ten years. By simply utilizing single progression on a group of compound exercises utilizing a fixed set and rep goal (say two work sets of five), I've had great success putting 50 to 80 pounds of solid meat on beginner-to-intermediate trainees, in a couple of years. Many of these trainees make the 300 bench press, 400 squat, and 500 deadlift club without any change in the exercises used.

Now, let me give you a more detailed look at how I apply the principle of variety.

Application of Variety

Let's say I start a trainee out using two sets of twelve on all the big movements. Within about four to six weeks, the training gets to the proper level (with maximum effort, and barely making the last rep). I break out the small discs and ride this rep goal as long as possible. If the trainee is eating properly, this will last anywhere from four to six months. When the trainee fails to make the rep goal for a couple of workouts (as long as the out-of-gym factors are being adhered to), I'll continue to microload, but drop the rep goal to eight reps. This will give the trainee a couple of weeks of less intensive training, and then the training will be at the proper level again. I'll have the trainee ride this rep goal for as long as possible, and then I'll drop the rep goal again-generally to five reps. I've had trainees ride the fives for up to a year before I make the drop to threes. Depending on the trainee's goals, I may then go to singles, with a backoff set of eight reps. This entire process takes from two to three years. It's not fancy, but it can transform someone.

After the above process has been completed, what I'll generally do (again, depending on the trainee's goals) is start cycling the rep goal over a three to four week mesocycle. In week one, the trainee will perform two sets of eight; week two, it'll be two sets of five; week three, it'll be two sets of three. Then, the entire process will be repeated. This is known as a variation of a loading pattern. It gives the body greater variety from week to week. But the trainee will use the same exercises every week. This process can go on for another couple of years before the body needs something different.

Assuming the trainee isn't in a build-up phase, a minicycle would look something like this for the bench press:

Week #1 200 pounds for 2 x 8

Week #2 230 pounds for 2 x 5

Week #3 250 pounds for 2 x 3

The loads will vary for each trainee, depending on fiber composition and how well the trainee is "neurologically wired." This illustrative trainee will add anywhere from a half to one pound on week #1, one pound on week #2, and one to two pounds on week #3.

Rack work

After a trainee has been on the cycling program for a while, I'll start utilizing the power rack, to do partial movements. Once again, I haven't switched to different exercises, but have simply shortened the range of motion of the same exercises that were being used previously. This is another application of the principle of variety. And what's great about this, is that it allows for the principle of progressive overload – to me, the most important principle of them all – to continue to work its magic, because the trainee will be able to handle a heavier weight than he or she was used to while using a conventional range of motion. Also, the trainee doesn't have to take the time to learn a new motor skill. If, for example, the trainee switches to a dumbbell press from a barbell press, he or she will have to take a step back (utilizing weights below full capability) to allow time to learn the new movement properly.

Incorporating new exercises

There are several ways that I recommend doing this. But, I must mention that I feel trainees change exercises much too often. The prevailing thought is that "if I switch to a new exercise, the strength and size gains will come rolling in." The problem is that this type of trainee is generally looking at the wrong reason why the gains aren't rolling in in the first place. And this is because the trainee isn't focused on, and willing to work at, spending at least three to five years utilizing progressive overload on a handful of basic exercises. It's much easier to switch to the "magic" exercise of the month, than to buckle down and concentrate on adding weight to the bar and making your reps.

There are two scenarios in which I will incorporate new exercises into a trainee's size-and-strength routine. The first is if the trainee is not a competitive powerlifter or Olympic lifter, has a solid foundation of several years of training on a group of big basic exercises, and just wants to try a different movement.

The second scenario is when a trainee has reached a level of development, but the stimulation from progressive overload on a particular group of exercises is not allowing for *continued* gains. Of course, I'm assuming that out-of-the gym factors are being properly practiced. This second scenario really becomes apparent if the trainee is trying to stay at a particular weight class, and has a low bodyfat percentage, thus not allowing for much (if any) gains in strength from hypertrophy.

Let me address the first scenario. Let's say you want to switch to the dumbbell bench press, from the barbell. If you want to stay proficient at the barbell variety, I would suggest that you alternate one week with the barbell, and one week with the dumbbells. If you're not interested in continuing to be able to utilize your strength through the specific motor skills required of the barbell bench press, I would recommend that you commit to training with the dumbbells exclusively, for at least six months. One year would be better.

If you decide to come back to barbell bench pressing in a year, don 't expect to break your old records the first time you switch back to the barbell. You'll be stronger in all the musculature that barbell bench presses recruits, but you'll have to re-learn that particular motor skill before the new strength gains will transfer.

Here's how to make the switch to the dumbbell bench press: Drop the barbell bench press to one live set, and add two sets with the dumbbells following that one set with the bar. Start with about 35% of your one-rep max with the bar, split over the weight of the two dumbbells. If you can bench press 200 pounds for one rep, you would use 35-pound dumbbells. Add one pound to each dumbbell every workout until the reps get tough (possibly one rep left in you), and then eliminate the barbell bench press. Doing this, you'll continue to get stronger on the muscles that perform a supine press (through the barbell bench press) while your body learns the new motor skill of the dumbbell bench press.

Now, for the second scenario: In my experience, there comes a time when the body needs to experience what's known in exercise physiology as a new "pattern of fiber recruitment." My experience has taught me that this is *only necessary when a trainee has reached at least the intermediate level of strength and development*. I define the intermediate level, for a man, as someone who can squat or deadlift with double bodyweight, and bench press one-and-a-half times bodyweight. For a woman, it would be a squat or deadlift with 150% to 175% of bodyweight, and bench press of bodyweight. But, remember that these are *minimums*.

If a trainee hasn't reached this level, I feel it's unnecessary to do anything other than concentrate on a handful of basic exercises, put out maximum effort, and add a little iron to the bar every training session. *Don 't jump around from exercise to exercise.*

When a trainee falls into the second scenario, it's necessary to start utilizing different exercises to continue to make progress. This is because, from the intermediate level, the body has become so efficient at a particular exercise (motor skill) that the body becomes resistant to change regardless of using different methods to increase the load. In order for this trainee to continue to make good progress on the bench press, for example, he or she would be best served to do something other than just the bench press. What I would have him do is to alternate over a three-week microcycle the

following exercises that stimulate the muscles responsible for supine pressing:
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Week #1 Dumbbell bench press: 2 x 8
Week #2 Dip: 2 x 5
Week #3 Barbell bench press: 2 or 3 x 3
By doing this, the body is undergoing a completely different recruitment pattern during the first two weeks, with the third week allowing for the transfer of the new strength gains to the specific motor skills of the barbell bench press (if that's the goal of the trainee). As you'll notice, the rep goals change each week. This also gives the body something different to adjust to – a variation in load. So, a complete program could look like this:

Workout A Week #1
1. Knee raise (hanging from a bar): 2 x 8
2. One-1egged squat: 2 x 8
3. Leg curl: 2 x 8
4. Dumbbell bench press: 2 x 8
5. Supinated-grip pulldown: 2 x 8
6. 45-degree back extension:1 x 8
7. Plate-loaded gripper: 1 x 20 (with a ten- second isometric contraction on last rep)

Workout B Week #1
1. Exercise for the obliques: 2 x 8
2. Trap bar dead1ift: 2 x 8
3. Seated dumbbell press: 2 x 8
4. Hammer curl: 2 x 8
5. Bench dip: 2 x 8
6. Dumbbell calf raise (off floor): 2 x 15
7. Wrist curl: 1 x 15
8. Reverse wrist curl: 1 x 15

Workout A Week #2
1. Crunch: 1 x 5 (with a one-second isometric contraction at the top of each rep)
2. Leg press: 2 x 5
3. Stiff-legged deadlift: 1 x 10
4. Dip: 2 x 5
5. Supinated chin-up: 2 x 5
6. Dumbbell static grip work: 1 x 60 seconds

Workout B Week #2
1. Side bend on 45-degree back extension: 1 x 5
2. Conventional deadlift: 2 x 5
3. Rack standing press with barbell starting on pins set one inch above head: 2 x 5
4. Dumbbell curl: 2 x 5
5. Pushdown: 2 x 8
6. Single-legged calf raise (on one inch raised surface): 2 x 5
7. Finger extension (in bucket of rice): 1 x 20

Workout A Week #3
1. Sit-up: 2 x 3 (with a one-second isometric contraction at the top of each rep)
2. Squat: 3 x 3
3. Glute-ham raise: 2 x 5
4. Bench press: 3 x 3
5. Dumbbell row: 3 x 3
6. Barbell static grip: 2 x 30 seconds

Workout B Week #3
1. Side bend: 2 x 3 (with a one-second isometric contraction at approximately 30 degrees past the midline, on each rep)
2. Sumo deadlift: 3 x 3
3. Standing barbell press: 2 x 3
4. Barbell curl: 3 x 3
5. Close-grip bench press: 2 x 3
6. Farmer's walk: 3 x 30 seconds

Only work sets have been listed in each routine. Warm-up sets are additional.

There are many variations of this type of program, depending on the goals of the trainee and the equipment available. This type of program (as with any other) doesn't create miracles overnight. It
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takes about four mesocycles (four times through the three-week cycle) to start producing results. And as with any other program that I recommend, the trainee should plan on staying on it for at least one

year. But remember, this program is *only* for trainees who can meet the minimurn strength requirements described earlier.

In closing

What I've presented in this article is how I apply the principle of variety to strength-training programs. There are other ways to do this, but what I've presented is what has worked best for the trainees I've worked with over my nearly 17 years as a strength coach.

But *do not* go off half-cocked and start switching to every exercise under the sun. Switching exercises all the time (or even using the program described above, if you *haven't* satisfied the entry strength level) is the road to failure, and will lead to frustration.

If you've been training consistently on a good program for a number of years, and want to give a new exercise a try, do it in a sensible way as I've described. And make sure you stick with it for *at least* six months.

You can't beat the basics combined with the accumulation of training time.

The Long Cycle

Simple Periodization for the Beginner to Intermediate Trainee

The program philosophy presented in this article is one of the absolute best ways for a beginner to intermediate trainee to dramatically increase their strength and size in a relatively short period of time. Now, when I say “short period of time" I'm referring to the real world not fantasyland. “Short” in the real world is at least one year of training time. In fantasyland, where most of the steroid users, clever marketers and arm-chair theoreticians hang-out, you’ll get promised 20 pounds of ‘rock solid’ muscle in a week-what a joke! Using what is presented below I’ve transformed trainees within a couple of years to the point where it is routine for them to be accused of steroid use.

Periodization Defined

So, what is periodization anyway? By definition it is a process of structuring training into phases. I know that to most trainees it seems like some mystical formula shrouded in the language of the old Soviet Union; that it is pretty complicated stuff. But, in actuality, it is quite simple. And that’s what I’m going to do in this article-explain how to make it simple.

The essence of periodization, also known as ‘cycling’ is to build up the workouts so that a trainee is training hard for a period of time and then to purposely ‘back-off’ by training relatively easier, so that the trainee can recover and super compensate from the previous period of hard training. After the back-off period the body is fully recovered, stronger, and ready to start another period of building up, training hard, and then backing off again. This cycling of training has been proven over and over again to be superior to just training as hard as you can all the time.

There are a multitude of interpretations of periodization-most of which would make a mathematics PhD shudder. Now, there may come a time when a trainee may need to get more sophisticated, but only when they‘ve achieved an advanced level of strength and development. Also, I believe that having ‘preset’ dates for the ‘back, Off" (regeneration) training period(s); as is the case in the standard periodization model, aren't as productive for the beginner to intermediate level trainee as letting the body dictate when it's time to back-off. Now, you may be thinking that such an instinctive type of setup would be reserved for the advanced trainee but it is just the opposite. And it’s not so much ‘instinctive’ as it is simply letting the body dictate when these periods are to occur. Yeah, you can start a beginner trainee out on a routine that has preset back-off weeks but I feel you’ll be cutting the results short verses letting the body dictate when this is necessary.

For instance one method of periodization has the trainee hitting it hard for three Weeks with the fourth week designated as the back-off week. But, what if the trainee is still going strong at the end of week three? And what if the trainee keeps going strong for 12 weeks? If you’d have followed the typical formula presented above (where you back-off in week four), you would have lost three weeks of progress in that 12 week period. Now extrapolate this over a one year period, and it becomes very evident of the time ‘lost’ to backing-off essentially one week every month. Understand that I am not against backing-off; I‘m for it, but only when it is necessary.

My plan has the trainee going hard until the body dictates that it has plateaued Experience gained through over 60,000 hours of hands-on instruction has taught me that a beginner to intermediate trainee can go at least six months before a back-off and rebuild is necessary.

Keep in mind that I’m talking about beginner to intermediate trainees here-not advanced trainees. The beginner to intermediate especially if substantial muscle mass gain is a goal, and the necessary caloric intake to accomplish this goal is being met-can ‘go’ a lot longer then an advanced trainee before hitting a plateau. The main reason for this is that the nervous system of a beginner isn’t as developed as an advanced trainee. Therefore, it doesn’t adapt and then plateau as fast. Also, the beginner has much more room for improvement versus an advanced trainee who is pushing his genetic limits and may not want to gain substantial bodyweight.

The Plan

Here’s how I do it. The trainees experience and goals will dictate the rep goal that I’ll start them out at. But for this example let’s say that I’ll start a trainee out using sets of 12 reps on all the big movements (squats, deadlifts, bench pressing, overhead pressing, rowing or chins or pulldowns, barbell curls, close grip bench or dips etc,

With") about Four to six weeks the training gets to the proper level of effort (with one rep left before failure and I start Micro loading (see chart below) as the means of progression to allow the trainee to 'ride' this rep target as long as possible. If the trainee is eating properly, progression will continue for three to six months using a rep target of 12 reps

Exercise /Rate of Progression
Squat 2 1/2 lbs per week
Deadlift(bent-knee) 2 1/2 lbs per week
Power Clean 2 '/2 lbs per week
Stiff-leg deadlift 1 to 2 1/2 lb per week
Bench press (all forms), Dips 1 to 2 lb per week
Row, Pulldown, Chin 1 to 2 lb per week
Shoulder press 1/2 to 1 lb per week
Barbell curl 1/2 to 1 lb per week
Pushdown 1/2 to 1 lb per week
Close grip bench press '1/2 to 1 lb per week
Grip, Forearm work 1/2 to 1 lb per week
Crunch, Situp, Leg raises 1/2 to 1 lb per week
Rotator cuff work 1/2 lb every four weeks
Neck flexion and extension (neck strap) 1/6 lb per week
Standing calf work (barbell, machine) 1 to 2 lbs per week
Single leg calf work 1/2 to 1 lb per week (dumbbell held in one hand)
Back extension (45 degree, horizontal) 1/2 to 1 lb per week
Sidebend 1 lb per week

On this type of training program these increments provide the 'right' loading-or stating it another way-the right 'dose' of iron. This will allow the trainee to continue to make their rep target from workout to workout for a LONG period of time, especially when the rep target is reduced to 6 reps and below and especially when the trainee is gaining weight.

When the trainee fails to make the rep target (12 in the example above) I'll have him repeat the weight for a couple of workouts. If he still can't complete the 3 sets of 12 then it's time to back-off and rebuild. Now, the way that I do this is different than what is normally prescribed in traditional periodization models. Traditional periodization has the trainee reduce that top weight substantially (by up to 20%) for a week and then either jump right back to using their top weight again the following week, or taking an additional week to 'climb' back up to than previous top weights. Then, hopefully the trainee will go beyond the top weight that they were handling for the 12 reps during the next two weeks. This process does work, but us I said for beginner to intermediate level trainees I feel there is a better way. Now for you periodization aficionados don't get your underwear all twisted by, the explanation I just gave. I KNOW that what I presented is an oversimplification but it is way beyond the purpose of' this piece (which is to make things simple to break down every nuance of the various loading parameters (wave, step, linear, non~ linear, conjugated, yada, yada, yada) that are used in various periodization formats'

So Instead of dropping the weight what I'll do is have the trainee actually increase the weight by the prescribed dose (say 2 '/2 lb. on the squat) BUT drop the rep target to 8 reps. This will give the trainee a couple of weeks of less intense training and then the training will climb to the proper level again. What is different, and great, about this is that the trainee continues to 'feel' the weight that had become a maximum effort to make the 12 reps-but now only does 8 reps. Without going into scientific detail I feel the nervous system doesn't get 'detrained' as much using this method as when following other periodization models that have the trainee drop the weight. Here's the other thing that's great-the trainee gets quite a confidence boost because what was a weight that was very difficult for 12 reps is now performed for a strong 8 reps, and With additional weight on the bar. This confidence continues to grow as the weight mounts on the bar over the next several months till it starts to become very difficult again. Then I'll have the trainee 'ride' this rep target by continuing to Micro-load for as long as possible, and then I'll drop the rep target again-in this case to 5 reps, and the entire process is repeated. The 5's are a magical number (actually a weight that is roughly 80 85% of a one rep max)-I'll explain what I mean by 'magical' sometime in a future article. For you must understand that working at 5 reps builds the maximum amount of functional muscle mass. I've had trainees utilize 5 reps as the rep target for up to a year before they'll need to make the next drop to 3 reps. Once the 3's 'dry-up' there are several ways I recommend the trainee to go dependant on their goals. I may go to program based on using sets of single reps followed by a backoff-set of 8 repetitions, I may have the trainee go back to the 5's again. It just depends on the particular circumstances of the individual. This entire process takes anywhere from two to three years. Not very fancy, but hey it sure brings home the bacon, literally

transforming the trainee into someone who is not recognized by family and friends.

After the above process has been completed, the trainee has gained so much muscle and increased their strength to a level that puts them in the intermediate to advanced trainee category. From here I'll generally (once again depending on the trainee's new goals) start 'cycling' the rep goal over a three to six week macrocycle. Using the example of a three week macrocycle; in week one the trainee will perform 3 sets of 8 reps. week two it'll be 3 sets of 5 reps, week three the trainee will perform 3 to 5 sets m" 3 reps. Then the entire process will be repeated with the addition of a small dose 01" iron to each Weeks' load. This process can go on for another year. Using the ("'00th that I've just explained, trainees under my guidance have put on up to 80 pounds of solid bodyweight and achieved national rankings in drug free, 'raw' powerlifting.

Program Design

It's beyond the scope of this article to get into the details of program design as this topic can get very big and confusing. To get detailed information on how to set up a training program read the article Designing Your Training Program. What I'm going to do here is present two templates that I have had tremendous success with. One is performed two times per week the other three times per week.

Performed two times per week (i.e. Monday and Thursday):

Day one

1. Crunch 1 x 5-20 (choose a 'fixed' rep target between 5 and 20 reps) 2. Squat 2-5 x 5-15

3. Stiff-legged deadlift or back extension 1 x 10~15

4. Bench press 2-5 x 5-15

5. Pulldown, Chin, or Row 2-5 x 5-15

6. Calf raises 1 x 5-20

7, Static grip 1 x 60-90 seconds my two

Day 2

1,Side bend 1 x 5-15

2, Deadlift 2.5 x 5-15

3 Military press 2-5 x 5-15

4 Barbell curl 2-5 x 5-15

5 close grip bench press 1-3 x 5-15
6 Wrist curl 1 x 15-20
7 Reverse Wrist curl 1 x 15-20

Here are two effective templates for training three times a week (ie Monday, Wednesday and Friday). Recommended sets and reps are the same as the two times per week template.

Day 1
1 Squat
2 Stiff legged deadlift or back extension
3 Bench press
4 Pulldown, chin or Row

Day 2
1 Crunch
2 Barbell curl
3 Military press
4 Calf raise

Day 3
1 Side bend
2 Deadlift
3Close grip bench press
4 Static grip

This template spreads the ‘big' exercises; the Squat, Bench, and Pulldown or Chin or Row, over two days. Some trainees feel they can‘t do the Bench or a Pulldown, Chin or Row, justice after squatting hard
Day one
1. Crunch
2 Squat
3. Stiff legged deadlift or back extension
4 Barbell cur!
Day two
1. Bench press
2, Pulldown, Chin, or Row
3. Calf Raise
4. Close-grip bench press
Day three
1. Sidebend
2. Deadlift
3. Military press
4. Static grip

I kept the rep range broad because the goal reps that you choose to work at needs to be based on your goals and training experience. I generally recommend new trainees to start out utilizing higher reps in order to help develop motor skills (technique) and to keep the overall force on the connective structures relatively low (compared to sets of five reps and below).
As I mentioned above, I can’t go into the great detail that this area of strength training demands, but what I have presented should give you an idea of how to set up a productive program that will stimulate gains and allow for complete recovery.
So, if you are just beginning in the iron game, or if you have been at it for a while and feel that you haven't make the progress that you should have, I challenge you to string together at least one year of training utilizing the ‘long cycle’ approach that I‘ve presented in this article. If you achieve this goal I’m confident that you'll look, and perform, radically different this time next year.

Appropriate Volume

The confusion is unbelievable. And it's really sad in this age of readily available information. What I'm speaking of is the modern-age question (I can't call it 'age old question' because in the old days 'it' wasn't a question at all); "how many sets should I do?" What's best: One set? Two sets? Ten sets? And what makes it more confusing is that every faction has its poster child. You know, the guy that has tremendous development and strength who claims that he got that way performing 'X' (insert any number for the X sets. Very confusing I feel your pain-and hope to eliminate it.

What I'd like to do is to shed some light on the subject so that it isn't so confusing and it really shouldn't be. The information that I present in NOT based on some clinical study that I've performed it is based on many, many years in the trenches working one on one with trainees amounting to thousands of hours training over the last 20 years. And it is also based on the information that I've derived from being under the iron now for over 30 years, and still pushing it hard. So, this information is based on what I consider the most reliable form of data in the face of the earth-empirical. You can perform all the controlled studies you want (which many by the way are a joke but what it eventually comes down to is the test of time on a wide variety of subjects-in other words 'real world' results. Just ask any drug company executive what the true test of a new drug is. Drug companies spend millions of dollars to test a new drug in a clinical setting (arguably the best, most controlled clinical studies on the planet), the Food and Drug Administration approve the drug, only then to have to pull the drug off the market in a couple of months because of the adverse effects it has when the 'real world' starts using the drug. His answer will be empirical data. Empirical data either confirms or denies what the clinical studies found.

What's great about this as it's related to our field of strength training is that empirical data abounds. Not just what I've accomplished on my stable of trainees, but the data that is available from all the way back to the 19Lh century. And it continues to be proven to this day not only by the biggest and strongest men and women in the world that you hear about or see on the Strongest Man competitions on TV, but most importantly the big and strong men and women who are hitting it anonymously in the gyms, basements and garages around the world; so called regular people who can squat two-and-a half to three times their bodyweight only wearing a belt, or who sport 18+ inch arms.

The Right Amount

So, what's the right amount? Well, it depends on several factors; what are you training for? What is your lifestyle like; three kids and two jobs? What other physically demanding activities are you involved in (sports, hard manual labor)? What is your experience development level? Would you consider yourself a beginner, intermediate, or advanced trainee? This is an oversimplification but, I would consider someone an intermediate to advanced trainee (real, drug free trainees), who can squat two times their bodyweight, deadlift two-and-a-half times bodyweight, bench one-and-a. half times bodyweight (no bench shirt, paused on chest) and strict curl 70% of their bodyweight. This at least gives you a rough guideline.

A simple rule of thumb to determine the right number of sets to perform is that as you become more experienced-as your nervous system becomes more developed-you need more volume to continue to progress. The prerequisite here is that your lifestyle must allow you to recover from the increased volume. Now, I know that flies in the face of many of the "high intensity" crowd-but not only is this what] found to be true over my many years in the game (some of which were spent utilizing HIT protocol) but, empirical data over the last 100 years confirms it. I found it very interesting when recently I read where a very well known, well respected he has mine) NFL strength coach who is not only a HIT devotee, but actually spent much time under the tutelage of Arthur Jones himself, recommend two and now three working sets per exercise. Makes you wonder why he's decided to increase the volume of his training protocol-possibly because he's getting better results? I don't know for sure-but I know he's a bright guy who's been in it longer than me.

Appropriate Volume

My goal here isn't to get into the single set versus multiple set battles that has beefl raging on for awhile. And it's not because I don't like a good fight-I just don't have the time for it in this writing.

In almost all cases, doing multiple sets is critical to your success in getting bigger and stronger. In the situations where a trainee is involved in other sports, or has to shorten a workout for out of the gym reasons,

or for an experienced trainee “cutting back” to allow his body to regenerate, doing ‘less’ will still be productive. To state this simply; there is a time and place for everything. To think that a football player is going to come off the field after a two hour practice and perform squats, for five sets of five reps is ridiculous and counterproductive. But to require him to perform one hard set of five is not only realistic but absolutely necessary for him to get stronger. The flip side to this Is that to think a trainee who wants to get as big and strong as possible, who works a desk job, is single, and has no other responsibilities, will get the optimal amount of stimulation from one set (practiced as the only training method throughout his entire training career) is also ridiculous.

The bottom line is that you have to build up to the point to doing more. Now when I say more this is taking into account that you are already training hard enough to stimulate gains. ‘Hard enough’ being a weight that you could possibly perform one rep beyond your target number. Yes, this is enough to stimulate gains many have been brainwashed into thinking that they must train to failure to gain this is absolutely false. And it is my opinion that unless you fall on the far side of the bell curve you will never reach your strength and size potential relying only on the ‘training to failure’ protocol.

I want to go back to the doing ‘more’ statement that I made above. I want you to name something in life in which the practice of doing ‘less’ makes you better; hit golf balls once a week?, study a Finite Mathematics problem ‘once’ and put the book away? Spend time with your significant other for 20 minutes once in a two week period? Go to the tanning bed one time a week for 10 minutes to get that deep dark tan? I can’t think of anything that doesn’t require someone to do more to get better. More work on the field, more work in the classroom, more time at home with your wife and kids, getting more done at work, AND, more work in the gym period. Kind of seems like its natures law doesn’t it?

Let what you just read sink in. Some of you just had a light bulb go off; others are downright pissed off at me right now; since I am the coach that is known for abbreviated training for ‘real people’ with ‘real lives.’ Go back and read that statement again-thoroughly; I wrote more work in the gym, not more time in the gym. If you know how to structure your workouts you can complete more quality work in less time.

So, Exactly How Much?

As I posed in the first paragraph: Is it one set? Two sets? Ten sets? Here’s what my empirical data (supported by empirical data from the biggest and strongest drug free people who walk the earth) has taught me and what I use successfully on the people I train. Generally, you should perform between two and five working sets on exercises that will produce the changes that you desire. And although this piece isn’t about exercise selection, the “changes that you desire” will be best produced by the crop of commonly known compound basic exercises-squats, rows, deadlifts, bench presses, sit-ups, etc. Other exercises that support your continued progress on the

basic group, or other exercises chosen for their ‘cosmetic effect’ (for competitive bodybuilding) should be performed for one or two sets if they are performed within the same workout as the compound basic exercises. If they are performed on a different day, then they should also be performed for two to five sets.

I want to reiterate again that there is a time and place for everything. I recently read this stated in another way and I think it’s great; “all training laws are reversible under the right circumstances”. BUT, don’t make a point to train against what has already been proven through time, just to prove that you can train differently or train in a Way that is falsely more ‘macho’--very, very few have succeeded this way.

Why You Should Do More

This topic can get real big. So, I’m going to try to keep it simple. My explanation is based on factual exercise physiology, and proven by experience.

Doing more sets helps you to perfect your performance of each exercise. It perfects your skills. Just like swinging a baseball bet or golf club thousands of times helps to perfect your swing. Perfecting your ‘groove’ or motor skills of each exercise makes them more efficient. More efficiency leads to better leverage which leads to lifting more weight which leads to more strength which leads to more muscular development. Better leverage greatly reduces the risk of injury, which leads to lifting more consistency, which leads to consistent stimulation, which leads to more strength You get the point.

My experience has taught me that whether it is with a rank beginner, or a seasoned trainee, performing only one set even if it is done ‘too failure’, does not--even after months or years of training develop ‘great’

technique. They're pushing as hard as possible all right, but the bar still 'drifts' in different directions, the 'groove' is inconsistent from rep to rep; it's just not perfect. Yes, the trainee does develop some muscle mass, but strength development (relative or absolute) slows to a crawl even when utilizing a rep goal of six or less, usually accompanied by an injury of some sort. Also, I have noticed that the strength that is displayed by these trainees is far below what a trainee of their muscular size should have. The reasoning behind this is that the mass is mostly sarcoplasmic (increased fluid, capillaries, and other organelles inside the muscle), caused by the fatigue of training to failure-instead of the increased mass being a product of an actual increase in the contractile proteins-which is produced by the combination of creating maximal tension and fatigue. To get this combo you must perform multiple sets with a heavy weight. So, the 'one set' trainees have gotten bigger and a little stronger but not nearly as strong as if the mass was produced by performing multiple sets (not to

failure) utilizing relatively heavy weights (approximately 70% of max and up) Using a weight in which it becomes difficult to perform six reps or less.

There is something else that I want to address concerning the skill of exercise performance'. There are some authorities who claim that basic strength training exercises don't require much in the way of 'skill' to be able to perform them optimally. 'This argument is used to support the contention that you don't need much 'practice' - don't need to perform many sets to perfect the skills of, say, bench pressing. I disagree. Sure, performing a bench press doesn't reqiiire the level of motor skills of hitting a baseball which is arguably the hardest skill to master in all of sports but I surely wouldn't classify the bench press as a movement that requires little in the way of motor skill development. I achieved a fairly high level of success hitting a baseball, and it took at times, taking over one thousand swings of batting practice per week, So, looking at the bench press as an example, here's some of the things motor skills that a trainee needs to perfect to bench press optimally; feet need to be "dug" into the ground, lumbar area needs to be held in spinal extension, scapular area needs to be retracted and depressed throughout the set, a breath needs to be inspired and held during the descent and released during the ascent, the bar needs to be held motionless at the bottom position. the humerus needs to adduct during the descent, and will at some point abduct during the ascent, a strong isometric contraction of the gripping muscles of the hand must be held for the duration of the set. These are just some the basic "skills" that need to be practiced. Oops, and I almost forgot-they need to be perfected while holding a very heavy weight above your torso (while in a fatigued state at times). This doesn't sound like a 'simple' activity, does it? The point; if you want to get good at benching (which will result in optimal strength and size development) you'll need to bench for more than one set per week. You'll definitely get better at benching performing 25 to 30 total reps per week; 5 sets of 5 reps performed one time per week, or 3 sets of 5 reps performed twice per week, versus performing 8 reps one time per week (one set of eight performed to failure).

I think optimally stimulating strength and size gains, has more to do with 'teaching' the nervous system what you want it to do, and then giving it time to make the necessary morphologic (tissue/muscle) changes. And the only way to teach the nervous system is by exposing it to multiple trials. You almost need to think of your strength training workouts as 'teaching' your body to do something rather than as approaching it as a workout to subject the body to as much physical torture as it can withstand. Don't misinterpret me you need to train very hard but to achieve a specific purpose, not just for the sake of 'training hard'. You know the Russian strength coaches, who got much of their early (1930's to 1950's) strength training knowledge from us, have a term for what I am calling a 'teaching' of the nervous system--they call it developing Skill Strength.

Keep this in mind no one knows conclusively, what actually occurs on a cellular level that makes a muscle grow and get stronger. There are only theories. Theories are not facts. Some think that it is caused by supercompensation after tissue has been damaged; others think that the cause is a disruption in the pH balance of the muscle; others think that it has something to do with ATP, and another with the stimulation of 'satellite cells'; on and on and on it goes. Whatever the scientific explanation is behind it. the truth is in the pudding, and I know that by recommending the performance of multiple sets I've produced the best results in the trainees Who put their trust in me to get them as big and as strong as possible.

Volume Broken Down Further

Here are the specifics for trainees whose sole desire is to get stronger and bigger. These recommendations would change dependent on a trainees' specific life demands which can effect recovery time; an athlete who is 'in season', or a trainee who is holding down a physically demanding job, etc.

For Beginners to Intermediates

Perform two to three working sets on the big basic compound exercises. Some intermediate trainees may need to perform these twice per week cycling the
volume performed in each workout. Perform one or two sets on auxiliary exercises; exercises that effect smaller muscle groups, such as the arms, abs, obliques, direct low back work, and calves. Dependent on how you set up your training week. even some of these movements, if they are not performed on the same training day as the “big stuff”, can be performed for up to three sets.

Intermediates to Advanced Trainees

You need to push for at least three sets on all exercises. And to really make it to your genetic potential you must push for five working sets for at least one of you two sessions per microcycle. A microcycle for most trainees is based on a week although depending on how you set up your training it can be longer. For instance one of the templates that I recommend has the trainee performing an “A" and “B” workout alternated on a Monday (A), Wednesday (B), Friday (A), and the“ the next week on Monday (B) format. This template is a ten day microcycle.

Overtraining

Oh boy, I can hear many of you thinking right now; “John, I’ll overtrain with that much volume!” Wrong. It makes me sick about how many perfectly healthy trainees have been brainwashed into fearing ‘overtraining’. Hey, I know that you can overtrain no doubt about it. But, what I have recommended above, YOU CAN DO, safely and very effectively. I’m not recommending that you perform 20 sets of bicep work performing 5 different exercises three times per Week like that which is promoted in the stupid. steroid filled, mainstream muscle mags. All you get by doing that is a bunch of worthless fatigue because the weights you have to use are so low you don’t expose the muscles to any appreciable level of tension.

Keep in mind that if you’ve only been performing one or two sets of an exercise, don‘t jump right to doing five sets; that will overtrain you. Start by increasing your work sets to three, then after about three months add another. Do it gradually, give your body time to adapt. Although the volume per some of the exercises is high (five sets), the overall workout volume needs to be low to moderate by keeping the number of exercises low.

Here’s the bottom line; what I have recommended works for all the trainees that I have worked with (and re-read the second paragraph on the first page for my experience level), and the empirical evidence over many, many decades supports its validity.

In Closing

You can make progress by doing less than I recommend. But I’m confident that unless you fall on the far side of the genetic “bell curve” (genetic superiority), it’ll only get you so far, and if it can get you further, it’ll take much, much longer. Some of you may feel that you have no choice due to professional or family obligations. I understand whole-heartedly, as a family man of three young children, owner of three businesses, and a competitive powerlifter. But, with the right planning, and selection of only the absolutely necessary exercises to achieve your goals you can do it-you can get in the appropriate volume of work, and build a strong and physically impressive physique, by strength training as little as two times per week. Remember that it’s not enough just to train hard-you have to train smart. And in my opinion, using the appropriate volume is one of the smartest things you can do.

"Rebel" Thinking: Calf and Ab Training

From Hardgainer #41 – March/April 1996

Why are you training your calves for 2 sets of 15-20 reps? How about your abs? One set of 30 reps? Or is it 2 sets of 20? Why are you doing this? Have you ever taken the time to ask yourself why it is recommended that you use only higher reps (15-30) for these very strong muscle groups? You've undoubtedly seen squats recommended for anywhere from maximum singles to sets comprised of 50 or more reps. So what gives? Why the disparity? These are questions that went through my mind about five years ago.

MY DISCOVERY

I was getting ready to do battle with 405 lbs for 20+ reps on the standing calf machine. I made 22 reps, couldn't budge number 23 and I gave it a hell of a try. I had made no progress in this movement for months, despite consistently great effort. I would always fail between 20 and 23 reps. It was time for a change.

Since all of my other basic exercises were still making progress, I decided to take a week off just the calf raise, and then start a new cycle using a different rep range. During that week I decided to use 15 reps as the new rep target for my calves. I went looking back through my old training journals to find what I had last used as a top weight on this movement for 15 reps. Well, it wasn't that much more than I had just used for the 20s. I realized that over the last several years I hadn't made any real progress on this exercise.

Then I happened across an article in an old magazine that stated that the great Reg Park could use over 800 lbs for 10 reps on the standing calf raise. I thought, "I wonder why he's only doing 10 reps?" Then it hit me. I'd been so closed minded. I'd been training my calves as if there was some kind of law against using lower reps (less than 15). My calves needed to feel more weight. My body had become used to the 15-20 rep range. I needed to use a lower rep range. This was standard procedure for me on my other basic exercises, but I had never attempted it before on calf work because I had never seen it recommended before. Why doesn't anyone recommend lower reps for the calves? The same is true for the abs.

Are high reps recommended because the ankle joint becomes more vulnerable than say the lower back region or the knees, although low reps are prescribed and used quite frequently for squats and deadlifts? After training my calves and abs for 5-rep sets (and instructing many of my clients to do the same) for several years now, with tremendous results, I can say that the ankle is no more vulnerable than any other joint.

I've stated before that I believe there is no magic in a given rep range, and I'm not suggesting that there is now. *But there is "magic" in anything that rekindles the human will, so that you continue to put in massive levels of effort, consistently over the long haul!*

Breaking away from conventional thinking about calf raises and crunches rekindled my will. In my almost-twenty years of training I've used all rep ranges for all exercises, and I have found what rep range or combination of ranges works best for me. I have always had success alternating between cycles of anywhere from 3 reps to 20 reps. But I've always kept the reps above 15 on my calf and ab work. How closed minded I'd been. Anyway, I couldn't see any reason not to use a lower rep range for my calf and ab training. The calves and abs have been treated over the years by the magazines as if they are "constructed" of some different type of muscle fiber that only responds to high-rep training. That is just not true.

I can recall only one instance when high-reps-only training for the abs was questioned. That was by the very insightful Arthur Jones. I remember reading somewhere that he wrote that the abs should be trained no differently than any other muscle. He suggested the 8-12 rep range. Well, being somewhat of a "rebel" thinker after all the years of listening to the "cutting edge" advice from the phony steroidbloated champs, getting very limited results but numerous injuries, I now always follow my own instincts based on my training experience and formal education. I decided to take the lower rep training for the calves and abs further – to the 5-rep mark.

THE "TRANSITION"

I decided to use the same approach that I use when performing 5-rep work on the other big exercises such as squats and deadlifts: a couple of warm up sets followed by two "live" sets. When the weight starts to push me I do only one "live" set. I started the transition by adding 10 lbs a week to my 20-rep weight, but for only 5 reps. I was able to maintain this rate for about ten weeks till it started to push me, then I dropped to 5 lbs a week. I was able to maintain this rate for a surprisingly long time. If

you've never done lower rep training for your calves (and I'm very confident that virtually no one has) you won't believe how incredibly strong those muscles are.

I hate to give out "numbers" but I need to, to illustrate the effectiveness of the program I used. A little over fourteen months after starting on the 5-rep work, I completed 5 perfect reps, to momentary failure, with 747.5 lbs. I never measured my calves, but they were much bigger (it was about at that time that I had to cut the back of my favorite cowboy boots just to get my leg in). The following week I wanted to see how much "carryover," in the strength department, there was to the 20-rep calf work. Remember that my previous best was 405 x 22, fourteen months earlier. I initially tried 450 lbs but stopped at 10 reps because it was too easy. I put 500 lbs on the machine and hammered out 26 reps. This was a gain of about 100 lbs, for high reps, on an exercise that had previously made no progress for years. After about a week off I went back to 20-rep training for six months, and continued to make steady progress.

I experienced the same kind of results with my weighted crunches. Before I started the 5-rep training I could perform approximately 20-25 reps to failure with a 90-lb dumbbell held high on my chest. Fifteen months after starting the 5-rep program I performed 5 reps (failed on the sixth) with a 180-lb dumbbell. A week later I tried the 20s again, and made 21 reps with 120 lbs.

HOW TO DO IT

First of all, train your calves and abs only one time per week. You have to make the transition slowly from the higher reps (15 or more) to the lower rep ranges. Great technique is always important when you train, but when using lower reps it is critical! When using a weight that allows you to do 15 reps or more, the body can be somewhat forgiven if you get a little out of the "groove." When working with lower reps (5 or fewer), if you allow yourself the slightest margin of error you will get hurt.

You're going to do a couple of warm up sets followed by two "live" sets. When the sets get tough to perform, one "live" set is all that you need at each weekly calf workout. What I recommend is to add 10 lbs a week for the calf raise and 5 lbs a week on the crunches, for the first four weeks, at only 5 reps a set. You have to give the body time to toughen up to the heavier weights. From here on out, add 5 lbs per week to the calf raise and 1 lb a week to the crunch. You should be able to "ride" this rate of progression for quite a while. Eventually decrease the calf progression to 2.5 lbs a week. When you get to the point where reps 4 and 5 are nearly impossible to get out, break out the very small plates and *keep pushing!*

CALF RAISE: HOW I TEACH IT

I had always believed that one should allow the heel to go "all the way down" to a maximum stretched position when performing the calf raise. After years of dealing with a condition known as plantar fascitis I am no longer an advocate of this technique. Not only have I dealt with this condition, but a handful of the clients that I taught to get a maximum range of motion also developed the same condition. (This occurred while using the 15+ reps range. It wasn't due to the lower reps and hence heavier weights.) Plantar fascitis is an inflammation of the major tendon on the bottom of the foot. Its symptoms are pain on the bottom of the heel, especially when you first get out of bed in the morning. I know that this condition was brought on by allowing the foot to "bottom out" during the calf raise. I know this because when I altered my technique, and the technique of my clients who had the same condition, the plantar fascitis disappeared.

What I now instruct my clients to do is to extend to a point between one and two inches below parallel, and then stop. If you allow your foot to go to its maximum range of motion, I feel too much strain is put on your Achilles tendon and the fascia on the bottom of your foot. I believe it is nearly impossible to keep tension on the calf muscle when you've bottomed out. All the stress is on the joint. I feel this is similar to allowing a pair of dumbbells to extend as far down as the joint allows during dumbbell bench presses. This practice virtually guarantees shoulder problems.

Some of my clients I train can get a maximum stretch at the bottom of the calf raise with no problems. You just have to find out what works for you. I don't allow any bouncing in and out of the bottom position. We come to a complete stop at the bottom, and then really concentrate on pushing as hard as possible on the way up, trying to get as high as possible. This is the part of the movement that I feel is most neglected – the contraction at the top of the movement. Remember, the goal of the movement is not to see how far down you can "hang" with the weight, but to see how high you can get it. Hold the contracted position for a moment before slowly returning to the bottom.

THE IMPORTANCE OF CALF AND AB WORK

I have seen most people just throw in some calf and ab work as an afterthought. I think this is wrong. As many of the contributors to HARDGAINER magazine have mentioned over and over again, most of your effort needs to be concentrated towards using heavier and heavier weights in the big basic movements (i.e., squat, deadlift, bench press, pulldown, etc.) I wholeheartedly agree. But some time

needs to be allotted towards the smaller but still very important movements. It doesn't take much time or energy.

If you're just starting into weight training, try to include these smaller exercises right away, one time per week. If they interfere with your recovery, and take away from the big exercises, just perform the

small movements once every two weeks. But the calf raise and the crunch (along with grip work, another "little" area) must be trained. The ab work is absolutely critical for developing a corset of strength around the middle of your body, not only to prevent injury but to help stabilize the body during the big lifts. It is absolutely necessary to stabilize the body during the big lifts. The calf work is necessary, again to stabilize the body during the big lifts, and to strengthen the ankle and foot, and prevent injuries there. Anyone who runs or plays a sport that requires running, jumping, cutting, etc., must do calf work.

"REBEL" THOUGHTS

The Greeks have a philosophy that you can't truly learn something unless you experience it yourself. I agree. Don't stay locked in a certain approach just because someone recommends it. If you aren't getting stronger every 3-6 months, then what you're doing isn't working. Try a new approach for a reasonable period of time (8-12 weeks) to find out if it works for you. Something that worked for you once may work even better with a slight modification (fewer sets, less frequent workouts, different rep range, training *harder*, etc.) Just make sure it falls under the basic philosophy of sound training-basic and abbreviated routines that focus on progressive poundages in good form, and hard work.

By trying new approaches you will eventually find the approach or combination thereof that delivers you to the promised land of slowly but steadily increasing strength and size.

Life is a journey, not a destination.

BROTHER JACK

Here are two photographs of my brother, Jack. Though he is obviously very impressive, Jack has had some major physical obstacles and emotional disappointments to get where he is today. As a young child he had eight operations to correct an inner ear problem that disrupted his balance. During a football game in his senior year in high school, Jack tore his anterior cruciate ligament. This required total knee reconstruction. Jack has also had various operations on his feet to correct other problems. All the numbers that I am going to mention were done after the knee surgery.

These photos were taken about four years ago. At the time, Jack was a 218 lb freshman football player at Colorado State University. At the time he could squat well over 500 lbs, could strictly bench press 405 lbs, and run the 40 yard dash in 4.55 seconds. Jack has since been up to a muscular 251 lbs (at 6' tall), and with a 660 lb squat and a 475 lb bench. He has achieved these impressive numbers at such a young age because he has trained correctly from day one. He was thirteen when he started training. He's benefited from all my training mistakes, and has never used anything but the type of routines featured in HARDGAINER.

Jack signed a professional baseball contract in December 1995, with Cincinnati Reds, and will be at spring training in March.

Consistent hard work paid off.

Rep Speed

From Hardgainer #62 – September/October 1999

Before I get into the meat of the article I want to commend Stuart for having a magazine that's "openminded"
and fair to all forms of sensible abbreviated training.

I'm finally at the point where I have to throw my hat into the "rep speed" ring. I want to start out by saying that getting strong and big is not, and should not be a complicated thing. I must say that I found it refreshing to read Ken Leistner's commentary on this subject in issue #59.

But I'm not trying to get into a "piss fight" with anyone. I'm simply stating my professional opinion based on 25 years of experience "under the bar" and over 14 years of training people one on one.

My description of a properly performed rep is summarized on page 47 of BRAWN (although I'll elaborate). Stuart wrote:

"Once the reps become hard, you use as much force as you can, without cheating, to get the bar up. The bar is always lowered deliberately, with no dropping. Following the early reps of a set, you'll be trying to move the bar rapidly but, in practice, the bar will be moving slowly."

Unless I've misunderstood him, or missed something, this does not seem to be what Stuart now advocates and has written in BEYOND BRAWN. I don't want you to think I'm "badmouthing" Stuart, or that we're at odds with each other – we're not. We just seem to have different opinions on the rep speed issue. Stuart and I agree on almost all training-related issues. But we're both professionals, agree that it's okay to disagree, and are not so arrogant to think that we know it all.

A complete description

Here's my description of a properly performed rep. The bar should be lowered under control then either completely stopped at the bottom position or performed with a controlled "turn-around" or "tap," then the bar should be driven up as hard and as fast as is necessary to complete the rep. Yes, that's what I said – *"as fast as is necessary to complete the rep. "* Now don't misinterpret this. The explosive contractions must be controlled not thrown! And you must decelerate at lockout. Another thing – don't be explosive with warm ups, or if you're inexperienced and still learning proper biomechanics. Also don't "explode" the bar up during the early reps of a high-rep set (reps above 8). Once the set starts to become challenging, start pushing or pulling as hard and as fast as you can! On sets of more than 8 reps the weight will be such that you could move the bar fast enough to throw it – but don't! That would be an abuse of what I'm talking about.

I can virtually guarantee you that on a limit set of 5 reps or less you'll not be able to move the weight fast even though you're trying to! But you must try because this guarantees that you're putting out maximum effort, and it also helps to recruit the fast twitch fibers of the muscle which have the greatest potential for strength development and hypertrophy (growth).

In my professional opinion it's not speed that gets most trainees hurt; it's poor biomechanics, an unrealistic progression scheme, or muscular imbalances. If trying to accelerate the bar takes you out of good biomechanics, then you've no right to train in this fashion. I want you to understand that, in my book, the safety of my trainees is number one, because if you're constantly getting hurt you can't train consistently. And if you can't train consistently you aren't going to get anywhere with the weights. We have an extremely low injury incident rate that I would stack-up against any training facility in the world. The reason for this is our heavy emphasis on great biomechanics, a progression scheme that the body can adapt to, and the correction of strength imbalances between agonists and antagonists.

With new trainees we don't emphasize accelerating the bar at first because they haven't developed the motor abilities to move the bar with as much force as the body can generate (as fast as possible) and stay under total control while maintaining perfect biomechanics. But we don't have them count seconds! We simply have the trainee push the bar hard but under perfect control. I feel that counting seconds is an unnecessary distraction, diluting the trainee's concentration on biomechanics, and from working as hard as possible to complete the goal number of reps.

Speed and injuries

I want you to understand that in my professional opinion, just because you're performing reps in a slow cadence doesn't necessarily mean you're using good form. Let's talk about "good form" for a moment. To me, good form means getting in a good biomechanical position (one that optimizes leverage and safety for each individual trainee's genetic makeup), and maintaining this position for the duration of the set. It has absolutely nothing to do with speed. I've witnessed slow reps performed with terrible

form (causing injuries) and explosive reps performed in complete safety. I've also seen the opposite of this.

It seems that there's so much talk these days that if you go slow you won't get hurt, and that's just

not the case. It seems as though numerous examples are given on how someone was doing his reps too fast and he got hurt, when more than likely it was poor form resulting from the lack of control that hurt the trainee. No one ever says anything about the trainee who got hurt moving slowly. Well, let me tell you that one of the worst injuries I've ever personally witnessed was by an experienced very strong trainee. I've known this man for over 25 years. He severely tore his right pec with a submaximum weight – a weight he could comfortably perform 5 reps with when performed in his normal "none counting seconds style" – because he decided to start lowering the bar slower than normal. This occurred on the very first rep of the set. He was lowering the bar in a three-second cadence.
Was the injury a result of moving slowly? In my opinion – no. But it could easily have been blamed on that. If the injury occurred while he was moving the bar explosively, like he normally does, it would most assuredly be blamed on speed. The point I'm making here is that speed (whether slow or explosive) isn't necessarily the culprit. What caused this injury, by the way, wasn't because he was going slow, it was an improper jump from a last warm up set of 225 pounds to a "live" weight of 315 pounds. The trainee should have performed a last warm up with 275 pounds.

Reaching your genetic potential – safely

I assure you that no one can refute the fact that power is the product of mass times acceleration. This is a proven fact of physics that's incontrovertible. In my professional opinion, in order to develop the human body to its maximum strength and size potential you must lift the heaviest weights possible for a given number of reps for a long period of time. For the body to do this it must create the maximum amount of force it can generate. This can only be accomplished by trying to move the bar as fast as possible with as much weight as possible. Now let's not get stupid here. I'm very aware that physics on paper is one thing, and training the human body is another. The philosophy I presented above is the one I practice and teach, but with the proviso that the trainee generate as much force as possible *in the safest way possible.*
The human body is meant to move fast – it's natural – you just have to do it in a way that's safe. But what's safe? Safe is control. That's why I don't have inexperienced beginners train with maximum force – because they haven't learned to control their bodies or the bar yet. Watch world class sprinters. Are they moving as fast as possible? You bet. But they are under total control of their bodies, their biomechanics are perfect, and this makes them efficient. This control – this efficiency – helps prevent injuries while allowing the athlete (or trainee) to use maximum force, which in my opinion is the only way to reach one's strength potential.
I know that you're thinking that sprinters pull muscles all the time – but so do distance runners, and they are moving much slower. (By the way check out the size of all sprinters' legs.) Once again, what I feel causes the injuries is either poor biomechanics, training at a rate that the body can't adapt to (too much weight or too much frequency, i.e., overtraining), or muscular imbalances – not speed! Speed is the culprit if it makes you use poor form.
I just realized that I better clarify something because I can hear your minds working right now. "So," you say, "John, if speed doesn't matter then why don't we just drop the bar on the eccentric phase of the movement? You know, bounce benches, rebound squats and curls." Guys, let's not get ridiculous. When I'm talking about using speed safely, I'm talking about through the concentric phase of the lift, because this can be easily controlled. Letting gravity completely "free fall" a weight is completely out of control. I would never advocate this.

Other concerns

What I'm getting concerned with is that many trainees are getting so afraid of getting hurt in the weight room that their training is based on avoiding getting hurt instead of training to make progress – safely. Don't think of your body as some frail or weak thing. Your body is tough. Your muscles, tendons and ligaments can withstand a tremendous amount of force as long as the body has been conditioned to handle it and the body is placed in the proper position to handle it. This is one of the reasons to train in the first place – so that you 're strong and resistant to injury from forces that would hurt someone who doesn't train.
I'm not saying to throw caution to the wind. You must train safely! But don't become so afraid to get hurt that you don't put out maximum effort. I promise you that if you follow the rules of sound progression, learn and use good form, and correct muscular imbalances – it's very unlikely that you'll get hurt, period.

To summarize

In my opinion, to reach your genetic potential you must move as much weight as possible for a prescribed number of reps. To do this you must generate as much force as possible. To do this you must try to move a heavy weight (or, on a high rep set, the tough reps) as fast as possible. You must do this as safely as possible. Safety comes from good biomechanics and control of the weight. Good biomechanics and control come from great concentration and experience. If, by all means, you have to count seconds to maintain control of the weight, then do so. Professionally speaking I just don't feel it's

necessary.

Recommended reading

Mike Thompson's first article in the "Real Thing" series, issue #12, page 18, nearly summarizes my *philosophy on training. It's a great piece.*

Over and Over Again

From Hardgainer #57 – November/December 1998

You can't reiterate the basics enough. Sometimes you just have to say things over and over again. Based on all the calls and letters that I receive, many of you are still making major mistakes in applying the basics. This is going to be the basis of this article. I'm going to touch upon a number of topics to make sure things are clear-so that you can succeed.

Patience is the key to success

Building strength takes time. You're not going to get strong and huge in the first six months. In this time frame you could make some significant changes to your body and gain some muscle mass, but basically during this time you're setting the foundation for future growth. I'm going to be more specific. Based on the students that I have worked with in the past, in the first six months (taking it easy to begin with) you should have broken into new strength gains about three months ago, and gained 6-12 pounds of bodyweight. By the one year mark you should be handling far more weight than ever before, or at least more weight than in your recent past, and gained a total of 12-25 pounds of solid bodyweight. Now this sounds good as you're reading this, but think about it for a minute. If you were to walk into my gym today and I was to tell you it would take an entire year to make significant changes, you would think, "That's too long." To make stunning changes it will take a minimum of 3-5 years if you're training and eating properly. In other words 3-5 years if you do everything *correctly.* But how many people actually do everything correctly?

Three to five years of correct training and eating. This is the time it takes to make stunning changes. To reach your maximum potential it may take more than ten years, depending on how many years you waste. I'm not saying this to discourage you. *I'm saying this so that it doesn't take you ten years to accomplish what should have been done in three!* So, let it sink in that it takes time. If anyone tells you anything different, they either want you to take steroids or they're flat out lying to you.

Add small increments to the bar when you're training hard

I've talked about this till I'm blue in the face, and so has Stuart, but many of you just aren't listening. Now, for the one hundredth time, small increments mean 2-1/2 pounds. on the squat and deadlift, 1-1/4 pounds to the bench and upper-back work, and half a pound on arm and shoulder work.

The next question is; "John, what do you mean by training hard?" My definition of training hard is, for instance, when performing an 8-rep set and you have one rep left in you – but no more. This is as long as you should go till you switch to using the small plates.

I prefer having my students switch when they have 2 reps left in them. Yes you can train harder than this, and you will sometimes. How much harder? On that 8-rep set you barely make the last rep with perfect form and stop – thus *beating failure!* This is the intensity you want to train at for as long as possible. *For as long as possible.* For six months or for a year – or longer!

Training at this intensity level for this length of time will mean that you will be training harder for longer than 99% of people who train with weights. Every now and then you will go to failure. For instance on an 8-rep set you make number 7 and try, but miss rep number 8. This will happen every now and then. But if you're eating well and adding weight in small increments, you will beat failure virtually every time.

"The White Moment" revisited

I wrote an article in HARDGAINER #40 titled "The White Moment," which dealt with aggression. For those of you who didn't read that article, let me explain. The moment right before you attack a set you should be "white hot" with aggression – as though nothing in the world could stop you from getting your prescribed reps, let alone the weight on the bar. You can't go into a set thinking about your date last night, or the ballgame tonight. You've got to be on fire. But this fire must be focused into a very narrow channel of perfect technique. If it isn't, all the fire will do is burn you (by means of an injury, or failure to make your reps due to inefficient lifting technique) instead of burning the weight.

What I have been seeing on the video tapes I receive is aggression out of control. This is simply an abuse of aggression and a total lack of concentration. Just getting real mad, stomping around the gym yelling and throwing weights around is absolutely ridiculous, and no way to get big and strong. All this is, is a short cut to an acute and possibly career-ending injury. So use your head to channel your aggression into great exercise technique. To link aggression with great technique takes a lot of effort – *a lot of effort.* And not just for one workout but for fifty or more workouts in a row before making any program changes.

Aerobic exercise

Everyone should do aerobic exercise – period. A lot of trainees get concerned that performing aerobic work will prevent them from gaining mass. This couldn't be further from the truth. Even if it did impede

your muscle gains a little, the benefits that one derives from aerobic work are worth it. The most important reason to do some form of aerobic work is because it gets the cardiorespiratory system in shape. In other words it keeps your heart and lungs working well. Weight training alone (unless it's circuit training) will not do this!

I've been around many big and strong men who couldn't walk up a flight of stairs without becoming extremely winded. To me, this is pathetic. A truly strong man is not only strong enough to handle massive weights, but can also walk or run for distance successfully. You see, I don't believe in producing big strong guys who can't move. I like to produce big strong "athletes," whether they participate in a sport or not. Plus, being in good aerobic shape helps you to recover between sets faster because your heart and lungs are more efficient at removing waste products.

I recommend aerobic work to all of my students (no exceptions) especially those that wish to gain as much weight as possible. For these trainees I get them up to 40 minutes for two or three aerobic sessions per week. I know you may be thinking "doesn't that cut into their recovery ability?" No. See, like everything else that I recommend, I have them break into it slowly so that their bodies get used to it, and I don't have them perform excessive aerobic work. The other very important reason that I require aerobic work is that it helps to minimize the amount of fat you put on even while consuming a large number of calories.

To implement an aerobic program, pick an aerobic modality that you can do consistently, e.g., walking, jogging, cycling, stationary biking. Determine your aerobic training zone by taking 220 minus your age. Take this number and multiply by 0.7. This is the start of your training zone. Now, take 220 minus your age again and multiply by 0.8. This is your top end of your training zone. Start your aerobic work and check your heart rate every 3-5 minutes throughout the workout. You can simply check your heart rate by placing a finger (do not use your thumb because it has a pulse of its own) on the side of your throat. When you feel the pulse, count the number of beats for 6 seconds, then multiply by 10. This is your current heart rate. You need to stay in your training zone for 20 minutes twice a week to get an aerobic effect. Start slow, maybe 10-15 minutes your first workout, and add one minute each workout thereafter. I would recommend getting up to 30-40 minutes twice a week.

Take stock

So, how are you doing? I hope you don't think that I'm asking the same question that your neighbor does in the morning. What I mean is, "How are you doing strength wise?" Are you stronger today than you were last year at this time? If not; it's time to take stock of what you're doing. If you're not any stronger, then either your program or you aren't working; maybe both. Either way, you need to take a serious look at your program and your lifestyle.

Be honest. Be critical, and then make adjustments. Did you fool yourself into believing that you were eating consistently well? Were you taking in 5,000 calories every day, for example? Or was it more like 3,500? Or maybe you didn't think you really had to eat that much to make gains.

What about your training? Did you include concentration curls because you like the "pump"? Did you leave out squats because they're hard? Well let's get one thing straight. If you don't make changes and start following the rules of sensible training, then next year at this time you will be exactly the same size and the same strength as you are now.

So, what are you going to do now? Make a decision! Are you going to look for some glitzy training program presented by some phony steroid taker, or are you going to knuckle down on a basic program presented from the pages of HARDGAINER, or better yet from Stuart's new book BEYOND BRAWN?

As a matter of fact *I'll tell you what you need to do!* You need to make the decision to get "radical" and break away from conventional training theories. If you have the "guts" to do this, then the next twelve months of training will be the most productive you've ever had. I don't say this to sound like a "tough guy." I say this because I want you to be successful, and I know the approach I promote works.

Believing

I'm going to get philosophical for a moment. Don't get caught up in a fantasy that you can accomplish a Herculean level of development in a short period of time. Certain people, or more specifically, certain writers and steroid users, are fooling you into believing something that can't be done. I've been down that road. So don't waste your time believing what they say. *What they say doesn't work!* Concentrate on the basic exercises. Concentrate on adding the next pound. Concentrate on the next meal. These are the things that will absolutely help you to reach your potential.

Over the years that I've been writing for HARDGAINER I've given numerous examples of my students who have followed the basics and achieved great success. If you're a new reader of

HARDGAINER I suggest that you order at least the past six issues and study them. You will then learn the basics of how to train to achieve success. Then the most important part is to diligently apply what you've learned, and not waver from it.

In the next issue I will share with you another student who is nearing the fifty-week mark without

missing a workout. When I started working with this gentleman, several years ago, he weighed in at 170 pounds. He's currently at 250. Danny's a great story.

Before I leave you, let's do a little arithmetic. You've got eight weeks till the next issue of HARDGAINER comes out. That's eight curl workouts. At one pound per workout that's 8 pounds to your "live" sets of curls. I challenge you to do this, for this is exactly what Danny will be doing (with his *18+ inch arms). Just do this, and you will start a great story of your own.*

"My Way" to Train

From Hardgainer #67 – July/August 2000

There seems to be a misconception about one of the basic training styles that I recommend. I'm referring to this as "my way" to train because that's what many readers have dubbed it – but it's anything but that. The single progression training philosophy has been around long before me. I think many trainees refer to this as "John Christy's way" to train because I'm one of a few who enforces the tremendous discipline that this philosophy requires, I use it on a majority of trainees with great success, and I constantly write about it.

The misconception I speak of is when many of you believe that with "my way" of training you stop a rep or two short of momentary muscular failure, that "my way" is some kind of lower intensity alternative to training "to failure." Let me state loud and clear that you 'll never reach your potential by training a couple of reps short of your capacity. By "your capacity" I mean the last possible rep you can perform.

The difference between training to your capacity and going "to failure" isn't much. And actually, while properly using single progression, the trainee will go to failure on occasion. Let me offer an example to illustrate what I mean. If I'm performing a set of ten reps with the squat, I'll be using a weight that will allow me to barely complete the tenth rep – I absolutely could not make the eleventh. The trainee who would be training to failure on the ten-rep squat would also barely complete rep ten, but would then descend to attempt rep eleven – but would fail to rise with the weight. So, the only difference in the two approaches is that with "my way" you don 't get the benefits (if there are any) from that last descent (eccentric contraction) with the weight. That's the only difference between what I have dubbed "beating failure" verses "going to failure." I also should point out that on rare occasions, using the example above, I won't make the tenth rep – I'll elaborate more on this later.

Don't take what I have just written as some "put down" of the train-to-failure people. I know there are many trainees who train using that philosophy and get very good results. Actually, in the past I've trained using a "high intensity training" philosophy – although at the time I didn't know it had a name. I just trained to failure, and got good results. But I was constantly getting chronic injuries (some acute) which would stop my training for a while, and I was sick more often than I should have been. My log books indicate that somewhere between the tenth and twelfth weeks I would come down with an illness (respiratory, with a fever), and it seemed like I was constantly icing some joint to bring down inflammation. As I said, the results were good – just not as good as with single progression (where I had much fewer injuries and virtually no illness).

Using the ten-rep squat example above, I want to further illustrate how I utilize the single progression philosophy. The next squat workout (a week later) I'd add a pound and do it again...over and over again. This is the way it goes 90% of the time. On occasion, it doesn't turn out as I've described it. A workout will come along where I'll actually go "to failure" on rep ten – i.e., I'd have successfully completed rep nine, descend to attempt rep ten and end up not making the positive phase of the rep. In other words I'll not have made my target rep. When this happens I'll repeat the weight till I make ten. This usually takes a workout or two. Then I add a pound again.

Sometimes a workout occurs in which I hit rep ten and I know I have another rep in me – so I take it. I only do this when I know I have another rep in me. How do I know I have another rep in me? Experience. After twenty six years of training I know how it feels during a set when I'm at my capacity or if there's one rep left. I don't instruct my consultation trainees to take the extra rep unless I feel that they have acquired enough experience to do so. Sometimes (although this is rare unless I'm trying to gain a lot of weight) I'll have yet another rep in me – so I take that one too. When this happens I'll add two and a half pounds the following squat workout instead of the usual one pound, in order to get my reps back to ten. It's my intention to do this month after month, for as long as possible.

This "my way" approach allows many of my trainees to train to their absolute capacity for over 100 workouts. Think about that for a minute. When was the last time you did that? When was the last time you even heard of anyone doing that? Perhaps never. If you now understand this method of training you should see that it most assuredly is not an "easy" way to train. In reality it's actually one of the most demanding, because you maintain such a high level of intensity for many months – with the intention of making a year or more of it. And the thing is, you can train this hard for many workouts in a row without getting injured or sick (as long as you're taking good care of yourself).

This method is not "glitzy," but it delivers tremendous results to those who apply it correctly. I've seen it happen many times. The reason I like it so well is that single progression focuses on the most important factor in weight training – progression. And progression can teach someone how to train hard. I can take a trainee who at first has no concept of how to train hard, and by adding a little bit of iron to the bar every workout – by increasing the demands slowly – the trainee will automatically learn

to train as hard as possible in order to make the target reps.
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The only time I recommend trainees stop a set short of their capacity is if they are new to weight training, if an experienced trainee needs to clean up his technique, or if a new exercise is being introduced. My goal is to get trainees to a weight that pushes their capacity as soon as it's safe. When is it safe? When the motor skills required to perform the exercise safely have been established. How long does this take? I usually get a new trainee up to his capacity by the twelfth week. Someone who is experienced – and let's say is starting a new exercise (the dip instead of the bench press) – should usually be pushing his capacity somewhere between the fourth and sixth week. Some might think that the trainees in these examples would be wasting their time during the "build-up" periods. This couldn't be further from the truth. Not only are they perfecting the motor skills, but they are giving the relatively "non-porous" ligaments and tendons time to adapt. These tissues have less blood supply than muscle, and as a result need longer to adapt.
Training should not be complicated. Keep things simple. And don 't get caught up in which training "school of thought" is better. Let me tell you from experience that any training philosophy will work as long as it recommends brief, infrequent, progressive workouts – period. The key is to find one that you'll stick to, and makes you a little bit stronger every month, for a long period of time. Because "time" is the element that separates "no" development from "great" development. Time – as measured by the number of progressive workouts in a row – is the element (once you're training, eating and recovering *properly) that will determine whether you reach your potential.*

Bad Shoulders & Benching, Warm-ups, and Aerobics

In this issue I want to hit a variety of topics that have been brought to my attention

Shoulders and the bench press

This morning I dealt with another trainee who's having severe shoulder pain due to a specific bench pressing technique. This technique involves "pulling" the bar towards the face once it leaves the chest. The bar then travels "up and back" till it ends up over the eyes. This technique causes many shoulder problems particularly because of the bar being pushed back to a position where the arms are locked out above the eyes. I am vehemently against this practice. This exposes the shoulder, and upper back musculature, and other soft and hard tissues to "unhealthy" severe stress which can cause a multitude of chronic and acute injuries. The bar should not end up any further back than a position directly above the shoulder joint.

There are very few trainees that I am aware of who do bench press this way and experience no problems. These trainees belong in that rare group of people who can get away with using an otherwise dangerous training technique.

The bar pathway I recommend is a natural one. I have my trainees lower the bar to where the bottom of the pecs and top of the abs meet. This is a point about one inch below the nipple. From this point I just have the trainee simply push the bar back up. The body is very efficient-it will find the pathway that is the most productive and the safest-as long as it is allowed to do this. If a trainee is instructed to push the bar in a certain way (that is not natural) their bodies natural abilities will be thwarted and they will end up "teaching" their body an improper way to perform the exercise. I'm not saying that everyone starts out with the best bar path and doesn't need instruction. But in most cases, if a trainee is not "over-coached". his body will naturally find the optimal path. This path will vary a little with every trainee but when viewed from the side the bar will start moving horizontally back towards the upper chest once it leaves the chest-but it is not abrupt. It will move back slowly during the entire length of the ascent (as the bar is moving vertically). It will do this on its own you don't have to consciously make this happen as some unknowing (or think they know it-all) coaches advise. The bar will end up somewhere between the upper chest and straight up from the shoulder joint. This path greatly reduces the risk of injury to any of the shoulder and upper back tissues and will also give you the greatest leverage to lift the heaviest weights possible.

Selecting Warm-up weights

The selection of warm-up poundage's is not as important for "warming you up" as it is for the progressive recruitment of more and more muscle fibres leading up to the "live" sets. Performing aerobic work for 5-10 minutes before your workout Will warm you up in a general fashion. Follow this with some mild stretching and you will be ready to go. For a general recommendation I would suggest the following scheme for your warm-up sets.

60% for 5 reps

80% for 5 reps

90% for 1-2 reps

The percentages are of your “live” weight for the day. You should rest 2 minutes between the 60% and 80% sets (more if you need it-don’t get worn out), and 34 minutes between the 80% and 90% sets. Then rest 3-4 minutes and hit the live sets. These are general recommendations. Some trainees may need more warm-up sets and or a lighter starting set. Generally, advanced trainees will need more warm-up sets because the weights that they use on the live sets are much heavier relative to a beginner. Beginning trainees need a lighter set at the start performed for higher reps (50% for 10 to 15 reps) to allow for more motor skill work (practice) to help with technique development. As with everything else in the iron game, every trainee is different. Start with what I’ve recommended and let experience teach you what to do. A very important point is that you don’t wear yourself out on the warm-up sets.

My personal scheme is to perform only 5 reps with the first warm-up, then only 1 or 2 reps per warm-up set after that. I try not to waste any energy (glycogen and my creatine phosphate stores). My goal is to allow my nervous system to get adjusted to the heavier and heavier weights. Also, the last warm-up of 90% doesn’t always get me “close enough” to my live weight. On my bigger exercises, that 90% may be some 50 pounds or more from my live weight. My experience has taught me that 50 pounds is too big a jump going into the live set. So I’ve adjusted the above percentages to make them feel right to me. For instance, my last warm up for the squat and deadlift has to be Within 30 pounds of the live weight. For the bench press I need to be Within 20 pounds. For overhead work and arm work I need to be Within 10 pounds. I‘ve shared this With you just to show you how the general recommendations need to be fine tuned by experience. If you've been doing lots of reps on your warm-up sets. try cutting back. and watch how much more energy you have for the live sets. For more information please read the article Warm up Sets aren't Supposed to “Warm You Up".

High-intensity Aerobic work

There’s been a lot of talk lately about “high intensity” or “interval” aerobic training being superior to “traditional" (low to mid-level) aerobic training. To shed some light on this topic we need to define the various levels of intensity as applicable to aerobic training and what their energy requirements are.

There are primarily three types:

1. Low-level Aerobics are performed at 50-65% of the trainee’s maximum heart rate for long durations (one hour or more). The primary fuel used at this aerobic level is fat which supplies up to 90% of the energy used. The other 10% is from glycogen and protein. Unless the trainee is completely de-conditioned (out of shape), this level of training provides only a slight cardiorespiratory effect.

2. Mid-level aerobics are performed at 70-85% of the maximum heart rate for moderate durations of 20-40 minutes. About 50% of the fuel contribution is from glycogen; about 45% from fat and 5% is from protein. Mid-level aerobics provide a very thorough cardiorespiratory workout. This is the aerobic zone that most trainees equate with aerobic training.

3. High-intensity aerobics are performed at 90% and above of the maximum heart rate. They are usually performed as “intervals”. Interval training is where the trainee runs at a low-to mid-level pace and then bursts into 1~3 minutes at a high-intensity level, and then settles back to the previous level. About 90% of the energy contribution comes from glycogen, and 10% from fat and protein. This type of training is used to greatly increase one’s aerobic capacity, or what is known as their V02 max.

We prescribe this level of training for our competitive aerobic athletes such as distance runners, triathletes, and middle to long distance swimmers to name a few. These athletes are trying to increase their speed over long distances. We also use a form of this (sprints with short rest intervals) for our athletes who are involved in a sport that requires anaerobic conditioning such as football and hockey. The name “high intensity" aerobics Is actually a misnomer. ’I his level of training is more accurate termed “anaerobic conditioning". If the trainee can only maintain this intensity level for about 30 seconds at the most before lactic acid “shuts them down." At this point the trainee must either slow the pace or stop.

A simple way to estimate your maximum heart rate is to subtract your age from the number 220 and then multiply by the desired percentage. For instance, to determine the 50% training heart rate for a 20-year-old you would take 220 minus 20 = 200 Then 200 multiplied by 50% = 100 beats per minute. This 16 known as the “straight line” method. For more Information on conditioning please read the articles Complete Conditioning Parts I and 11.

Now, let's get back to our original thought that high-intensity aerobics burn more fat than the other forms of aerobic training. When you look at it from a fuel (fat. glycogen, or protein) consumption standpoint, the answer is a resounding “no”, at least not while you are actually performing the exercise. High-intensity aerobics use glycogen as the primary fuel, and will only create a fat-loss state if the trainee doesn’t consume many carbohydrates after the workout. In this case the body would be forced to try to convert part of the fat molecule to glycogen. For fat loss while consuming a balanced or calorically dense diet, the best bet is low-level to mid-level aerobic training. To determine what is best you need to look at its-like anything else-from the standpoint of your overall goals.

Your goals should determine your type of training, duration, frequency and intensity. If you're trying to gain a lot of muscle tissue, while minimizing fat gain, low-level aerobics with limited bouts of mid-level aerobics should be your choice. High-intensity aerobics would be out (even if they do burn more fat after the session) because you would be depleting your glycogen stores performing the aerobic work when instead, you need to be using them for your weight training workouts.

If you absolutely want to perform this high level of aerobic work (or if your sport requires it), you may have to sacrifice one of your lower-body weight training sessions per week because again, this level of training will deplete the glycogen stores similar to a weight-training session. Over the long haul, most trainees’ legs (and bodies) wouldn’t recover if you weight trained your legs twice per week and performed high-intensity aerobics or anaerobic conditioning twice per week too. This is the general rule; there are exceptions if the trainee or coach knows how to regulate the frequency and volume of lower-body training. For instance if a trainee is performing two lower body weight workouts per week and wants needs to perform two high-intensity or anaerobic sessions per week he should regulate the volume of the weight training sessions to allow for maximum recovery. This is accomplished by performing one of the workouts at a regular volume (3 to 5 sets} and the other at a lower volume (1 to 2 sets), This second lower volume workout could be preceded by the second anaerobic session to allow for maximum recovery. In other words hr could perform sprints and then hit the weight room for a set or two of squats

Here’s a program for the trainee who’s interested in gaining muscle tissue while minimizing (or even losing bodyfat. Hit the weights twice per week in a brief, progressive program. Perform low-level aerobic training two to three times per week, building up to one hour in duration. One of these aerobic sessions could he a midlevel session (for cardiorespiratory conditioning) as long as it’s worked into slowly. This session would need to be inserted into the training week as far away from the weight training sessions as possible; for instance, if you weight train on Tuesday and Friday, hit the mid-level aerobics on Sunday. The low-level aerobics can be inserted almost anywhere because they don’t tax the body systemically, and they don’t drain your glycogen stores. If adding the mid-level session is too much, then instead you could perform some mid level aerobics as intervals along with one of the low level sessions. It all comes down to your overall goal as

to which level of aerobic conditioning you choose. Don’t get caught up on the latest craze that hits the gym scene. There really hasn’t been anything new in strength training, muscle building, or aerobic conditioning in the last 50 years. Most trainees are always looking for a gimmick. Most of these gimmicks don’t work. Stick with the basics. Regardless of their goals, everyone needs to take care of their health first. To do this you need to get stronger, get your heart and lungs in good shape, develop a good level of mobility around all major joints, and eat a healthy diet. To all you aspiring athletes reading this, you can be highly successful in your sport and accomplish all of the above. You don’t have to sacrifice your health to do well at your sport.

Again and again

You may be getting tired of hearing it, but here it goes again, because one of the purposes of my writing is to keep you on track with your training. Are you stronger now than six months ago? If you’re not, your training isn’t working. Have you been wasting your time jumping from one program to another? Are you disciplined enough to get your meals in? Are you staying up too late at night? Has greed got you to add weight to the bar in such large increments that you’re “heaving and bouncing” the barbell instead of lifting and lowering it? Think about it. Make the decision to do things right. Start now! So when I ask "the question” again you can say, “Heck, John, I am stronger-my training is working!”

Biomechanics Basic, Part 1: The upper back

From Hardgainer #77 – March/April 2002

To derive the most out of your training you must master the proper biomechanical set-up of the upperback region. Let me say this a little more emphatically. *Unless* you master this, you 'll never reach your size and strength potential; and more than likely you'll suffer innumerable injuries to your shoulders and cervical area. Once you've mastered the proper set-up, not only will you have greatly reduced your chance of injury (which will allow you to practice one of the "magical" ingredients of success – consistency), but you'll be able to generate the maximum amount of leverage that your body is capable of. This leverage will allow you to lift the greatest amount of weight possible – promoting the fastest gains in strength and size.

The upper back

In order to maximize leverage, and reduce risk to the shoulder and upper-back region, the shoulder blades (scapula) must be retracted and depressed. Retracting and depressing are technical terms that basically mean to squeeze your shoulder blades together as hard as possible while pulling your shoulders back. Although that sounds like a simple proposition, it requires great strength and concentration to maintain this position throughout the completion of an exercise – especially when the set gets tough. This action greatly stabilizes the shoulder joint. The shoulder is not really much of a "joint" at all (as compared to the definitive "ball and socket" of the femur and hip structure). The only way to make the shoulder a stable joint is to use your muscles to "hold it into place."

Without a stable shoulder joint you're asking for rotator cuff injuries, injuries to the cervical spine area, the pectoralis muscle and the bicepital tendon, just to name a few. This is absolutely critical in the bench press, any overhead press, dip, squat, deadlift, and supportive grip work.

Let me talk you through setting up in this position for the bench press. After you're lying on your back, reach up and grab the bar – but don 't remove it from the rack. Now, squeeze your shoulder blades together as hard as possible. This will lift your chest several inches if performed properly. Now you 're ready to remove the bar from the uprights to begin your first rep. If you can 't reach the bar to get it out of the uprights in this position, which is common if you haven't been retracting properly, then you must either lower the uprights, or if they are not adjustable you must raise the height of the bench. You must find a way to do this because it's potentially dangerous to get the bar out of the uprights in a protracted position (opposite of retracted, and an extremely unstable shoulder position) and then try to retract when the bar is already at arm 's length and your shoulder structure is under load.

Now the challenge – for those of you who haven 't been retracting before taking the bar, or if you're weak in the upper back – is *maintaining* this position of retraction throughout the exercise. If you haven 't been retracting, you'll feel an immediate increase in your pressing power, and, using the example of the bench press, you'll feel a lot more of the work in the chest as against the shoulders and triceps.

There are several exercises that develop the strength needed to maintain a retracted and depressed position. These are any type of rowing exercise, pulldowns and chins (if done properly), and an exercise commonly known as a posterior delt raise/fly.

Rows

The most common mistake I see in the performance of a row is that the trainee does most of the pulling with the biceps instead of the prime movers, which are the lats and trapezius. Don 't get me wrong, the biceps are heavily involved in the movement, but if you're not feeling it in your back, you 're not performing the movement correctly. Make sure that, in the one-arm dumbbell row, for example, as your arm extends, you allow your shoulder blades to "pull apart" or pull away from one another, which will result in a stretching feeling in the lat and trap muscles. Don 't take this to an extreme and overstretch, or you'll get hurt, but you should feel a definite stretch in the area. While pulling the weight towards you, synchronize the pulling of your arm and the squeezing of your shoulder blades back together.

Another way that I teach the movement, for a barbell or prone row, for example, is to instruct the trainee to try to touch his elbows behind his back, which of course can't be done but it elicits the correct thinking. For trainees who haven 't been doing this, I generally have them hold the contracted position – squeezing the blades together as hard as possible – for a one-second count.

You'll know that you're performing the exercise correctly if, during the contracted position, your chest is "stuck out" as far as possible. If it's "caved in" upon contraction, then the movement is putting most of the work on the biceps and very little on the upper back.

Pulldowns and chinups

If I could, I would rename these movements "pull-ins" and "chin-ins." In order for these movements to maximally utilize and stimulate the lats and trapezius, the bar (whether the bar moves in the case of

the pulldown, or is stable in the case of the chinup) must be pulled *into* the body, *not just down in front of it*. Please reread that until you can conceptualize it in your mind. If you simply pull the bar down you'll not retract and depress the shoulder blades to the greatest extent. Also, by just "pulling down" you'll internally rotate the shoulder under load, which can cause injuries to the rotator cuff. When instructing trainees on how to perform the pulldown, regardless of whether the hands are supinated or pronated, I have them pull the bar *into* the chest area – specifically the clavicles. They usually have to drop the weight quite a bit so that they can accomplish this, but boy do they feel it in the back instead of just the arms!

Posterior delt raise

This is another movement I use to strengthen the muscles used to retract the scapula. I use this *in conjunction* with a major upper-back movement (those described above), and generally for only one work set. This exercise makes the trainee fully utilize the trapezius and posterior delts, to accomplish retraction *without* a lot of help from the big lat muscles. The exercise that I prefer is done with a pair of dumbbells held at arm's length while the trainee is seated and bent at the waist till the torso is approximately parallel with the floor. The dumbbells are slowly lifted out to the sides, with the arms held straight, till they are above parallel to the floor. The trainee holds the contracted position for a full one second before lowering under control. While in the top (contracted) position, the arms must be straight out from the shoulders. If someone was looking straight down on you from the ceiling, your arms will be at a 90-degree angle from your torso. If your arms are allowed to "drift" back towards your hips, the powerful lats take over a large part of the contraction. I've had tremendous results with this exercise, not only for teaching a trainee how to retract, but also for rehabilitating shoulder injuries.

In summary

In the 27 years I've been "under the iron," including the 16 years I've been a professional strength coach, one of the most important things I've learned is that to develop one's strength and physique to a maximum level, you must be strong in the area of the body that you can't see in the mirror – i.e., everything behind you, from the back of your neck all the way to your calf muscles. If you haven't been, start this year off right by strengthening the muscles that retract and depress the scapula. After a couple of months, watch all your pressing movements, squat and deadlift soar to new heights from the newly gained stability that you have in your upper-back and shoulder region.

In the next issue I'll address the lower-back structures.

Biomechanics Basic, Part 2: The lower back

From Hardgainer #78 – May/June 2002

Last issue I stressed the importance of strengthening and maintaining the proper biomechanical position of the upper back. In this issue I want to do the same for the lower-back musculature. Similar to what I stated in the last issue concerning the upper back, strengthening and utilizing the proper biomechanics in the lower back is critical to your success in the Iron Game. It's not just critical from the standpoint of getting maximum leverage on all of the big lifts – allowing you to lift the greatest amount of weight possible. It's also critical for the prevention of an injury to this vital area which could easily result in not only the end of your lifting career, but also your ability to perform basic day-to-day functions without pain (walking, sitting, going to the bathroom, etc.) Make sure you really pay attention to this article, for it could save you a lifetime of pain.

The lower back

In order to maximize safety *and* maximize leverage capabilities of the lower-back area, the lumbar spine must be firmly held in a position of extension. In layman's terms this means to "arch" (versus "rounding") your lower back.

I'm aware that there are some writers in the field who recommend against this position due to what they claim is a risk of injury; instead they promote a "flat back." In my 16 years of teaching this position to nearly a thousand trainees, as well as using it myself for 27 years, I've *never* witnessed an injury caused by maintaining this arched position. The only exception that I may have to using this position is someone who has lordosis (the ability to extend the lumbar area *beyond* a normal range of motion, i.e., an *abnormal* curvature of the spine). In theory, this person may be able to cause a "jamming" of the spinous processes, which could lead to injury. Even with that said, I've worked with many trainees who have this condition (including myself), and they have never had a problem from maintaining the arch during exercise.

When you flex your lower-back muscles, creating an "arch" in the lower back, it locks the spine in a safe position, which protects the discs even under extremely heavy loads. Your discs are not as fragile as many people would have you believe. They are designed to handle extreme *pressure – as long as that pressure is evenly distributed throughout the entire disc.* Arching your back helps to achieve this. There are several spinal surgeons who work out with us, and we've had discussions concerning what the discs are capable of handling, and they support what I've stated above, which deserves repeating: *Flexing the lower-back musculature helps to stabilize the spine in such a manner that it promotes the even distribution of pressure throughout the discs surface area.* So, when you perform squats, deadlifts (not stiff-legged deadlifts), bench presses, overhead presses, any type of row, curls and calf raises, arch your back and *keep it* arched throughout the duration of the entire set.

The aforementioned requires great strength and concentration, so let's talk in detail about what I recommend to develop this strength.

Lower-back strength builders

Conventional, sumo and trap/shrug bar deadlifts are excellent for building the "static strength" capabilities of the lumbar region. They build static strength because, for the most part (and ideally), the lower-back muscles don 't go through a range of motion from a position of spinal flexion to spinal extension. As long as proper form is practiced – which means *not* allowing the lower back to "round" – a trainee will build tremendous static strength. This is highly desirable, but my experience has taught me that this isn't enough.

The lower back musculature needs to be strong throughout a broader range of motion, for two main reasons. For one, you need to be strong outside of the "arched position." Let me explain using a reallife example. If, when attempting to complete the last rep of a set of squats, you come *out* of the arch at the bottom position right before the ascent – due to fatigue, lack of strength or lack of concentration – your lower-back muscles had better be strong beyond the range of their static strength capabilities if you have any hope of surviving the stress that this poor biomechanical position creates. If you're not strong outside of the range of static strength, at the least you 'll not make that rep, and at the worst you 'll get hurt – possibly severely.

The other major reason that the lower-back muscles need to be strong throughout a more complete range of motion is that in real life, as well as in various sports, your lower back can't be held in an arched position. It's just not realistic. So, my recommendation is to use the stiff-legged deadlift and/or a back extension exercise to develop strength throughout a complete range of motion.

The stiff legged deadlift

I've seen this exercise taught in a variety of ways – many of which make me cringe. I'm not going to try and break down every variety (some of which are viable), but instead explain the way I teach it to achieve the aforementioned strength benefits. I have the trainee's feet about hip-width apart (standing

on the floor, *never* on a bench) and have him/her grip the bar at shoulder width. I have the trainee grasp the bar, which is placed approximately at a height that hits the shin half way between the ankle and knee. The height of an Olympic bar with a pair of 45-pound plates loaded on it produces the right starting bar height for most people. For someone who's short, I'll use 35-pound plates, and for someone tall I'll elevate the barbell by placing it in a cage/power rack, or by placing the 45-pound plates on rubber bumper plates. I believe, for most trainees, that "bending over" (flexing the lumbar spine) beyond the specified depths can greatly increase the risk of injury.

I have trainees maintain a slight bend in the knees throughout the entire lift. When the trainees grasp the bar I instruct them to allow the lower back to "round" – I don't want them performing this exercise with a flat or arched lower back, because it then defeats the purpose of building strength throughout a complete range of motion. Now, I *never* have trainees purposely try to "hump" the lower back, or make it round beyond what's natural at the specific depth that I described above.

The bar is held close to the legs and pulled at a controlled pace till the trainee is standing erect. The bar is then lowered under control to the starting position on the floor.

I always keep the reps high (usually 15) because I want a weight handled that's light relative to what the trainee can use when performing a conventional, sumo or trap/shrug bar deadlift. I do this to ensure what I believe is a safe level of stress on the vertebral discs.

The lower back is designed to "round" and therefore, as long as a trainee builds up slowly, can (and should) develop a tremendous amount of strength in this position with minimal risk of injury.

Back extensions

I use two preferred basic types of back extension setups. One has the body parallel to the floor when the spine is in extension, and the other has the body at a 45-degree angle. Both of these units are good and accomplish the goal of developing strength in the lower back throughout a complete range of motion. I make sure my trainees "dorsi flex" their feet – extend their heels – while performing the exercise. Dorsi flex means to do the *opposite* of pointing the toes, i.e., pull the toes *towards* the body. This helps the trainee feel the exercise more in their back rather than the hamstrings.

The exercise should be performed in a controlled motion with a pause at the top and bottom of the motion. To add resistance I have the trainee hold a dumbbell right under the throat. Once again, I keep the reps around 15. A good minimum strength level for a man is a 50-pound dumbbell for 15 reps, for a woman it's 20 pounds.

The reverse back extension is a fine exercise, but it's a secondary choice in my programming to the others mentioned. There are two reasons. One, the movement is not as "specific" to the transfer to the squat and three forms of static back deadlifts because in the reverse back extension the feet are not anchored to the ground or the machine. In other words, when the feet/legs are fixed, and the torso moves, this is the functionality required in most "reallife" circumstances and the squat and deadlifts. The other reason for my preference for the other two forms of back extensions is that most trainees don't have access to a reverse back extension unit.

In general I feel the reverse back extension is a good, biomechanically sound exercise. We use it at my facility. I use it in a trainee's program primarily for variety, or if a trainee can 't perform the other movements safely or without discomfort (due to a previous injury, or for some genetic limitation). When I design a program I usually prescribe the stiff-legged deadlift *or* a back extension. I rarely prescribe both to be used at the same time.

In summary

In order to reduce risk and maximize leverage, the lower back must be held in its normal arched state. Arching means to flex the lower-back muscles, which will put you in a position of spinal extension. This position – for most trainees, that is, there are always exceptions – will allow the spine's hard tissues (the vertebrae) to maintain their position parallel to one another, preventing uneven compression of the discs. It's this uneven compression which can result in the greatest damage to the area, some of which can be irreversible.

Please re-read this article several times and incorporate the exercises described to give you a back that's strong regardless of the position that your body is in.

Tension and Fatigue:
How to manipulate these variables to get big and/or strong

I can confidently say that most of you reading this article are interested in either getting bigger. getting stronger, or both. In all actuality, to get bigger you have to get stronger. And if your focus is pure strength without putting on any bodyweight, you will still get at least a little bigger. So, strength and size go hand in hand, but you can emphasize one or the other. What I just explained is an over simplification, but it's accurate and my goal here is to keep this simple. Let's talk about these variables, how to achieve them, what adaptations they create in the body, and then most importantly how to put'em to use to achieve your goals.

Generating Fatigue

"OK John, you said this would be simple bit isn't this getting a little over-simplified". I can generate fatigue-I'll just train hard enough to make myself tired" Yada, yada, yada, Yea, I know that I told you this stuff was simple-but it's not that simple-not if you want to get as big or as strong as possible. Let's talk about what 'fatigue' really is.

If you train an exercise for at least 10 reps, and more specifically above 15 reps, the musculature that is being worked will 'fatigue' and shut down (if truly a max, or very close to it) because it has basically run out of fuel. You will feel 'tired', and will feel a 'pump' in the muscles that you are working. And although you just worked 'hard' and if you performed a repetition max (trained to failure) you will believe that you stimulated the muscle into a growth state as much as possible. Well, this isn't actually the case, because the actual muscle-the myofibers; the contractile elements of the muscle that you were working, still have the ability to continue to perform more reps even if you've reached true muscular failure because the body still has the ability to recruit more fibers-but it can't. It can't because the components that supply the contractile elements with the fuel mixture (fuel + oxygen), and remove the waste products can't meet the demands ol the 'length' of the work that you are asking it to do. So, the body shuts down due to the build-up of toxic by-products as a consequence of running out of fuel-- Demand has exceeded supply. It is much more detailed than this. but this explanation in accurate. So, you haven't really done a whole lot to the actual muscle, but you have put the body in a state where It will generate more of the 'stuff' (mitochondria capillaries, glycogen bound with water and sarcoplasmic fluid to name a few) that supports the muscle that you already have. This will make the muscle measurements increase. but again, it's not because you've added more muscle Fiber.

So this is what is actually happening inside the muscle when you are generating high levels of fatigue. I want you to keep in mind throughout this article that when I'm referring to fatigue, I'm referring to it specifically as defined above as the type of short-term fatigue that most trainees can associate with while actually going through a training session. There are other types of fatigue associated with the physiology of Weight training (nervous system, endocrine system to name a couple), but they are a long-term type of fatigue and aren't something that you necessarily manipulate and apply to get a specific adaptation. As a matter of fact, you want to do everything in your power to avoid long-term fatigue.

When training in the 10 to 15 range you will feel a great pump-especially if performed for multiple sets with short (one to two minutes) rest intervals-and will feel like you are bigger due to the 'pump', but this is only a temporary size increase.

Later I'll discuss how generating fatigue during a workout applies to creating an actual Increase in the muscle fibers. Now let's take a look at generating tension.

Generating Tension

You create tension in your muscles anytime you flex them. The harder you flex, or are forced to flex, the more tension you create. When you lift your arm to scratch your nose. your bicep flexes. Since you're only lifting the weight of your arm it won't flex very hard-you won't create much tension. If you do this right now, even though the bicep 'balls-up' it'll be soft, which is the result of a low level of tension. Now if someone asks you to show them your muscle (your bicep-most aren't going to ask to see you flex your quads), you'll flex your bicep hard-very hard if you're trying to impress and it'll feel harder than when scratching your nose. For the sake of simplicity let's call the 'showing me your muscle' scenario voluntary tension; you're creating tension without any external resistance making it contract.

Now, grab a barbell and do a curl. Of course, the bicep flexes and tension is created even though you aren't trying to consciously 'flex' it—you're simply just focused on lifting the weight. Once again for the sake of

simplicity let's call this involuntary tension; you're creating tension with an external resistance without trying to flex the muscle.
Just as there are different degrees of voluntary tension – you can flex your muscle easy, medium, or heard—there are different degrees of involuntary tension. A simple rule of thumb is that the heavier the weight lifted the more tension that is created. A weight that you can lift ten times (10RM) creates less tension than one you can lift three times (3RM). This can get much more complicated, but as I said I want to keep this simple.

Creating the Ultimate in Tension

I've been teaching this method longer than I can remember, and I've been using it in my training almost from the start. Let me digress for a moment.

Back when I started training (now 32 years ago), I was influenced, as many others were, by Arnold Schwarzenegger. Now, I didn't know at the time that he was using steroids and that many of his training methods wouldn't work unless I was taking them also. But, I learned something very, very valuable from his writings and again, when I had the opportunity to actually spend some time with him face to face as a very young boy.

He always stressed to "put your mind into your muscle that you are working you need to flex the muscles as you are working them". Well, to make a long story short, this

statement would become a cornerstone in my training philosophy, one that I use to this day. To apply what he said, I would try to flex the muscle that I was trying to develop, instead of just trying to push or pull the barbell; for instance I would consciously flex my pecs when I would bench. I noticed right away, even as a very young very inexperienced trainee, that I felt stronger when lifting when doing this, that my technique would improve, that I felt more stable during an exercise, and I felt that I got better stimulation from the exercise that I was performing. Little did I know that what I was doing was the secret to maximizing the results of every rep that I performed. All I was doing was listening to Arnold Schwarzenegger-and creating the ultimate in tension.

Here's what you need to do. You need to combine what I termed involuntary tension and voluntary tension. Lift a maximum weight (doesn't mean you have to go to failure) for your desired number of reps and make sure that you are 'flexing' the prime mover(s) of that exercise as hard as you can. It's also a great idea to flex the entire body as well. This creates great stability and goes a long way to injury-proof your body during an exercise.

So, what does "tension generation' do to the body?

If you perform an exercise for a one to four rep max (1RM to 4 RM) the muscle stops Working (can't lift the weight) because the body can't recruit enough fibers. Its not a matter of fuel supply meeting demand this time-- there is plenty of fuel So there is very little fatigue. and consequently, no pump that you would feel. But because there is very heavy weights involved there are very high levels of tension. It in this tension that produces widespread microcellular damage to individual myofibers. And the theory suggests that it is the recovery from this damage that causes the actual muscle Fibers to increase in cross sectional diameter. But, there is very little increase in what I referred to above as the 'stuffing' or the support components of the myofibers. I'll explain how creating tension applies to getting bigger and stronger

Getting Bigger

Getting bigger is called hypertrophy. There are basically two types; Sarcoplasmic Hypertrophy (SH) and Myofibular Hypertrophy (MH).

-Creating 'Virtual' Size: Sarcoplasmic Hypertrophy (SH)

SH is where the muscle is measurably bigger because there is more 'stuff' inside the muscle. As mentioned above this 'stuff' is mostly support structures and fluid- Sarcoplasmic fluid-hence the name. All of these support structures help to supply the fuel and carry away the by-products that allow the actual contractile elements-the myofibers-to do the work. So it only makes sense that since they are giving out first-they (the support structures) will be the 'things' that the body makes more of so that it can get better at doing this particular task. Almost all of the measurable increase in size is from this additional stuffing. There is very little increase in any of the actual contractile elements-the muscle itself. And this is because there isn't significant tension-the weight isn't heavy enough to cause 'damage' to the actual myofibers.

To create SH you need to develop high levels of fatigue without much concern for creating high levels of tension. You need to perform sets (usually one to three can do the job) of 10 reps or higher. You also need to keep the rest intervals short; one to two minutes. Working in this rep range with such a short rest interval doesn't allow for the use of relatively (as compared to 8 reps and below) heavy weights-so there isn't much tension generated. And if you could create enough tension with this relatively light weight your muscles would run out of gas before it can do any substantial damage to the myofibers. You're creating a lot of fatigue, but not much tension. "But John, I can make up for this by 'flexing'-right?" Wrong. 'Flexing' or creating what I termed voluntary tension, actually works against the involuntary tension created by the weight itself, when working at higher rep ranges due to the fact that the additional flexing fatigues you faster than not flexing. This occurs when you pass a certain rep count-- in my experience anywhere from 5 to 7 reps. This varies with individual genetic fiber makeup. and training history. So, again you are creating even more fatigue—and less tension.

Generally. I don't recommend training in the 10 to 15 rep range (With the exception of beginners, trainees who are recovering from injury. or a trainee who needs to develop strength endurance of this duration) due to the fact that gains are primarily from the support structures as I described above. I want my trainees size gains coming from the 'real thing' the actual contractile proteins—actual muscle tissue. Size gains from adding new muscle fiber add to someone's functional strength. And you are not going to get much in the way of functional strength carryover from increasing just the support structures inside the muscle. You'll help increase the muscle's endurance, but again, you won't be doing much to improve its strength capability.

So what's the bottom line? You can get much bigger by solely working on creating SH-but in my opinion, this is virtually a worthless size increase for most trainees. You become nothing more than a giant water weenie so to speak.

-Creating the 'Real Thing' Part I: Myofibular Hypertrophy (MH)

MH is where the muscle is measurably bigger as a result of an increase in the size and number (yes, for those who have a background in micro-anatomy; in the actual number) of fibers. For those readers who want to know the science behind muscular growth please read the text box below.

To understand the mechanisms of how skeletal muscle increases in cross-sectional diameter through the addition of new contractile proteins-new muscle fibers-one must have a little understanding of microanatomy and microbiology.
Adult skeletal muscle fibers are biologically incapable of undergoing cell division to increase their number. The number of these specific muscle fibers is set at about 24 weeks of gestation in humans. So, although these mature fibers can't undergo cell division, there are other cells that can, to form new functional myofibers. The source of these new fibers is the satellite cells that are adjacent to the basal lamina of the mature muscle fibers. These cells are "awakened" upon a disruption (as through progressive weight training that creates high levels of tension) of the mature muscle cell membrane. Once "awakened" these cells begin a process of cell differentiation that leads to the creation of new immature fibers. As these fibers mature over time, they enlarge and eventually fuse with one another and with the mature fibers to increase the cross-sectional area.
What's really fascinating is that these small, immature fibers express proteins, which are normally found only in embryological development. Talk about weight training reversing the aging process! Micro anatomists refer to these new fibers as type IIc.

MH training causes very little gain in the amount of the support structures of the muscle cell. To create MH you need tension—a lot of tension. The creation of peak tension has been shown to produce widespread microcellular damage to individual myofibers causing them to grow in cross-sectional diameter. And remember how you create tension- it's how hard the muscle needs to 'flex'. Well, when you're straining against a weight that you can barely lift one time- you're creating about as much tension as possible. You would have to do this over and over and over again anywhere from 8 to 15 sets of one rep to be able to get a significant hypertrophy response. I don't recommend this as a methodology to achieve MH because although you may be able to tolerate this once in a blue moon, doing so every workout will literally tear your joints apart (as well as cause negative effects on the nervous system and endocrine system). But, it is possible to train continually in the one to four rep range (doing 'singles' with less than a 1RM weight) over a long period of time without the joint destruction mentioned above as long as the rep target is cycled from workout to workout. And this is exactly what Olympic lifters do. You'll notice particularly at the lighter weight classes that Olympic lifters are muscular 'rock hard' in their appearance but not overly large as in the case of a bodybuilder. This is important because this 'rock hard' but 'not bloated look is the result of pure gains in myofibular mass with little gain in the way of the support structures of the muscles. Of course, I am assuming that both models (Olympic lifter and bodybuilder) are both low enough in bodyfat percentage that you can

see all the musculature. Creating pure MH is a very, very slow way to increase the measurable size of a muscle-but it also takes the longest to lose if a layoff or inconsistent training is forced upon a trainee.

-Creating the 'Real Thing' Part II: The Best of Both Worlds

To stimulate the maximum amount of functionally usable muscle size in the shortest amount of time you need create high levels of tension combined with high levels of fatigue. This combination will stimulate increases in the actual myofibers (real muscle tissue) along with an increase in the amount of support structures. The support structures will help support the newly acquired muscles' function, repair, and growth. Stimulating gains in MH and SH simultaneously will make you big as fast as possible with the size gains being functional. To pull this off you need to create fatigue but not at the expense of losing a high level of tension. Perform multiple sets (generally 3 to 5) of 5 to 8 reps with moderate duration rest intervals of 3 minutes. This combination of sets, reps, and rest interval allows you to fatigue the muscle while still using a heavy enough weight for the generation of a high level of tension. To describe this in another way, you need to get a 'pump' while using heavy weights for low reps. It helps to create more stimulation if you generate voluntary tension with every rep that you perform. As you lift the weight, 'squeeze' the muscle that you're working. In all honesty I have seen great mass developed at the lowest end of this rep range without the "moderate duration rest intervals"; with rest intervals in the 5-minute range. This is the time honoured 5 sets of 5 reps training protocol.
I have frequently been asked throughout the now 20 years that I have been training others, why I favour my trainees working in the 5-rep range. Well, because, as explained above, I want my trainees to develop what I call "real mass"-- a size increase in the actual contractile components of the muscle- not just in the "stuffing" (support structures). This type of mass increase (myofibular) contributes to a usable strength increase whether on the lifting platform, the football field, or in life. Plus, as I mentioned earlier, this type of size increase (from MH and SH combined) as compared to SH alone, "stays around longer" if you must cut back on your training frequency for some reason; in-season athlete, injury, illness, or business or family obligations. You can develop SH faster, but it is a transient size increase, which is lost quickly.

Generating Tension without Fatigue: creating increases in absolute strength

By now, you may have figured this one out. To generate as much absolute strength (for one rep, or one rep performed multiple times) you must create as much tension as possible; and this is only possible when you create as little fatigue as possible.

To do this train in the 1 to 4 rep range for many sets. How many? Most of the time you should shoot for 5, but there may be times when you could increase this for a short period-if you are trying to specialize on a particular lift. And, you must avoid fatigue like the plague by taking long rest intervals-at least 5 minutes-and possibly even longer dependent on your particular fiber composition and training experience. The 1 to 4 rep range allows for the use of very heavy weights creating maximum involuntary tension. And you must flex as hard as possible on each rep that you perform to create as much voluntary tension as possible. You won't believe what employing this 'tension combination' does in this rep range to your one rep max until you actually try it for awhile. I mentioned above how the creation of tension helps to stimulate the actual myofibers to hypertrophy, but at the lowest rep ranges its greatest effect is neurological; it teaches the body to recruit-or activate-more of the fibers that it already has. And if you want to lift the heaviest weight that you possibly can, you must learn to recruit as many myofibers as possible.

Fatigue is the 'the enemy' for absolute strength gains because it can rob you of using perfect motor skill. Stated another way, when you're tired it's hard to maintain good technique at anything—tennis, baseball, gymnastics, etc—let alone handling a very heavy weight off the floor, or over your face. Also, great motor skills are needed if you are to maximise your strength because you will move the bar in a 'path' that is optimally efficient. This increased efficiency creates less wear and tear on your joints while producing the maximum amount of force—just like in any mechanical engine.

In Summary

Creating as much fatigue as possible during a training session by performing high reps and relatively light weights; getting a great pump with light weights, can make you big, but the size gain will be mostly from an increase in the amount of support structures of the muscle Cells, instead of an increase in muscle fibers. This type of size gain won't contribute significantly to functional strength, and you'll lose the size quickly if training gets even somewhat inconsistent.

Creating the combination of as much fatigue and tension as possible by training in the 5 to 8 rep range; getting a good pump with heavy weights, will make you bigger, and functionally stronger. This is the way to

go for the fastest gains in “real” size.

Creating as much tension as possible by working in the 1 to 4 rep range and by eliminating fatigue by using long rest intervals; lift as heavy as possible and avoid the pump, will make you much stronger without much increase in size.

Learning how to manipulate the variables of tension and fatigue will go a long way in making workout design less confusing, and will make your training more efficient; you’ll save time by stimulating your body in a specific way to create the specific changes you desire.

Squatting Style and "Machismo"

From Hardgainer #66 – May/June 2000

Stuart dropped me a line recently about a letter he received from a reader, which he wanted me to comment on in a future article. I thought, however, that it was important enough to warrant a comment now – not just because of this one letter but because the issue concerned seems to have become a "hot topic" recently.

In a nutshell, the reader believes that low-bar, to-parallel squats are a "cop-out" and not as "manly" as high-bar, butt-to-the-floor, Olympic-style squats. He also believes that the high-bar style brings about better muscular development. An inference was also made to the belief that low-bar squats caused more stress on the lower back than the high-bar style. With that said, let me give my two cents worth.

THE SAFETY ISSUE

I've always believed that any exercise has to be performed safely by the trainee concerned. Just because I can do rock-bottom squats safely doesn't mean that everyone else who trains should also be able to do them in this fashion. The truth of the matter, based on my 26 years of training and nearly 15 years as a strength coach, is that most people *can't* squat rock-bottom safely due to their biomechanical make-up, or other physical limitations. *But,* just because they can't go rock-bottom doesn't mean that their squatting "only" to parallel (or even an inch or two above) is any less valuable, result-producing, or tough as squatting all the way down!

In working one-on-one with every type of trainee imaginable, I'm absolutely sure of two factors concerning squatting style:

Factor #1

Most trainees can't squat below parallel safely. Because of the length of their femurs, tibias and spines, a basic premise of knee safety is violated – "never break the knee-toe line." In other words, for most trainees, when descending into a squat you never want your knee to jut out past an imaginary line that runs perpendicular to the floor from your toes. If the knee does jut out beyond the knee-toe line, this puts an enormous amount of stress on the knee structures-especially the patella and patella tendon. Now, please note that I said *"most trainees."* There *are* some people who can squat rockbottom without breaking the "knee-toe" line (and never suffer any consequences); *and* there are some trainees who *can* break the "knee-toe" line and yet *still* not have any problems.

Factor #2

The high-bar style, because of the length of the spine, femur, and tibia, makes most trainees (who have medium-to-long torsos relative to their leg length) bend over too far when the "going gets tough" during a set, putting the lower-back structures in a compromised position. By lower-back structures I'm not just talking about the muscles. I'm talking about the vertebrae, discs and nerves – the "stuff" you need to keep healthy if you plan on walking for the rest of your life! "Safe," to me, means keeping the vertebrae in a position that causes the least amount of *uneven* compression on the discs.

Whenever you place a load on your shoulders you're causing compression of the discs. Now, don't get concerned and stop squatting! Your body is designed to handle this compression for the most part. What I want to avoid is uneven compression on the discs, because this is much tougher for the body to handle. *Uneven* compression can cause disc disturbances that create a number of acute and chronic physical problems. This is somewhat of an oversimplification, but I hope you get the gist of it.

For most trainees, riding the bar high on the back/neck causes a tremendous increase in the length of the "lever arm" as compared to a low-bar style. The lever arm that I'm referring to is the length between the pivot point – fulcrum – in your lower back, and the point where the bar sits. The longer this lever arm is, the harder the lower-back structures have to work to maintain a safe position. In my experience, most trainees with medium-to-long torsos who ride the bar high will have a much greater tendency to bend over too much, creating poor leverage and putting much more stress on the lower back than need be.

I can hear some of you thinking, "Well, if it makes the lower back work harder, then it makes the exercise tougher and hence it should be more productive." Wrong! This is a gross misinterpretation of the theory that an exercise which is made harder, is more productive. Only an exercise that's made tougher and which *doesn't* increase the risk of injury, is generally more productive.

Here are two examples: If we all used a cambered bench press bar with a two-inch bend in it, to bench press, it would definitely make the exercise a lot tougher because we would have to start the ascent from a point two inches below our chests. I guarantee that most of us would have some type of

shoulder injury within the first few weeks, if not from the first workout! A good example of making an exercise tougher *and* actually safer is to pause the barbell (regular type, not a cambered one) on your

chest when benching.
For most trainees, riding the bar relatively low while squatting – on the posterior delts – will work the leg musculature harder because the lower back won't give out (since the lever arm has been shortened), and leverage will be increased thus allowing the trainee to use more weight. This is true whether the trainee has the capabilities to squat to rock-bottom or "only" to parallel.
Some might argue that the high-bar squat actually forces you to maintain an upright posture. I agree, but this position can only be maintained *during the really tough reps* of a set by a trainee with a *short* torso. For medium-to-long-torso trainees, when the set gets tough the lower-back muscles will generally give out, losing the more upright position, losing leverage, compromising the lower-back structures, and terminating the set long before the leg musculature gets worked as hard as it should.
Another problem with riding the bar high is the pressure it puts on the seventh cervical vertebraeunless you have enormous trap development, and I do mean *enormous.* This pressure can cause disc problems resulting in localized as well as referred pain-usually down the arm. Other problems are the deterioration of the discs and a narrowing of the grand foramen (the channel in the vertebrae where the nerves run, in particular the spinal cord). Why risk injury?
Play safe and put the bar on your posterior delts and the thickest part of your traps. By placing the bar here, not only will there be less risk for your cervical vertebrae but you'll get better leverage and be able to handle more weight.

THE "MACHO" STUFF

Any trainee should be respected first and foremost for the amount of *effort* that he or she is putting into an exercise on a consistent basis, *regardless* of the weight they are using or the exercise they are performing. So what if someone's not performing high-bar or rock-bottom squats?
At least some of those who criticize trainees who don't perform high-bar rock-bottom squats – though I'm *not* saying that the reader in question is one these people – fool themselves into thinking that they (the critics) train "as hard as possible" when in actuality they don't. They like to focus on an exercise that's known to be "tough," and which they happen to perform rock-bottom, to hide the fact that they really don't want to train hard themselves.
Just because a trainee can't squat to rock-bottom, or chooses to squat to parallel instead, doesn't make him any less of a "man" than the person who chooses to squat to *rock-bottom-as long as maximum effort is being applied over the long haul.* One trainee passing judgment on another just because of exercise selection or interpretation is "out of place machismo" and the type of thing I really dislike. It reminds me of the old but incorrect thinking about using machines instead of free weights. Supposedly, if you used machines you were just "copping" out because "real" men used barbells.
Of course, there are plenty of trainees who physically *can* squat, but won't and instead choose to fool around on the leg press machine. But, don't judge everyone based on those trainees.
Dan Foy is one of my strength coaches who at 6-1 and 270 pounds with an 18-inch arm, 33-inch thighs, and a 52-inch chest, has squatted 450 pounds for 20 rock-bottom reps, and will squat over 700 pounds in a meet this year. He recently did 30 reps on our Hammer Strength Leg Press and said it almost killed him. Does Dan's leg pressing make him any less of a "man"? John Stanley, at 6-2 and 230 pounds (at 50+ years of age), performs Hammer Strength Leg Presses with over 450 pounds for "many reps," followed by trap bar deadlifts and pressing a 100-pound sandbag overhead for reps, *but is not doing any squats.* Is he any less of a "man" because he doesn't squat at all? Of course not! I could give you many examples of men and women who don't squat at all (high-bar or low-bar, rockbottom, parallel or above parallel) but yet they are as tough as they come. Exercise selection alone, or a specific form interpretation, is not a determinant of a trainee's toughness or commitment.
Stick with what your, body allows you to do safely, add a little iron to the bar every workout, and train hard for along period of time. I know this formula will deliver the goods. Don't get caught up in all the bull surrounding the training world. Stick with the basics.

The Training Cycle

From Hardgainer #37 - July/August 1995

Have you ever wondered why you should take a week or more off from training after hitting a new big max, and then start a new gaining cycle using only 80% or so of the new max? And haven 't you wondered why you have to wait 4-8 weeks till you can handle the big weights again? Kind of tough to do, isn't it? It takes patience; and patience comes from believing it will work and deliver everincreasing size and strength. Well, you don't have to "believe" just because Stuart and Brooks have told you so. There is concrete research to back up the cycling of training intensity. For long-term gains, intensity cycling is one of the very best interpretations there is of sound training.

After reaching that new big max in, for example, the bench press, of say 300 x 5, or 250 x 5, you're a little sluggish getting a workout started, and your shoulder aches a little when you warm up. But to take 10-14 days or so off now, and start a new bench cycle with only 80%, taking 4-8 weeks to reach 300 lbs again, for example, before going into new poundage territory, is not appealing at all. This is the primary thinking (greed) that pervades most people, and is why most trainees never leave the intermediate stage of strength and development. Or, perhaps more accurately, why most trainees never get beyond the beginner stage of development. This lack of patience is understandable though. You worked very hard to get to this point, and you don't want to lose what you've worked so hard to gain. I know you're afraid that you've going to lose size and strength. Some might, but in my experience I actually feel bigger at the end of one week's rest, following 12-20 weeks of all-out training.

I want to iterate again, if you don't cycle your training intensity, you will have a hard time progressing past your current stage of development. There was a great article written by Brooks Kubik in issue #25 comparing the cycles of two weight trainees, i.e., Sam and George. One cycle worked, and one did not. It's a great and true example of what happens. Why does cycling work? Read on, there's science to back it up.

I'm sure that many of you have never heard of Dr. Hans Selye. He is considered by many to be the world's leading authority on stress. He authored the famous book THE STRESS OF LIFE, as well as contributing over 1,500 articles to technical journals, and writing 29 other books on the subject of how the body responds to stress, all of which applies directly to weight training. Stuart briefly mentioned Dr. Selye in BRAWN.

I want you to remember throughout this article that stress is not merely "nervous strain," to use Selye's words, but the body's response to any stimulus, positive or negative. The stress-producing factors, technically called stressors, are different yet they all elicit essentially the same biological stress response. Dr. Selye performed numerous experiments with various stressors, including "intense muscular work." The latter applies directly to us ironheads.

I'm going to tell you about one such experiment. Stick with me and you will see that you need to cycle your training, because progress is not linear (you cannot keep progressing indefinitely, without giving the body a break), and the ability of the body to adapt to weight training is finite, from cycle to cycle.

In his book THE STRESS OF LIFE, Dr. Selye gives an account of how a group of rats was exposed to various stressors (e.g., cold environment, drugs, infections) including "forced muscular work" and the results were "always the same as far as adapting to the stress," to quote Selye. So, there is much we can learn from this experiment.

Rats that were given time (5 weeks or more) to adapt to moderate levels of stress, could then withstand extremely high levels of the stress for months. But if given less time at the moderate level, they couldn't withstand the higher stress level. After months of continually adapting to the higher stress level, "acquired resistance was lost again" and exhaustion set in (a sticking point), and no matter what measures were taken (extra food, or even when placed under moderate levels of stress again) adaptation continued to diminish. These rats went through what Selye has named the "General Adaptation Syndrome," which is the way the body responds to any stress (including weight training). The GAS is composed of three phases: Alarm Reaction Phase, Resistance Phase and Exhaustion Phase. The actions of the body as it goes through the three phases of the GAS are based on "demonstrable biological laws" learned from the laboratory. Let's now take a look at the three phases, and how to construct a training cycle based on the actions of these phases in response to the stress called Progressive Resistance Training.

PHASE ONE: Alarm Reaction Phase

When a stressor (e.g., squat, bench press, deadlift) is first encountered, the body must rally its resources, so that it can, literally, survive. This is called the Acute Stage of the Alarm Reaction Phase.

As Selye notes, the body has to be given time so that it can take defensive measures by rounding up all the biological resources needed to repair the damaged muscles, and reload with fuel for the next training session. In other words, the weights used to start a cycle must be relatively light, 70% .to 80% of a max for the rep range you're using, and built up slowly (for 4-8 weeks) or the body will prematurely enter the Exhaustion Phase, and you will have killed the cycle before it had a chance to start. *Be patient!*

After the initial 4-8 weeks, or more, you should have built back to your previous best weights. These are now handled relatively comfortably, with a gaining momentum initiated. This is a sign that "adaptation has been acquired and the capacity of the body to resist rises considerably above normal," to quote Selye. If you try to rush through this phase by adding weight too quickly (due to lacking patience), or in large increments (get yourself some small plates instead), the body won't be able to rally its resources fast enough and you will bring on a premature end to the cycle, with nothing to show for your efforts. Again, you end up in Phase 3, the Exhaustion Phase, because "no living organism can be maintained continuously in a state of alarm," to use Selye's words. Once you are in the Exhaustion Phase, you have to start all over again. So, be patient, and do it fight. Once adaptation has been acquired, it' s time to go into new poundage territory.

1. Initial 4-8 weeks of new cycle.
2. Body's level of resistance (adaption ability) drops below normal at first.
3. Start cyle with 80% of maximum weights for desired reps.
4. Increase resistance slowly using small plates.
5. Body starts to mobilize it's defensive mechanisms to handle higher levels of stress.

1. "New Territory" - should be pushing new maximums at each workout.
2. Body's level of resistance (ability to adapt to demands) is at ist highest.
3. Maximize nutrient intake and rest.
4. Can last 12-20 weeks or more IF training frequency is low and progression is conservative.

1. Adaptation to this stressor diminishing.
2. Training enthusiasm drops.
3. Strength increases stop.
4. Feel tired more than usual.
5. Stop training before severe exhaustion signs begin.
6. Take 7-10 days off.

Start new cycle.

Chart showing the General Adaption Syndrome, and some of the corresponding functions of the body as it goes through a well-constructed training cycle. The curved line follows how the body responds to the three phases. Notice how during the Resistance Phase the body is *at the limit (plateau) of its adaptation ability. If you try to increase weight resistance faster than your body'* s *ability to adapt, your gaining momentum will be killed and the exhaustion phase entered into prematurely. Then you would have to start again, having not moved into any new poundage territory, and thus having wasted that period of training* .

PHASE TWO: Resistance Phase

This is the "new territory" phase. At this point, the body can tolerate consistently hard workouts, handling weights that should surpass old records and allow the trainee to break into new ground. This is the phase of the GAS that we look forward to. This part of the cycle can last a very long time (20 weeks or more, in my experience) if care is taken not to override what the body can adapt to. As Selye

stated in his book STRESS WITHOUT DISTRESS, "Excessive or unvaried stress...becomes distress. And this, in turn, can lead to...physical breakdown." So don't get "excessive." (I'll cover "varying" the stress later.) Keep it going by adding a very small dose of iron to the bar each workout. If, once again, you get impatient (greedy) and add too much weight, you will kill the cycle and end up in Phase 3, with little to show for your efforts. Be smart, be patient, put 100% into every work set at this stage, and really enjoy this phase.

PHASE THREE: Exhaustion Phase

Even if you played your cards right, and only added weight in very small increments, slept well, and ate nourishing meals, you would eventually encounter the Exhaustion Phase. The body can only recover for so long even if you do everything right. The exact reasoning behind what causes the body to enter the Exhaustion Phase, regardless of what steps are taken (e.g., extra rest, food, and even lighter weights) are not clear. But it has been found to be related to long-term release of corticoids. The adrenal glands secrete excessive amounts of corticoids during intense weight training, to combat inflammation. Dr. Selye, in THE STRESS OF LIFE, gives an example of what happens to the body by comparing with what happens to an electric heater during excessive use.

If an electric heater maintains the temperature of a room, we can compensate for excessive cold by using

more current. But this is possible only within certain limits. As more and more current is used, there comes a point when the wires bum out; then the whole heating mechanism breaks down, and, significantly, its failure is the direct result of efficient heat regulation. This kind of breakdown can occur in most compensatory mechanisms.

As Selye would put it, the body's resources to resist or recover from weight training become depleted, and the only way they rebuild is if they do not encounter this stressor for a while. The body needs a break from lifting weights. The key is to know when this phase is starting, and then take at least a week off. If you don't, and you keep trying to force gains, I promise (and it's been proven by Dr. Selye, and many real-world examples) you will get weaker and smaller, and very frustrated. You cannot "bully" your body out of the Exhaustion Phase. There are medical symptoms, as well as selfobservable

signs, that your body has had enough and is entering the Exhaustion Phase.

As far as the medical symptoms are concerned, the most generally used and reliable measures of undue stress are the levels of certain blood constituents, mainly the levels of adrenalines, corticoids, ACTH (adrenocorticotrophic hormone), and the eosinophils. Now, unless you have the time and money to have your blood drawn every week to track these constituents, this method is not feasible. So, what you need to be aware of, is recognizing the self-observable signs that become evident when your body is starting to deplete its "adaptation energy stores," to quote Selye.

The following are five of the most obvious self-observable signs that Phase 2 is ending, and Phase 3 is beginning.

i. No progress

After several weeks of honest 100% effort to all aspects of training (effort in the gym, good food intake, proper rest), you can't seem to make progress. In other words, you keep beating your head against the same poundages week after week, This lack of progress may also be accompanied by continually sore joints. This is the best sign to recognize because you haven't depleted yourself too much yet, unless you're also experiencing the following signs.

ii. Elevated heart rate

If you notice your heart seems to be "racing" while you're at rest, or especially when you're sleeping, it's a sign your body is working overtime to try to repair itself.

iii. Constant systemic fatigue

You feel like you're "zoned out" or "wiped out" all the time (not just following a hard workout). You may even experience "flu-like" symptoms. Years ago, when I was training "stupid," i.e., six days per week, sometimes twice a day, I would awake during the night sweating, with a heart rate over 120 beats per minute. Talk about being in an exhausted state.

iv. Psychological/attitude changes

You've lost your enthusiasm to train. You just don't feel like doing it. Irritability sets in (you yell at your dog, girlfriend or mother for no reason) and you've developed a bad attitude, or you feel like you could sleep any time any place.

4

v. Intestinal disturbance

You may develop problems with your digestive tract. Symptoms that appear are usually diarrhea, indigestion, or you simply lose your appetite and, hence, lose weight.

Dr. Selye classified these symptoms as "diseases of adaptation." (These are not diseases as you may interpret them though. By definition, a disease is a condition of an organism that impairs normal physiological functioning.) These symptoms occur universally due to any "undue stress," and are a sign that the body can no longer adapt to the demands being placed upon it. Selye also states that "when they [the signs of undue stress] appear, it's time to stop or change your activity-that is, find a diversion." This diversion should take place during wha115

t I call the Active-Rest Phase.

PHASE FOUR: Active-Rest Phase

I've taken the liberty to add a fourth phase (for us ironheads) to Dr. Selye's General Adaptation Syndrome. I call this the Active-Rest Phase, and that's what your body needs at this point – *rest*. It's time to take at least a week off and let your body recover from the pounding it has taken for the last 3-4 months (or perhaps even longer). Some of you may need 2 or 3 weeks of rest, depending on how much you've depleted yourself.

So what do you do during this period? Almost anything light, just stay out of the weight room. You can gently jog, swim, ride a bike, etc. Just stay mildly active and stretch a little. The key is to get some rest, so don't do anything too stressful. Now let me tell you what your body's going to do.

During this period, your body is going to restore many of its biochemical resources and functions, particularly the nervous and endocrine systems. These two systems take longer to recover from the stress of the months of working out. After the week or longer off, you'll be feeling great and ready to hit the gym again.

A new cycle can be started at 80% of your recent new best poundages. Once again, the body will

pass through the first two phases (hopefully you'll stop before you hit Phase 3 this time) and bring about new strength and the resultant muscular growth. Once again, you'll have to enter Phase 4 to let the body repair itself, and begin the cycling process again. If you do this for 4 or 5 successful long cycles, you can, literally, metamorphosize yourself.

One additional piece of advice I would give you would be to change some of your exercises from cycle to cycle. Of course you should stick to the big basic exercises, but there are plenty of those around. Your training doesn't have to be boring. There are also physiological reasons for changing your exercises from cycle to cycle. As Dr. Selye stated, "unvaried stress " can lead to depletion of the adaptation energy stores. So, it would be a good idea to change a couple of movements each cycle, as has been recommended in HARDGAINER.

Proven by science and much research, both in the laboratory and field, this is how the body adapts to stress. You can't get around it. If you want to realize your strength and size potential, cycle your training. Work on developing the awareness necessary to know when your body needs time off, and have the courage to do it. As Stuart has stated many times, don't waste years of your life trying to prove different, and end up short of your potential.

Addressing Your Questions

From Hardgainer #59 – March/April 1999

This issue I'll address some of your questions and comments that I've been reading on the Round Table of the HARDGAINER web site. Remember, however, that these are my own personal professional opinions; others may have different ideas or approaches.

Squatting, stiff-legged deadlifting and bent-legged deadlifting in the same week

Many of you are complaining that you can't perform the above combination. What I've been reading the most is that your lower back doesn't recover sufficiently from the squat and stiff-legged deadlift on Monday, let's say, to be able to come back and perform the bent-legged deadlift on Friday. In my now fourteen years as a professional strength coach I've never had anyone who can't do this *unless* they are involved in a sport or other activity that uses a lot of lower back or leg strength. I think the reason why you may not be recovering is the recurring fact that you've started with too much weight on these exercises, or you've added weight in too large increments. If you start slowly and build up all three exercises at a rate your body can adapt to, it can not only survive, but most importantly it can thrive.

The other reason I believe that could be causing the problem is poor form on the bent-legged deadlift. In all my years of working hands-on with hundreds of trainees I've rarely seen someone who was *not* properly supervised by a coach perform this movement without compromising the position of their lower back.

Your lower back (lumbar area) has to remain at least flat, or better yet, arched (spinal extension), *throughout the lift!* This is accomplished through flexing the spinal erectors during the entire lift. By doing this you're protecting the lumbar area of the spine, as well as the spinal erectors (the muscles of the lower back) themselves. This also gives you tremendous leverage allowing you to use the powerful hip flexors to their greatest advantage. I think what must be happening, once again, is someone trying to use a weight that's really too heavy to maintain proper form with. In their zest to lift a "heavy weight" they allow the lower back to "round." This not only puts undue strain on the erector muscles, causing a much longer recovery time, but will eventually cause an injury. Another drawback to deadlifting this way is that it cuts short your potential in the future because, as I said earlier, you're not maximizing your leverage.

John Christy's "way to train"

Although it's flattering to hear that "my" way to train has brought many trainees good results, I want everyone to understand that the methods I promote are not necessarily "my invention." The methods I prescribe have been available to everyone for years. I think what I do differently is in the structure of the programs and, more importantly, in the discipline I instill in my trainees. The biggest thing that I'm responsible for is promoting progression and consistency. This I'm proud to take credit for, and the results I've had the pleasure of helping trainees to achieve speak for themselves.

I believe there are a couple of misconceptions about "my" way to train. One is the level of what has been come to be called, in gym slang, the "intensity" of my recommended style of training. By the way, most trainees don't know the true definition of "intensity." Most would define intensity as "how hard you train," but here's the true physiological definition: "The percentage of a one-rep maximum for a given set (for instance 80% of a one-rep max, for five reps)."

Well, for some reason, many of you think that my style (beating failure as against going to failure) is an easier way to train, and that I recommend a training weight that would allow you to perform *several* reps beyond the "goal number" of the set if you really wanted to do them. Both of these assumptions are false.

I want to make it very clear that the only time I recommend using a weight that's below a maximum for the goal number is during the "build up" phase of a training cycle. Unless there are special circumstances or special limitations with a trainee, this "build-up" phase should end approximately 4-8 weeks after the start of a new program or exercise. Then – and pay attention, for this is very important – the weight will be such that an additional rep beyond the "goal number" would be nearly impossible. Sometimes an additional rep may be possible, but this is rare. If a trainee does adapt at a rate faster than the weight is being added (i.e., he could perform several reps beyond the goal number) all we do is add a bigger "chunk" of weight at the next workout or two, and then go back to adding the "little gems" again.

After this initial "build up" phase my trainees will train as hard as they can for every rep of every "live" set that they perform, for at least 25 weeks (50 workouts). When I say "as hard as they can" I mean, for instance, that if they are performing a 6-rep set on the bench press, the bar would lower for rep number 6, touch the chest, and although the weight would be threatening to make the trainee fail,

he will push with every ounce of effort possible to complete the rep, but only just – thus beating failure!

For the next workout, a pound will be added to the bar and the trainee will go to war again. This will go on for at least 50 workouts, and most of my trainees make 100 or more. I consider this a high level of "intensity" and, most importantly, it will be maintained for a long period of time.
Now let's look at another approach. If this set was taken "to failure," rep 7 would be lowered, touch the chest, and the bar would remain right there, or perhaps be pushed a little off the chest before getting "stuck." Either way, a spotter would be needed to help raise the bar. Now, this is a "hard" way to train, but is it necessary to stimulate growth? And there are drawbacks over time, for instance the "loosening" of technique to get that extra rep – possibly causing an injury, which is what I've seen the most often.
I'm not trying to start a "piss fight" with the "train to failure advocates." I trained in that fashion for a number of years and got good results. But I've received better results (and much fewer injuries) training in the fashion that I now advocate. I'm bringing this up to present to you a possibly different way to look at these philosophies, and I want to stimulate you to think and to raise questions. So, let me pose this question to you: Did the trainee that "beat failure" stimulate less growth than the trainee that went to failure? My opinion is that they both stimulated the body to change, but the inherent risks involved with the training-to-failure style, and the effects it has on the nervous system, may prevent along uninterrupted training cycle. In my experience, the trainees that beat failure, over time, will gain a tremendous level of confidence because their nervous systems don't "know" what it's like to fail. The great Olympic lifting teams from Eastern Europe, and China put tremendous belief in this philosophy, and so do I.
As far as stimulation goes, does it really matter if you train beyond your absolute limit-to lift until the bar doesn't move? Or will the body adapt to a new level as long as the weight lifted has exceeded what has been previously done, regardless if you went to failure or not? Let me say this another way: If a weight that you lift is heavier than you've ever lifted before, for a prescribed number of reps in consistently good form, does it really matter as far as stimulation goes how hard it was? I want you all to really think about this. I feel the most important thing is that weight is continually added to the bar at a rate the body can adapt to (without overtraining). This is, or should be, the most important objective to any program regardless of whether you use "slow- cooking" single progression, conjugate training, periodization, high-intensity training, a singles program, or whatever!
I've trained using all of these methods (and many more!) and have found what works best for me, and for the many trainees who have put their trust in me to decide what's the best way for them to achieve their goals. The bottom line is this: You must be stronger in six months than you are now. If this is not happening, then your program – regardless of your "intensity" – or the *application* of the program, is not working!

20-rep squatting

There seems to be a lot of renewed interest in 20-rep squatting these days. Some of the material on the HARDGAINER web site would have you believe that there's only one way to go about doing these – supposedly to take your 10-rep squat weight and do 20 reps. There's nothing wrong with doing 20-rep squatting *as long the weight that you were using to do 10 reps with was way below your max!* With a *true* 10-rep weight it would be physically impossible for me or any of my trainees to get more than the 10th rep, in which we would not be able to ascend to complete the 11th rep. But maybe the "take your 10-rep weight and do 20 reps" dictum is just a tactic to try to get trainees who were not squatting as hard as possible, to start doing so. Some people who think they are using a true 10-rep weight are just kidding themselves. Naturally, when I talk of a 10-rep weight, I mean exactly that.
If you take a trainee who's truly working to his max on the squat at 10 reps, and ask him to do 20 with the same weight, the only way he could get even a few reps over 10 would be to compromise his technique, which would more than likely cause a serious injury.
Let's look at someone who's not training his squat as hard as possible right from the start. And remember that I'm speaking from experience here. This trainee gets fired up and decides to jump into 20-rep squats. So, he loads the bar with, let's say, 150 pounds, and produces all 20 reps. And let's assume that his form remains great. He feels good that he got the 20 but is sore as hell for the next 5 days. He comes back 5 days later and, with 10 pounds on the bar, gets another 20 rep. The only thing is that it wasn't nearly as exhilarating as it was the first time, because he discovered that this is really a very hard way to train. Now remember that this trainee is not used to putting out this kind of effort. After another 5 days he goes at it again, and hates the entire process. So, he decides that training this way is just too hard, and he quits. So, you may say the guy didn't want it bad enough, that he was a wimp, and that's it. He's given up on. Well, my view is a little different. It would be easy for me to have those same feelings towards this guy – that he didn't have the guts to train hard, and that he wants the easy way out. But, instead, I look at the fact that this guy really wants to train hard – evidenced by the fact that he realized that he wasn't training hard enough and that he attempted to change – but he just wasn't conditioned to handle the discomfort associated with training this way. A

lot of coaches would give up on this guy because he isn't the type of trainee whose system (and mind)

can tolerate this kind of training *right off the bat.*

You have to remember that many trainees who start out lifting weights have never worked at anything this hard their whole lives – so they really don't understand what it feels like. Instead of giving up on this guy, I would take the time to have him squat in a way that would slowly allow his body *and* mind to adapt to the discomfort associated with 20-rep squatting. I would adopt the same sort of conservative 20-rep strategy that Stuart has advised in BEYOND BRAWN (paragraph 13.65).

I would have him use a weight that would allow somewhere between 25-30 reps *if* he actually went to failure, but he would stop at 20. Then I would have him add 5 pounds a week for four weeks, then cut back to 2-1/2 pounds a week thereafter. I would have him eating properly, allowing him to 20-rep squat successfully for a minimum of 25 weeks. I can assure you that at the 25-week mark your "wimp" can now tolerate the discomfort and would be squatting 190 pounds or so for the 20 reps, as against the 170 pounds he quit on in the other illustration. Sure this is not an enormous weight, but it's more than he has ever squatted and it has set the stage for tremendous gains to continue to come over the next 25 weeks. Yes, the next 25 weeks! If he was under my guidance we would shoot for at least a year of 20-rep squats. How many so-called tough trainees can say that they have done that? After the full year, our wimp would be handling about 240 pounds for 20 and would have put about 30 pounds on his body – most of it muscle. Not bad for a first year of serious training for someone who didn't seem to have the "guts" to train hard.

Looking back on my own experience with 20-rep squats, I regret not taking it a little slower. I reached a pretty big poundage but would have gone even higher if I'd been even more patient and just added a pound per workout verses two and a half, and kept at it for much longer.

My advice, even for the type of trainee who's conditioned to tolerate the discomfort of intensive training, is still to take a relatively conservative approach. See, my mind set is to train very hard over a long period of time on a particular program. This is the way to make tremendous gains. I haven't seen anyone build a great physique or great strength in 8 weeks. But I've seen tremendous results in 50 weeks. If, for example, you have the strength to just barely squeeze out 20 reps with let's say 300 pounds, I would have you start with 280 and add 2-1/2 pounds a week for at least the first 25 weeks. Depending on certain variables – how well you eat, your family and job situation, etc. – we would then make a decision as to when to cut back to adding just a pound per week on the bar. Twelve months after the 280 x 20 start you would be handling somewhere between 350 and 380 pounds. This is a tremendous gain for 20-rep work.

Let me finish my thoughts on 20-rep squatting by saying that there's no "magic" in 20-rep squats. I feel that 20-rep squatting is one of many excellent ways to train; but it's only that. Squatting for 10 reps or 5 reps can reap benefits just as well as 20. As I always preach, the "magic" comes from being progressive, being consistent in all areas of training, and trying as hard as possible to beat failure and make your prescribed rep goal.

One Man's Journey

From Hardgainer #43 – July/August 1996

Mike's training was like most guys' programs: 15-20 sets per body part, and in the gym six days per week. His mentor was a 45-year-old gym owner who has a 20+ year record of steroid abuse. (I know the guy who sticks the needle in the "coach's" butt.) Although Mike Dodd wanted to gain mass, this "coach" suggested a very low-fat low-calorie diet (less than 2,000 calories) augmented with his "special" amino acid supplement as well as other powders and pills, which cost an arm and a leg. Mike was taught to train for the "burn" and the "pump" with no instruction whatsoever given to adding weight to the bar and getting stronger.

There is a saying that there is rarely a bad student, just bad teachers. This is exactly what happened to Mike and I'm sure it has happened to thousands of people who are willing to work hard towards a goal but are put on the wrong path.

As a senior in high school, at 6'4", Mike tipped the scales at 140 lbs. During his first few years of training, on the six-days-a-week garbage, he gained some weight but also developed a chronic lowback problem. His lumbar muscles were very weak, and the instruction he got at the gym was very poor – terrible choice of exercises along with poor technique. Mike would pull his lumbar muscles at the drop of a hat. As I noted in issue #42, Mike once severely injured his back by picking up a sponge.

Mike was a manager of a food store that I shopped at, and after a couple of years we developed a friendly relationship. Because I was 250 lbs at the time, at 5'10", Mike noticed that I weight trained and he would ask questions concerning my training and diet. Like most people who don't know about proper training, Mike was surprised that I "only" trained 2 or 3 times per week, ate 4,000-5,000 calories per day (and not get fat), and took no supplements outside of a multi-vitamin and multi-mineral tablet. He just didn't believe it was possible.

Before I give out advise to someone I make sure that they're going to take what I say seriously, and put it into practice. I've sweated blood for a long time to learn what I have. I have very little free time (I'm working about 80 hours per week) and won't donate it to just anyone before I know for sure that it's going to be used. Mike's consistent interest, and the use of some of the tidbits of info I gave him, convinced me (after two years) that he would take my advice to heart – *and boy, did he.*

OUR FIRST FORMAL MEETING

I drew up Mike's first program, and being as limited on time as I was, I had Mike meet me beside a farm road – not in a gym, and with only a stick that I use for manual resistance to act as our barbell. This should give you some idea how "hungry" Mike was to get big and strong.

Beside that farm road he concentrated intensely on everything I had to say. We practiced squats and deadlifts beside that road. I had about ten minutes between two "at home" clients to discuss Mike's program and demonstrate how to perform a proper squat and deadlift. This wasn't the best way to instruct someone, but it's all the time I had and Mike was burning to get started.

MIKE'S FIRST PROGRAM

Monday

1. Crunch: 1 x 15
2. Squat: 1 x 20
3. Bench press: 2 x 8-12
4. Pulldown: 2 x 8-12

Thursday

1. Side bend: 1 x 15
2. Sumo deadlift: 1 x 15
3. Military press: 2 x 8-12
4. Barbell curl: 2 x 8-12

He started the deadlift at 85 lbs, for 15 reps, and added 5 lbs per week. The squat started at 115 lbs, adding 5 lbs per week. He started the crunches and side bends at a fixed weight and added 2 lbs per week. The other exercises were done for 2 sets of 8-12 reps, to failure. In other words, he picked a weight that he could only get about 8 reps with on the first set. He would then stay with that weight till he could get 12 reps on the first set. Between sets he would rest 3-4 minutes and then had to get at least 50% of the reps he got on the first set. At this point he would add approximately 5% the following week and this would force the reps back to 8 or 9. This is a blend of single progression and double progression types of programs.

I remember Mike telling me about his first proper workout. He really didn't expect much because it was so short. He was used to being in the gym for two hours or

more, and he wasn't used to working very hard. The night after his first real workout he had big plans to go out on the town. Those plans quickly got cancelled. He was simply too tired. You don't necessarily have to go to failure to be considered as working hard, but I had Mike go to failure because I had to make sure he experienced what hard work was all about. Remember that I was not personally supervising his workouts, but coaching from a distance. The easiest way to make sure he trained hard was to make him push or pull the bar till it wouldn't move.

But I didn't have him train to failure on the squat or deadlift because of his previous injuries and lack of experience with these two movements, and because he did not have my hands-on instruction. I had him use the single progression method instead, to make sure that he could maintain perfect form while building up the weight at a controlled rate. Once the weight built up it would eventually make him work very close to his limit, while maintaining perfect form.

NUTRITION

I gave Mike advice on nutrition as I shopped at the store he managed. I told him that most supplements were a waste. I told him to take a multi-vitamin and multi-mineral tablet in the morning and eat real food 5 or 6 times a day, keep junk food to a minimum, and drink milk. He was to work up to one gallon a day every day, and eventually two gallons.

Over the next nine months Mike proved his worth. He never asked me to check out his form. He never complained about anything. He just went to work the best he could. When we would happen across each other at the store, I would ask how it's going, and he would simply say, "Good." I could tell – he was getting bigger. Mike gained about 30 lbs. He was deadlifting 230 lbs for 15 reps and squatting 225 for 20. (His best while training in the old way was 200 lbs for a couple of half reps.)

He accomplished all this without hands-on instruction, or even a training partner. His springboard was the meeting beside the road, and some verbal consultation.

It was at this time that I opened my new training facility and gave Mike the opportunity to train under my guidance.

Watching Mike work out the first time was an eye opener. I discovered that his initial results were because of a good program and increased effort over his previous level, but his form was poor. Although Mike was working harder than he ever had, he was nowhere near to generating the type of effort he was capable of.

THE SETBACKS

Outside of cleaning up his exercise form, my main priority was to teach Mike how to get it up for every rep of every set. Though he was working harder than he had previously, I knew he had more. At first this didn't go well. Mike would get himself up for the upcoming set, but would lose technique and get sloppy. A focused rage is a learned behavior. It takes time and consistent practice to develop one. Mike was trying to build the weight on the bar faster than what was possible. This was partially my fault, and this cost him. While squatting in the spring of 1995 Mike pulled his low-back muscles. The culprit was unfocused aggression which was fueled by trying to add weight to the bar too fast. He knew the weight was too heavy but he thought that by being extremely aggressive he could make it. About halfway through the set Mike's form broke down, he lost his flat back, and he was unable to walk for about three days.

Shortly after this incident Mike developed a severe intestinal problem and couldn't eat normally. He lost over 20 lbs. It was during this time that Mike witnessed my brother Jack work out a few times. After being under my guidance for over twelve years, Jack can generate frightening levels of intensity and withstand enormous physical stress (the good pain) during a productive set. This initially made

Mike Dodd, in May 1996, sumodeadlifting
315 for 15 easy reps.

Mike question if he could ever learn to train that hard. Combine this with the fact that he just lost 20 lbs, couldn't eat yet because of the intestinal problem, and couldn't train because of the back injury, to

say Mike was down on himself is an understatement.

THE COMEBACK: "LITTLE GEMS" AND JACK

Mike and I had a talk about things. I assured him he had the desire to push himself as hard as Jack does. It would just take time and a lot of practice and hard work. He got injured and lost confidence simply because I allowed him to violate a couple of rules of sensible training. First, he added weight to the bar too fast, at a rate his body couldn't adapt to, and thus no matter how hard he tried he was destined to fail (physically and, most importantly, mentally). Second, he simply hadn't been training long enough to acquire the learned behavior of a focused rage.

The solution was simple. We would take a step back and start using weights that he could handle, and combine that with practicing a fierce pre-set aggression and concentration routine. (Brooks Kubik has mentioned how he goes through this routine. Reread his article in issue #34. It's good material.) We would then build the weights back up gradually. When the weights just started to push him we would break out the "little gems" and add just a small dose of iron to the bar every workout. Nothing tricky, just basic HARDGAINER philosophy.

Mike's new routine was the same as the first I gave him, but with the addition of stiff-legged deadlifts following squats, shrugs following the military press, and the addition of hanging grip work. Because Mike had tight Achilles tendons he did no calf work to begin with. After he had worked on his flexibility for a while I added calf work to his program. The program had no "magic" in it. The "magic" was in the effort put forth for every "live" rep of every "live" set of every workout.

Mike was adamant about getting his squat depth below parallel. Note that he can squat below parallel and still keep his back flat. I worked with him until breaking parallel was second nature, and then he could focus on the most important thing – effort. At 6'4", for Mike to go below parallel is a long range of motion. But he was determined to do it and his biomechanics could handle it. I added the stiff-legged deadlift because I wanted to give Mike's low-back muscles stimulation through a more complete range of motion. This provided a substantial carry-over to the sumo deadlift. To this day, Mike gives the stiff-legged deadlift credit for making his sumo deadlift "easy" on his low back.

Mike's training now got an additional bonus. He and Jack started training at the same time. As a professional strength coach I can say that Jack has learned to produce a focused rage for everything he does. He has reached the upper level of mental preparedness for every set of every set, and it is infectious. Mike has caught this "disease." Over the next five months Mike learned how to harness all his power on the set before him. The weights continued to build on the bar, and the muscle on his body.

There is a critical lesson to be learned here. Most beginning and intermediate weight trainees are continuously looking for a "better" routine, especially when gains slow down. Instead they should be working on ways to work harder, to reach inside and use more effort. As you can see, I didn't make any startling changes to Mike's original program (the one I gave him beside the farm road) but what Mike did was work harder. It's easy to switch to a new routine at the same effort level, but all you'd get is more of the same results you're getting now. But try and generate more effort every time you train, with additional reps or more weight on the bar, and you will get results.

PRESENT AND FUTURE

Mike now weighs 250+ lbs. He squats below parallel with over 350 lbs, with no assistance other than a belt. He can bench press over 300 lbs and does lat pulls with over 250, and curls with 130 for 5 reps. These numbers aren't world beaters (yet) but considering that Mike is 6' 4", to squat below parallel with close to 400 lbs, and bench press over 300 lbs with very long arms, and with less than two years of proper training, is very impressive. But Mike doesn't focus on his unfavorable levers, or use them as an excuse. He concentrates on delivering full-bore effort on what he can do. He's a warrior.

For the uninitiated to watch Mike train now would be a frightening experience. He generates ferocious levels of intensity. He has learned to focus all his mental and physical energy on every rep of every set. Nothing is wasted. His current routine is very similar to the previous one he was using. All I've added is a set of partial bench presses in the rack, and more grip work.

If your training hasn't been bringing home results, and you're using a good abbreviated program, quit searching for another. Instead, concentrate on putting out more effort. Be like Mike, and practice harnessing all your power for the next rep you perform. This is the lesson that Mike has learned on the early part his journey, and it's one of the most important in my book.

Fifty-Two Weeks of Training

From Hardgainer #55 – July/August 1998

Another of my clients has trained for a whole year without missing a single workout. One hundred and four workouts in a row – every Wednesday and Saturday like clockwork, no injuries or illness. His deadlift went from 45 pounds x 15 to 300 x 5, bench press went from 185 x 5 to 259 x 5, and he's gained 45 pounds. Not bad for his first year of sensible training. How does this compare to your last year of training? I keep giving you examples of students who follow the "rules" of basic training and reap great results – so I hope it's all sinking in.

At the time of writing – early April 1998 – I have been consulting with Craig Rasmussen for exactly 57 weeks. Notice that I said "consulting." Craig does not live in Indianapolis. He resides in California. I have not coached him through every workout. As a matter of fact I have only personally coached him through one workout – Craig flew in for a day last November. Even though I set up and monitored his program, Craig had the desire to train 104 times in one year without missing a single workout. So don't try to use the excuse that you don't have a strength coach watching over you every workout – Craig didn't.

Craig's journey-in his own words

When I informed Craig that I would be writing an article on him I requested that he write a biographical sketch of his training journey and send it to me so that I could use parts of it to write this article. Well, Craig tells his story better than I could, so I'm including it as it is. Its good material. I'm sure many of you can relate to it. Here it is:

"My first experience with weight training began when I was in junior college playing basketball, at the age of 19 – I was 6-1 and about 160 pounds. I had always been extremely skinny and the coach really stressed how much I needed to get bigger and stronger. Once the season was over I signed up for a weight-training class and started to work out for the first time.

"There was no guidance in this class and I basically did what everyone else was doing, focusing most of my efforts on the bench press, struggling to push 135 pounds for 1 or 2 reps. I then began to seek some information on weight training, and found some books at the local bookstore and some old bodybuilding magazines that my dad had stored in the garage. I constructed some routines from these books and magazines. Somehow I was able to gain about 15-20 pounds in my first year of weight training, as many novice trainees often do.

"For the next couple of years I trained semi consistently at a local Gold's Gym with a friend who had also begun to train during his freshman year in college. We mainly used routines that were six days per week, 10-20 work sets per bodypart, and trained each muscle group two times per week. When we skipped a workout we skipped our leg day. My strength increased for a short while on these programs, but progress quickly came to an end and I had a long period of stagnation when I used the same weights over and over again. During this time I began to spend a lot of money on weight gain powders, metabolic optimizers, and aminos. I also began to collect every kind of book and magazine to add to my ever-growing collection of confusion and misinformation.

"The next few years of my training life were spent when I was in college. I actually cut back my training to four days per week and focused on basic exercises, though I was still training each exercise two times per week. I made some progress during this time because I was able to combine this training with good nutrition. My bodyweight climbed to 190 pounds and my strength increased once again.

"I continued to be sold on supplements and the routines of steroid users. I followed Arnold's sixdays-per-week routine from his book, and various routines of others I would read about in magazines. I spent over a year following a three-days-on and one-day-off routine without making hardly any progress in terms of strength and size.

Craig curling 112 pounds for 5 reps.

Craig sumo-deadlifting in his garage gym.
"Following my graduation from college I began to be exposed to some of Stuart's writings, and I began to see ads for BRAWN and HARDGAINER but never paid much attention to them since the information seemed so radical compared to what I had been exposed to previously. I moved back to a four-days-per-week routine and then to an every-other-day split routine for the next year or so. I was focusing mainly on basic exercises such as the squat, bench press, row, etc. I tried to add weight on a regular basis but I was doing it in too large increments. My patellar tendons (in my knees) were starting to really hurt me because in the squat I was using a too narrow stance, pushing through my toes, and positioning the bar way too high on my neck. It is a wonder that I didn't seriously injure myself. My bodyweight fluctuated between 180 and 190 pounds, since I did not eat consistently even though I had a strong grasp on how to eat properly.
"After this year or so of training I took some time off to let my knees heal. I decided that I needed to learn how to squat properly because I had to be doing something wrong. I had some material that mentioned BRAWN as a book that contained a good description of the squat. I went out and bought a copy and ordered the free copy of HARDGAINER using the coupon from inside the book. I read only the chapter on the squat and I continued to train on an every-other-day split routine. I then began to see some mention of BRAWN and HARDGAINER on the internet. The information intrigued me so I sat down and finally read the whole book.
"Now I didn't know what to do. Could this style of training really work? It seemed very logical yet I had been so programmed to work out a minimum of four days a week for at least 8-10 work sets per bodypart that I had trouble accepting any other approach. I resolved to give this radical approach a try. I gathered as much information as I could from the internet, BRAWN and some back issues of HARDGAINER that I had ordered. I now began to experiment with sound routines. I noticed that I really enjoyed training this way but I was still making major mistakes in application. I was jumping around every two or three weeks from one routine to another. I was down the right path but lost on which specific way to go.
"I then received HARDGAINER issue #46 which contained an article by John Christy called "The Only Way." This article was excellent and answered many of my questions, but I still needed guidance. I immediately began to follow the routine in this article and resolved to improve my squatting form and learn how to deadlift (since I had never deadlifted before). It was at this point that I gave John a call to get the extra guidance I desperately needed.
"In the subsequent year of proper training I learned many lessons. The most important of which was that of consistency. My training cycle has continued for over a year without a plateau, and I'm still getting stronger. Adding a small increment of weight on a regular basis has accomplished unbelievable results in terms of size and strength gains. I have gained over 40 pounds of bodyweight in the last year, and increased my strength greatly. It was great to have the opportunity to go to Indiana and learn the important lesson of how to put out effort. That is, instead of just going in and lifting, I learned how to approach each set and rep with maximum seriousness and intensity.
"People are amazed when they learn that I train only two times per week. They just cannot believe that it can be done. I remember getting strange looks and questions in the gym when people saw me

doing squats, benches and pulldowns in the same workout. They wondered what the small weight plates were that I was using. I'm sure they thought I was an oddball. It didn't bother me a bit as I continued to see the weight grow on the bar every workout, while the others at the gym remained unchanged, pushing the same weights over and over. I now have my own home gym and it is awesome! I can now let loose and really concentrate on putting out maximum effort every workout.
"My goals are to continue on this same basic program as long as possible, hopefully for another year. I have set my short-term goals on the 300-400-500 numbers that are talked about so often in HARDGAINER. I would specifically like to bench press 300 x 5 by the end of 1998, squat 405, and get my sumo deadlift well over 400 pounds. Eventually I hope to achieve the elite numbers of 400-500-600 and maybe try some powerlifting. I would mainly like to continue to get bigger and stronger. This is something that I truly have a passion for and plan to continue for my lifetime."

Craig's training program

Craig's story is not unusual. It's a common path many of us have walked. Let me tell you, Craig's bone structure isn't anything special. He's just a pretty much average guy genetically, but he has a burning desire to succeed, and lots of patience. Try that anabolic combination on for size.
Here's the first program I put him on.

Workout A (started 26 February 1997)

1. Crunch: 1 x 15 with 35 lbs
2. Squat: 2 x15 with a 45-lb bar
3. Stiff-legged deadlift: 1 x 15 with 65 lbs
4. Bench press: 2 x 5 with 185 lbs

5. Supinated pulldown: 2 x 5 with 115 lbs
6. Static grip: 1 x 60-90 secs, 100-lb 'bells*
*Craig is gifted with long fingers relative to his forearm length. This helps him to excel at gripping. Most trainees have to start with 35-40 pound dumbbells in the static hold.

Workout B (started 1 March 1997)
1. Side bend: 1 x 15 with 30 lbs
2. Sumo deadlift: 2 x 15 with a 45-lb bar
3. Standing military press: 2 x 5 with 95 lbs
4. Barbell curl: 2 x 5 with 75 lbs

Pretty simple stuff, isn't it? As Craig developed I added a few exercises, and adjusted his warmup sets as he got stronger. Fifty two weeks later he completed the following.

Workout A (22 February 1998)
1. Lying L-fly (for the external rotators): 1 x 20 with 11 lbs
2. Crunch: 1 x 10 with 101 lbs
3. Squat: 2 x 5 with 280 lbs
4. Stiff-legged deadlift: 1 x 10 with 257.5 lbs
5. Bench press: 2 x 5 with 259 lbs
6. Supinated pulldown: 2 x 5 with 231 lbs
7. Wrist curl: 1 x 20 with 78 lbs
8. Reverse wrist curl: 1 x 20 with 22.5 lbs

Workout B (25 February 1998)
1. Lying L-fly: 1 x 20 with 11 lbs
2. Side bend: 1 x 10 with 90 lbs
3. Sumo deadlift: 2 x 5 with 302.5 lbs
4. Military press: 2 x 5 with 149 lbs
5. Barbell curl: 2 x 5 with 112 lbs
6. One-legged dumbbell calf raise: 2 x 10 with 40 lbs
7. Static grip: 120-lb dumbbells x 72 secs

Teaching intensity

As you read in Craig's biography, he said that he learned how to put out maximum effort on every rep of every set when he came here to train. Craig's previous approach was to just grab the bar and lift, without any mental preparation. What he learned when he came here was to take the few moments before the set and get himself "excited," "fired-up," or "riled." In issue #42 I wrote an article titled "The White Moment." I suggest that you read it.

I'm not saying that you have to get mad to do a set (although it sure doesn't hurt), but you absolutely need to summon up all the effort that you can, and you can't do this by casually entering a set. This is a quality that is hard to put into words and it is hard to teach using written language. It is best learned through seeing it in action. For me, it is very simple. I am a warrior. I enjoy the battle. It doesn't matter if it's a 500-pound barbell, a 260-pound linebacker from Ohio State University, or a pitcher throwing 95 mph fastballs; it gets me fired up. I enjoy the challenge.

I can honestly say that I could teach Craig everything he needed to know about how to get strong and big via correspondence, phone consultations and video recordings except how to train as hard as he is capable of. He learned how to put out more effort than he had ever done before, but to really understand how to get the most that he was capable of he had to come here and see it first hand.

Consistency revisited

I just can't stress it enough. Consistency is as important as progression when it comes to the strength game. Heck, it is actually more important! For if you don't train consistently how can you expect to be progressive – i.e., add weight to the bar? The major reason I wrote this article in the first place was to demonstrate via Craig how the body can be transformed if you don't miss workouts and if you simply add a little iron to the bar every workout. I'm not implying that any of you would miss workouts for no reason. The reasons that I am speaking of for missing

workouts are injury or illness brought about by not training properly – i.e., training too often, using too many exercises, poor exercise technique, improper weight selection, and not eating or sleeping properly, etc.

What do you think Craig is going to look like at week 104? He's already getting accused of steroid use. You get rewarded for your patience – eventually. There were times during Craig's year of training when he couldn't add even a pound to the bar. So I had him repeat a certain weight a couple of workouts. All of a sudden a weight that was once very difficult became easy. As long as you are working as hard as possible it is okay not to be progressive but you must be consistent. You will get strength gains by repeating a weight that is very difficult to do. It's much better on certain occasions to repeat a weight several workouts than it is to add weight. If you add weight when you're not ready for it, slowly and subtly your form will deteriorate.

So what's the bottom line? To get the maximum results out of your training you must not miss workouts due to injury or illness. (I figure I'm not speaking to the unmotivated trainee who will miss a workout because he has an early date with his girlfriend). You must work up to using weights that challenge you to make your prescribed reps, but you must make them while maintaining great form! You must add weight on a prescribed basis until, for example, that one workout arrives where you fail to make 5 reps (you failed at 4). Then stick with that weight till you complete the 5 reps in good form with a rep to spare. Then add a pound and go to battle again. Wage war on the bar. Don 't mess around. The bar won 't get any lighter to try and help you out. No one is going to help you out. You're alone under that bar. You must rely on your own strength. You must have the courage to face a heavy weight every workout, and have the will to summon up all your strength for every rep of every set. And if you can train without missing a single workout for a long period of time, you can expect to win every **time.**

Evening the Genetic Score

From Hardgainer #38 - September/October 1995

THE RADICAL GENETICS

Five years ago, Adam Smith was heading down the wrong road of life. At 6-3 (190 cm) and a "sopping wet" 140 lbs (63 kg), Adam had severe scoliosis (curvature of the spine) which caused a serious curvature to his upper back, hips that looked displaced slightly to the right, and the most pronounced rounding of the shoulders I've ever seen. Mix in a 6 1/2 inch (16,5 cm) wrist, 39 inch (99 cm) inseam and 36 inch (91,5 cm) sleeve (top of the shoulder joint to middle finger), and you've got some radical genetics.

Due to his physical stature and stage of maturity (18 years old) Adam, to put it mildly, lacked selfconfidence. Since he felt he couldn't "cut it" with the mainstream of the high school crowd, he got involved with people who were rebellious against society. Adam not only let his personal hygiene go bad (seldom washed clothes, rarely had a shower, and never a haircut), but got into drugs to hide from who he was.

After getting into serious trouble with the law, Adam's father (a local businessman) bought him one month of training sessions with me (12 workouts). It was the start of a metamorphosis, and for me, the discovery of a common-sense (but non-traditional) twist on basic barbell movements that can help the tall hard gainer in particular to achieve maximum strength and size.

THE RADICAL APPROACH

To say the first workout was a struggle is a huge understatement. Not only was I dealing with the worst genetics I'd ever seen, but an attitude to match.

Using an empty bar, Adam tried to approximate the three powerlifts. With the bar (25 lbs / 11 kg) setting on pins in the rack set at the height where it would be on the floor if loaded with 45-lb (20 kg) plates, he attempted a sumo-style deadlift. Due to his limiting genetics and overall weakness, his lower and upper back resembled a half- closed penknife. He had the worst rounding of the low back I've ever seen. The same was true for his squat when he tried to reach parallel. Throughout both lifts he complained of pain in his upper and lower back. His bench press was the most contorted thing I've ever seen. Once the bar passed below a point 4 inches (10 cm) above chest height, he experienced severe rounding of his upper back (internal rotation of the shoulders), causing his chest to cave in, and he was in pain again.

At this point, whatever patience and faith (in me, and weight training) that Adam had, was fading fast. I had to come up with a solution immediately. It came to me out of a seemingly naive question, from someone not clouded by conventional training thought.

After Adam's fist attempt at bench pressing, he posed this question: "Why do I have to lower the bar all the way to my chest?" Being a big advocator of using the rack to do partial reps (for advanced men only, to this point) I knew you didn't have to lower the bar all the way to the chest to build powerful pecs, tris or delts. Since Adam wasn't interested in powerlifting competition (where the bar has to be lowered all the way to the chest, for instance), and since he had no pain at a point 4 inches above his chest, and could maintain good torso position to this point, I decided he didn't have to lower the bar all the way. What a simple answer to a seemingly complex problem.

I took Adam through the basic exercises and made adjustments according to what his genetics would allow. Instead of trying to force his body into doing something that it wasn't capable of doing (yet), I decided to focus on what his specific biomechanics would allow him to do. In other words, *why should I put his poor levers in a position of extremely poor leverage? Instead, I believe it is most important, especially for someone who is genetically challenged, to be put in a position to generate the best leverage possible.* (Please read that again.) With this philosophy in hand, I drew up his first successful weight training program.

Remember that Adam was a beginner with no previous weight training experience. So what you are about to see might confuse you, because, on the surface, it appears to go against a basic rule (that partial reps are only for advanced men) which has appeared in HARDGAINER over the years. But, examine my *application* of this training method, the reasons why I chose it, and the great results it produced. Then you will see it actually follows the basic HARDGAINER philosophy of doing what your genetics allow you to do as safely and as intensively as possible. Here was Adam's first program:

Monday

1. Rack squat

Each rep started off pins set at 3 inches (7,6 cm) above parallel. A very wide stance with toes turned out at 60 degrees from forward was used. At this depth he maintained good torso position, with a flat

low back. Most importantly, he was pain free.

2. Rack bench

Each rep started off pins set at 4 inches (10 cm) above the chest; about 27 inches (68,6 cm) between thumbs.

3. Single-arm dumbbell row

Each rep was performed with a one-second pause at the top, not only to help strengthen the muscles of the upper back, but to help correct the severe inward rounding of his torso. This helped Adam to retract and depress his scapula (pinch his shoulder blades together), which is very important for proper bench press positioning.

4. Heavy side bend

Included for lateral strength and to help his poor posture from the scoliosis.

Wednesday

1. Seated rack shoulder press

Each rep was started off the pins set at the top of his head. At any point lower than this, Adam experienced pain in his shoulders and upper back.

2. Shrug

Each rep was started off the pins set so that the bar wouldn't extend too far down. This prevented his shoulders from being pulled too far forward because, due to the scoliosis, this caused him pain.

3. Seated hammer curl

This was done seated, to take the pressure off his back. I used the hammer curl because it hurt his shoulder to supinate his hand under load.

4. Seated twist

Manual resistance was provided here. This exercise helped with the scoliosis. I will explain the technique later on.

Friday

1. Rack deadlift

Each rep was started off pins set at 4 inches (10 cm) higher than where the bar would be if loaded with 45-lb (20 kg) plates and resting on the floor. At this level, he could maintain proper torso and low back position.

2. Close-grip bench press

Each rep was started off pins set 4 inches (10 cm) above the chest, for the same reasons as with the regular bench press; 12 inches (30,5 cm) between thumbs.

3. Weighted crunch

All exercises were performed for five sets of five reps. Two or three warm-up sets and two or three "live" set were done in each case. I believe there is no magic rep range. What matters is doing what you enjoy, doing what is safe (to promote consistency), and making the bar "grow".

Adam started with comfortable weights and built up slowly, adding a little weight weekly to each exercise. He loved this, because he knew it was just a matter of time till the bar would get "big" *and so would he*. The weights got challenging at the 8-10 week mark, and I slowed his progression at this point. I think many trainees get to this point and then back off too soon. When the weights *get tough* is when you need to pull out the little discs, get tough yourself, and keep progressing.

The 5 x 5 format was used on all exercises (except twists at the start of the program), including abdominal work. No, that's not a misprint, ab work. You may have questions concerning the practice of using low reps for ab work (I use them successfully on calf work too), because, once again, it goes against conventional thinking. I will address this practice in a future article.

7

THE PARTIAL REP

A partial rep is relative to what has come to be known as the conventional rep. Examples of conventional reps include a squat to parallel or below, deadlift off the floor at the predetermined height of a 45-lb barbell plate, bench press to the chest, etc. Who got to determine what is "conventional" and hence, what is "partial" anyway? Let me elaborate.

When I deadlift off the floor (conventional style) at my height of 5-10 (178 cm), the distance to move the barbell to an erect position is much shorter than a man's of 6-3 (190 cm). (The difference between my pulling distance, and Adam's, is 4 inches (10 cm).) So, starting the deadlift about 4 inches (10 cm) off the ground is not a "partial" for Adam, but, rather, *a full range of motion relative to the safe and effective positioning that his biomechanics allow.*

When Adam starts his bench press from 4 inches (10 cm) above his chest, the distance to lockout is exactly the same as mine from chest to lockout. This philosophy also holds true for the other basic movements. So, if he is physically moving the barbell as far as it can go while maintaining good biomechanics for each lift, then it is a full range of motion for that individual. So, instead of the term "partial reps" I prefer the term "modified reps." Using these he can maintain much better biomechanics throughout the lift.

For the deadlift, he will be able to keep his torso more erect, allowing him to use his legs more

efficiently, with less compression and extension of his vertebrae. Compare this to having to pick the weight off the floor with a weak back to begin with, by rounding the lower back, a premature "pulling out" of the legs and hips, all of which will seriously compromise the health of the lower back musculature and spine.
The same holds true for the squat. Using modified reps helps to develop proper exercise form, greatly reduces the risk of injury, and makes it possible to achieve strength and size that could not be possible (for the genetically disadvantaged) using conventional ranges of motion. This spares having to use time and energy just trying to maintain what may be an "impossible to achieve" biomechanical position in the first place, and with such a small weight that you have little chance to stimulate strength gains, let alone stay motivated.
Using "modifieds" will help to develop a raw foundation of brute strength. This can then be applied to develop the skill necessary (if desired) to put the body back in a position of unfavorable leverage to move the barbell through a conventional range of motion.
At this point I want to stress that if you are a beginning weight trainee, and can perform an exercise using a conventional range of motion, with proper biomechanics, you should wait to use modified reps until you can strictly bench press at least 200 lbs (90 kg), squat 300 lbs (136 kg) and deadlift 350 lbs (158 kg).

THE RADICAL SCOLIOSIS

Scoliosis is basically a condition in which the spine has abnormal (lateral) curves at one or several positions throughout its length. There are two types of scoliosis-structural and functional. Structural scoliosis is an irreversible lateral curvature that can only be corrected with surgery. Functional scoliosis is usually reversible by strengthening the muscles that control its movement, and by applying functional skill development training. Adam's scoliosis was functional, so we set out to strengthen all the muscles that control every possible plane of its movement. By developing the strength of these muscles, and by consciously working to maintain good posture at all times, Adam could improve his condition. You see, it's not good enough just to have greatly increased strength. You have to teach the body to use it-by practicing the specific skill you want it applied to.
The deadlift took care of most of the large musculature of the upper and lower back (spinal erectors). The dumbbell row was for the upper back (scapula rotators, trapezius, rhomboids, and latissimus dorsi). Weighted crunches for the abs gave strength and stability to the front of the body. But I feel that outside of these great overall movements, two other exercises had a huge impact on his dealing with the scoliosis. These are the side bend and the seated twist.
The side bend works the obliques (for lateral stability), and the intrinsic muscles in the low back (intertransversales and longissimus groups) which are responsible for side-to-side movement of the spine.
The seated twist helps strengthen the small muscles that connect the vertebrae to each another (including the rotatores and multifidus). We performed these with Adam seated on a bench, sitting as "tall" as possible while I applied resistance at his shoulders. I would, for example, have him twist his torso slowly (it has to be slow) to the right while I applied resistance to his left shoulder. We did this for 15-20 reps each side. This had a tremendous impact on decreasing the pain he was experiencing at various points throughout his spinal column.

THE RADICAL RESULTS

After four years of training with me (his father paid for the first four months, then Adam got a part-time job to pay my personal coaching fee) Adam gained exactly 62 lbs (28 kg). He could rack bench press (4 inches (10 cm) above the chest) 250 lbs (113 kg) for 3 reps, rack squat (3 inches (7,6 cm) above parallel) 350 lbs (158 kg), and rack deadlift (4 inches (10 cm) above the conventional bar position) an astounding 400 lbs (181 kg). When he went back to see his doctor (the one who told him not to lift) to check on his scoliosis, to say the doc was shocked is an understatement. Adam added so much muscle to his back you couldn't even see the spinous processes of his spine (the bony parts that stick out).
Over the next year or so Adam continued to train, but on his own, with consultation from me. We have slowly worked his movements to the conventional ranges of motion (his decision, as I would have stayed with "modifieds"). This was done by slowly increasing his range of motion by progressively, over time, lowering the pins in the rack by half inch (1,3 cm) increments. I designed a special rack that allows 1 inch (2,5 cm) changes, and we used rubber mats to achieve the half inch (1,3 cm) changes. This rack also enabled very wide sumo-style deadlifts to be done in it, and is available through Wells Equipment Fabrication (317-326-4168).
Through a slow application of this method, he has hit the 390-lb (176 kg) squat mark, 415 (188 kg) deadlift, and 260 (118 kg) bench. All of these lifts were done through the conventional range of motion. He also added another 10 lbs (4,5 kg) of muscle during this fifth year of his training.
Adam will finish his degree in criminology next semester, and plans to enter the Police Academy

after graduation. He has traded in his dagger earring for a barbell earring, he showers at least once a day now, and is engaged to get married.
It's amazing how using a "simple" program, tons of effort, and a little common sense to adapt the exercise to the "genetic levers" of the trainee, not only can transform one's physique but can change an entire life.
Adam is truly a man of strength.

HARDGAINER-Style Training for the Genetically-Gifted

From Hardgainer #53 – March/April 1998

I received a call the other day from a reader, asking if I would help him with his training, as he hadn't made any progress for a long time. When I began to ask him my usual round of questions he cut me off and said that he wasn't a hard gainer, and that he could train 4-6 days a week and yet still recover. Now this gentleman had already achieved a respectable amount of size and strength, and thought he didn't need to train in the fashion that I've been writing about. He thought that abbreviated and basics-first training was only for hard gainers. He then asked, being aware of my size and strength, "You don't train that way, do you?" I assured him I train exactly "that way," and that I wouldn't have achieved the results I have by training any other way. He just couldn't believe that you can get very strong and big while training only two days per week.

This brings me to the basis of this article. If you think that you aren't a hard gainer, listen up! *In order to reach your genetic potential without steroids, you can't possibly train more than three days per week on a continual basis, and I assure you that two times would be even better.* Quit trying to prove that you can train like phony steroid lifters.

Before I get into the article, let's talk about the term "hard gainer." This means different things to different people. To some it means a type of trainee that has a small bone structure and the type of metabolism that doesn't recover very fast from training. I would agree with this to a point, but I feel the definition should include all of us who have to train very *hard* to get *gains*. In my opinion, the difference in program design between a true hard gainer and someone who isn't, is simply the amount of weight on the bar. I'm telling you, training is not as complicated as a lot of you are making it.

This article is about Dan Foy. Dan is one of the most genetically-gifted strength trainees I have ever worked with. He has been training under my guidance for seventeen months. I feel that although this magazine is geared towards hard gainers, all trainees should use a relatively abbreviated training program (relative to the training nonsense that takes place in most gyms today).

Dan is pure mesomorph. When he started with me he was approximately 215 lbs at 6-1 and was pretty chubby. He has been weight training for eight years, since he was a 190-lb high school freshman football and baseball player. Most of these years were spent training four days per week and using 10-20 sets per bodypart. Although he was able to handle this training volume and participate in sports, he only gained 25 lbs in eight years of training. In my opinion that's not much for anyone, especially a mesomorph. It indicates that Dan spent all those years in an overtrained state. *Yes, a mesomorph can be overtrained.* This is exactly why I believe (and practice) abbreviated routines performed two or three times per week, with all the emphasis placed on progression while maintaining good lifting technique. *This is for everyone, not just hard gainers.*

Dan started working out under my guidance on July 8, 1996 using the following routine and weights:

Workout A

1. Crunch: 1 x 20, 35 lbs
2. Squat: 2 x 8, 185 lbs
3. Bench press: 2 x 5, 150 lbs
4. Supinated pulldown: 2 x 5, 150 lbs
5. Standing calf raise: 1 x 20, 150 lbs
6. Static grip: 50-lb dumbbells x 60 secs

Workout B

1. Side bend: 1 x 15, 40 lbs
2. Sumo deadlift: 2 x 5, 155 lbs
3. Standing press: 2 x 5, 80 lbs
4. Standing curl: 2 x 5, 75 lbs
5. Wrist curl: 1 x 20, 65 lbs

At the time Dan started this program he was a full-time college student and a pitcher on the baseball team. His training also included running sprints, and baseball skill work. I also added rotator cuff work and medicine ball training. The only way he could make gains in the gym with all the other forms of training that he had to do was to weight train "only" two days per week.

There is one point I want to make abundantly clear. Though Dan is definitely genetically gifted, he works as hard as anyone I have ever met, and he is as dedicated as anyone I have ever met. *He is HUNGRY for success. And you must be, too – hard gainer or not.*

DAN TODAY

Dan is now 270 lbs. Here is the full exercise program he is currently on, as of mid-December 1997.

Every seventh week I test his maximum one-rep lift in all exercises except the crunch, side bend and wrist curl, to make sure the rate of progression is correct. As with the first program, only ."live" sets are listed; warm ups are additional.

Day 1 *(Tuesday; week 1)*
1. Crunch: 1 x 15, 100 lbs
2. Squat: 1 x 5, 470 lbs
3. Stiff-legged deadlift: 1 x 10, 250 lbs
4. Bench press: 1 x 5, 315 lbs
5. T-bar row: 1 x 5, 215 lbs

Wednesday
30 minutes aerobic work on bike (optional)
Stretching

Thursday
Baseball skill work
Long toss: 1 set of 15 throws
Throwing off of pitching mound: 1 x 20

Day 2 *(Friday, week 1)*
1. Sprints: 4 x 100 yards
2. Medicine ball work with 13-lb ball
3. Side bend: 1 x 10, 105 lbs
4. Barbell curl: 1 x 5, 115 lbs
5. Standing calf: 1 x 12, 450 lbs
6. Static grip: 1 x 60 secs, 100-lb 'bells

Sunday
Shoulder external rotation: 1 x 15
Shoulder internal rotation: 1 x 15
60-minute jog

Day 1 *(Tuesday; week 2)*
1. Crunch: 1 x 15, 101 lbs
2. Sumo deadlift: 1 x 5, 495 lbs
3. 45-degree back extension: 1 x 10,
30-lb dumbbell held high on chest
4. Standing press: 1 x 5, 175 lbs
5. T-bar row: 1 x 5, 215 lbs

Wednesday
Same as previous week

Thursday
Same as previous week

Day 2 *(Friday, week 2)*
1. Sprints: 4 x 100 yards
2. Medicine ball work
3. Side bend: 1 x 10
4. Barbell curl: 1 x 5
5. Standing calf: 1 x 10
6. Wrist curl: 1 x 20
7. Reverse wrist curl: 1 x 15

Dan Foy, sumo-deadlifting 505 lbs
Dan coming up with 480 lbs from one
inch below parallel.
45

Sunday
Same as previous week

"I could make gains if I was a college student"

For people who have the "I'm too busy" excuse for why they can't make gains like Dan, here's Dan's current schedule. Dan is one of my strength coaches so he gets up at 4.30 every morning in order to get to work by 6.00. He works till 10AM on Monday, Wednesday and Friday and then goes to classes that start at 11.00 and last the rest of the day. And he's not taking easy courses. His classes are second semester organic chemistry and organic chemistry lab, and ecology. Dan is getting his degree in biology with a minor in chemistry. On Tuesday, Thursday and Saturday he is again in the gym by 6AM (7AM on Saturday) and works till about 8.30PM. To sum it up he works a lot of hours as a strength coach, which is demanding work, on top of going to class, studying, his own weight training, baseball skill work, aerobic conditioning, stretching, sprint work, *and* he took the time to maintain a daily nutrition log. So what's your excuse?

A DIVERSION

There is a point I need to mention that I have mentioned before in HARDGAINER, but I don't think the point is getting through. Get yourself started on a good basic program like the one Dan is on. Make it your mission to stay on that program for at least 25 weeks after the weights start to push you, and 40 weeks is better. Now here is the critical point: Do not look for any other program. If the good basic program you have chosen doesn't work, then another won't either. This is because it's not the actual program that is at fault, but deficiencies in one or more of several other factors, i.e.:

a. You're not trying hard enough on each rep you perform.
b. You're adding weight to the bar at a rate your body can't adapt to.
c. You're not eating properly.
d. You're missing workouts.
e. You're staying up too late and not getting enough rest.

I know this deviates from the gist of this particular article, but the point is so important that it needs to be mentioned all the time.

DAN'S NUTRITIONAL PROGRAM

I don't believe it's practical to keep a nutrition diary every day. But I do believe that everyone has the time to keep one for three days to get a base on how they're eating, so that they can make the appropriate dietary adjustments to fit their goals. Then it should be done again every month or so for the same three-day period, as a check-up. How do you know how many grams of protein you're really getting every day? How about calories? Are you really getting 4,000 a day, for example, or is it more like 2,800? The only way to know for sure is to put out the effort to check. Buy a calorie counter and go to work.

When Dan kept his nutrition log for the first time he found out he was consuming over 6,000 calories per day, but not enough protein. (I recommend 1 gram of protein per pound of bodyweight as a minimum.) He was also gaining too much around his waist, so we adjusted his intake to 4,800-5,000 per day and brought his protein up to 300 grams per day. These adjustments have greatly affected his body composition as well as his recovery from workouts.

You can't discount how important good nutrition is. So don't be lazy. Keep a nutrition log and find out where you really stand.

FINAL THOUGHTS

For all of you reading this magazine who still train four, five or even six days per week and have a "gut" feeling that you should try training three or even "only" two days per week, trust your gut feeling, for it is correct. I can say without question that whether you weigh 150 lbs or 250 lbs, whether you can bench press 150 lbs or 450 lbs, *I could take any of you and train you just two days per week and no matter how good or bad your gains have been thus far, I can make you substantially stronger and bigger – period!*

Take a good look at Dan's program. He "only" trains the big basic exercises once every two weeks, but he is training the big basic muscle groups twice a week. What do I mean by that? If Dan squats on Tuesday and then sprints on Friday, all his leg muscles get "hit" twice that week. If he benches and rows on Tuesday, and then throws the medicine ball on Friday, all the same "prime movers" are stimulated again. Examine his program closely and see if you can find the other exercises which stimulate the same prime movers.

The bottom line, whether you are a hard gainer or not, is that everyone should be using a program that has come to be known as "abbreviated and infrequent." Remember that the programs which are prescribed in the pages of this magazine have become known as abbreviated and infrequent only as compared to the training used by the phony steroid crowd. Because of this I don't even like calling the programs I use abbreviated and infrequent.

My programs are just simply training programs that work, and I don't want to put them in any kind of comparison to programs recommended by drug-loaded phonies who, if not for the steroids, couldn't fight their way out of a paper bag, and who are misleading many trainees who want to make gains honestly. This makes me angry, and it's simply because I know that so many of you could be very strong and big but have been misled and continue to hang onto poor training approaches.

I wish every one of you could visit my training facility and see what "real" training can do to the body. I have men training here who can challenge the muscular development of any steroid-filled trainee. Not only that, but the men I'm referring to have strength enough to destroy any steroid-filled phony.

Once again, enough talk. Let's get to work on a good training program that allows you to recover and handle progressively heavier weights in good form. And if you want to get the most out of a program, get your eating in order. *Great genetics or not, I truly believe that this IS the way to great* ***strength and development.***

The Only Way

From Hardgainer #46 – January/February 1997

How was 1996 for you ? Are you stronger now than you were in January of 1996? Because if you're not, your training year was wasted. That's what I said, "wasted." If you have been a long-time reader of HARDGAINER, then shame on you. If you're a new reader, then let what I am about to say sink in real deep. No matter what your goals are, whether it be for football, ice-skating, "toning and shaping," or to get as big as humanly possible, there is only one goal in the weight room – to get stronger on the big basic lifts. Period!

Having a strong background in exercise physiology, I can assure you that a muscle can only do one of three things in response to weight training – stay the same strength, get weaker, or get stronger. So forget about all the high-tech pseudo-scientific bull of shaping exercises or defining exercises.

Face the fact that you have to get stronger – lift more weight – in a major leg movement like the squat, deadlift, or leg press, a major pushing movement like the bench press, military press, or dip, and a major pulling movement like the weighted chinup, pulldown, or dumbbell row. You also need to be able to hold onto a very heavy object for several minutes, like hanging from a chinning bar with 50 lbs attached to your body for over 2 minutes, or standing while holding a pair of 100-lb dumbbells for 2 minutes.

As simple as this philosophy sounds, most trainees don't have faith that something so simple works so well. They would rather fool themselves into thinking that there is some other way. Maybe you are conned into believing the junk training philosophies that are propagated by steroid-filled phonies. Take it from a guy at 5'10" who has weighed 250 lbs, with 20" arms, a 50" chest, and 30" thighs, that the mainstream crap doesn't work unless you're on steroids. Not only is this my advice, but it is the same advice given by all of the other well educated, experienced, and successful strength coaches that write for HARDGAINER.

I want to clarify my opening statement that you should be stronger now than you were in January of 1996, by giving you my professional opinion on how to rate your training year. If you didn't increase your strength on a big basic lift (squat, deadlift, bench press or pulldown, for instance), then your year was wasted and you need to change your whole approach to training. If you gained 5% or less, you are making some major mistakes. If you gained 10-20%, or more, you're doing great, but you have to fight like hell to stay on course and not be distracted for the coming year.

There is nothing glitzy about the programs that follow, because glitz doesn't build muscle. Maximum effort on every "live" rep you do, combined with adequate time to allow for recuperation, will manifest itself in increasing weight on the bar – *and this is what builds muscle*. I want you to understand that the day you reach a 300-lb bench press you will be a pretty big guy, and people will know that you "lift weights." But it's not getting to the 300 lbs that will make you really stand out. Yes you will have gained quite a bit of size along the way, but spending the next two years consistently knocking your head against that 300, slowly raising it to 350 lbs, *is what will literally transform you*. Rushing the process by adding weight too fast, or in too large increments and using poor technique to soothe your ego, will keep you "stuck" at that 300 for a long, long time. You see, the body adapts neurologically to lifting a weight at first. In other words, your initial strength gains through the first several months are a result of your body learning to use more efficiently the muscle that it already has. Actual tissue remodeling, or the growing of new muscle tissue, doesn't occur until a couple of months or so beyond the initial stimulus. That's why it is most important to stay patient and work very hard to handle the heavy weights for a long time.

Once again, *if you add weight too quickly and hit a plateau before you get out of the neurological learning period, your body will not have been given enough time to get to the actual muscle growth period.* This is one of the most important aspects of weight training, but it is especially important for the advanced trained, so he can continue to increase his strength and size.

Another concept you need to understand that will give you faith and help you to stay patient, is that the body doesn't just compensate for a weight that you lift, it *super-compensates*. Let me explain. If you are pushing 250 lbs x 3 reps for a maximum effort on the bench, for example, your body doesn't give you just the strength to push the 250 again at the next workout (compensation) but will reward you with a 1 or 2 lb strength gain (super-compensation). Now I don't know the actual amount, but I know this occurs. Now let's say you lift the 250 lbs again (a week later, in another workout). Your body will super-compensate again to let's say 252.2 lbs. Now if you lift the 250 again (a week later, in another workout) your body will super-compensate again to perhaps 253.5 lbs. So what you have

done is built a strength reserve of 3.5 lbs because you have allowed your body time to adapt to the weight. This is why it is very important to add weight slowly and in small increments.

In most case, I wouldn't recommend staying at a fixed weight as in the scenario above. I would

prefer to have added 1 lb to the bar at each of those workouts, which increases the supercompensation effect. But if you add weight too quickly, say 2.5-5 lbs at a shot, your form will deteriorate and you won't make your reps. Your body can't give you a reward that big if you are already pushing as hard as possible. Then you lose the super-compensation effect completely.
If you are using a double-progression type of program, where you use a certain weight for say 8 reps and train to failure at each workout until you get 12 reps, and then add weight, the same supercompensation effect takes place. That is, unless you get greedy and add weight before you've actually made your target reps. You may make the same number of reps for 3 or 4 workouts till this effect becomes evident. Then all of a sudden you' II get rewarded with an increase of a rep or two. No matter what approach you use, it takes time to get stronger and hence bigger. So be patient and work as hard as you can.

Getting to work

If you are classified as a beginner in the Iron Game, i.e., if you squat and deadlift around 300 lbs or less, and bench press less than 200 lbs, the following program is for you. Train twice a week, alternating the two workouts.

Workout A

1. Crunch: 2 sets x 5 reps
2. Squat: 2 x 5
3. Stiff-legged deadlift: 1 x 15
4. Bench press: 2 x 5
5. Supinated pulldown: 2 x 5
6. Standing dumbbell grip work 60-90 secs

Workout B

1. Side bend: 1 x 5
2. Deadlift (conventional, sumo, or Trap Bar): 2 x 5
3. Seated rnilitary press: 2 x 5
4. Standing barbell curl: 2 x 5
5. Grip machine work: 2 x 15

Start the program with weights that don't quite push you to the edge. In other words, use a weight that if you really pushed yourself on you could get 3 or 4 reps more than the target rep number. This is to allow your body some time to master perfect technique, as well as get your biochemical resources ready to withstand the harder work that is to follow in a couple of weeks.
For the standing grip work, choose a set of heavy dumbbells that you can barely hold for 60 seconds. For each succeeding workout hold the 'bells as long as you can till you get to 90 seconds, then go to the next pair of 'bells and work to build up to 90 seconds, and so on.
Add weight to the other exercises every workout, but nothing more than 5 lbs to the squat and deadlift, and no more than 2.5 lbs to all the others. In about 6-8 weeks, you should be working as hard as possible to make your target reps. When you get to a workout where you do not make your reps – for instance, you make 3 reps instead of 5 – it's not time to throw in the towel and end the cycle. Just stick with this weight until you make your 5 reps. This may take several weeks. When you get to the 5 reps, add the smallest possible weight increment. This might be 1 lb, or perhaps even less if you have the means.
The set and rep scheme that I have recommended doesn't include warm up sets. You will have to do a warm up set or two when the weights get real heavy, to allow for progressive recruitment. Also, take 3-5 minutes rest between the "live" sets.

Program for advanced men

If you can squat and deadlift 350 lbs or more, and bench press over 275 lbs, then this program is for you.
Advanced men don't need to get fancy, and shouldn't get fancy. Since you have the capability of putting out more effort and moving more weight per workout, you must give your body more rest, and train each lift less frequently. What you need more of is weight. You need to force your body to handle heavier poundages than it could through conventional ranges of motion. This is where the power rack comes in. Many authors who write for HARDGAINER are big advocates of doing partial reps in the

rack, and so am I. Although you will be using heavier weights than you have ever used before, you will be doing it with better form and with no aid from momentum. I will elaborate on this later.
You will be doing all of your big basic exercises spread out over three different workouts. The schedule will go like this – workout A on Monday, workout B on Thursday, and workout C on the following Monday, and then repeat the sequence.

Workout A

1. Weighted crunch: 2 x 5

2. Squat: 1 x 5
3. Rack squat: 2 x 5
4. Stiff-legged deadlift: 1 x 5

Workout B

1. Bench press: 1 x 5
2. Rack bench press: 2 x 5
3. Weighted supinated chinup: 2 x 5
4. Standing calf raise: 1 x 5
5. Static grip with dumbbells: 4 x 30 secs

Workout C

1. Side bend: 1 x 5
2. Deadlift: 1 x 5
3. Rack deadlift: 2 x 5
4. Rack shoulder press: 2 x 5
5. Rack curl: 2 x 5

For the squat, first work up to a maximum weight for 5 reps, then move into the rack. Set the pins so that you are starting about 2" above parallel. Set the bar on the pins; do not bounce the bar off the pins. When you use the rack properly, by setting the bar down on the pins and never bouncing the bar off the pins, you are forced to work without the aid of momentum, and this makes an exercise much harder to do. When you make an exercise harder to do, it is generally more productive. Work at this level for 3-6 months then move the pins so that you are doing only the top 3" of the squat for 3-6 months. After this go back to regular squatting (no rack work) for at least several months before returning to the rack.

Mike Dodd wrestling with and then pressing the 150+ pound "McDodd stone" at John Christy's training facility. Mike can press 230 lbs with a barbell but the shape of the stone makes it very tough to handle.

Before starting the rack bench, perform one live set of regular bench presses with a maximum weight for 5 reps. Start the rack bench press at 4" off your chest. Make sure you set the bar down on the pins between reps. There are no "touch and go" reps in the power rack because that would be an abuse of rack work. When the bar is resting on the pins between reps, fill your lungs with as much air as possible and then push the bar up. The sequence will be similar to rest-pause reps. After 3-6 months at this rack height, change to working the top 3-4" of the lift by moving the pins so that you start the lift from 7-8" above your chest.

Work your deadlift for one set of 5 reps using a maximum weight, then move into the rack. Set the pins so that the bar starts 2" below knee height. Work at this level for 3-6 months, and then start the movement 2" above knee height. Do not bounce the bar off the pins; set the bar down between reps.

For the rack shoulder press, set the pins so that the bar starts about an inch above your head. Work this height for 3-6 months, then set the pins so that you are pressing the top 4" of the movement. Work this for another 3-6 months, then go to the full range of motion from your collarbones.

Before you start the rack curl, work up to about 80% of your 5-rep weight for the full range of motion, and perform 5 reps. Then move into the rack. Set the pins so that you start the movement at about the half way point. Your forearms will be parallel to the ground at the start. Without leaning back, curl the bar from this position and return the bar to the pins. Take a deep breath and perform the next rep. If you've never done curls in a rack, you're in for a treat. After 3-6 months, return to regular fullrange curls.

For the static grip, hold a pair of dumbbells that make you work very hard for 30 seconds. Then rest for two minutes and repeat. When you can complete all 4 "sets" of 30 seconds, go to the next pair of dumbbells. A good minimum for an advanced man is to use 100-lb dumbbells for this exercise. If you're not at this level you had better get to work!

I want to close this article by reiterating a *very* important point. Whether you are just starting out, or have been in the Iron Game for 20 years as I have, the philosophy that will get you big and strong, or has gotten you big and strong and will get you bigger and stronger, is the same. Keep things simple and always try as hard as you can to get one more rep or add a little iron to the bar.

I am not telling you to become closed minded and only use my programs. There are many great programs suggested in this magazine. Over the years you will need to experiment to find what works best for you. Maybe it's 30-rep squats, or maybe it's very heavy single-rep squats. Just make sure the program is basic, abbreviated, and based on progression (either adding reps or weights, or both), and that you give it time, at least three months, to see if it works for you.

You don't need some computer-generated program or the latest Eastern European "top secret" garbage. But even after training all the years that I have, and instructing hundreds of trainees, I have been guilty (in my search for a "better way") of complicating things. But I always quickly realize that there is no "better way ." So heed this advice! Instead of wasting your time looking for a better way,

look for ways to put out more effort over a long period of time on a good basic program. Then you will **find that this is the only way.**

Mr. Consistency

From Hardgainer #47 – March/April 1997

I first started training Andy Greenspan, M.D., about two years ago at the time of writing (December 1996). He is 5-10 and at the time weighed about 150 lbs, at age 37. His goal was very simple, he wanted to get bigger and stronger. My kind of guy. He had never weight trained before, but was a runner and in good cardiovascular shape. What was great about Andy was that he had no preconceptions about how to work out. I didn't have to clean out his head of the training garbage that's found in the modern-day training world and gym "scene."

Andy is intelligent, and understood my philosophy of using an abbreviated program of basic exercises, and developing the ability to put out maximum effort for every "live" set. And he fully understood the necessity of being patient – with consistency and progression being of the utmost priority. Most of our workouts were at 6AM – being a doctor with two young girls means that Andy has a very busy life. But Andy would train whenever was necessary to get the job done. That many men complain they don't have the time to train is a pathetic excuse. If Andy can train consistently despite his rigorous schedule, then anyone can, if they really want to.

START SIMPLE, GET SIMPLER

Here's the first program I put Andy on:

Workout A

1. Crunch situp: 2 x 20
2. Squat: 1 x 20
3. Stiff-legged deadlift: 1 x 15
4. Bench press: 2 x 10
5. Barbell row: 2 x 10
6. Barbell curl: 2 x 12
7. Hanging grip work: 1 x time

Workout B

1. Side bend: 1 x 15
2. Sumo deadlift: 2 x 15
3. Military press: 2 x 10
4. Shrug: 2 x 10
5. Close-grip bench press: 2 x 10
6. Hanging grip work: 1 x time

For the "hanging grip work," Andy would hang from a chinning bar for time. The workouts were alternated over three training days: Tuesday, Thursday and Saturday. This is a "high frequency" type of program that I only recommend when the weights are very light and not stressful on the system as a whole. The higher frequency allowed Andy's nervous system to get used to the movements faster, and to develop a solid lifting "groove," so to speak. As soon as the weights started to get taxing he trained only two times per week, alternating the routines. At first, his squatting and sumo deadlifting were performed with an empty Olympic bar. Now, most people's egos couldn't handle that, but *Andy was thinking long term and instead of complaining about the" light weights" he concentrated on correct exercise performance and putting out effort.*

So much emphasis is placed on progression (which is critical) that most trainees forget that progression doesn't mean anything if it isn't done consistently. Consistency is just as important as progression. You have to do everything in your power to stay consistent. That means, most importantly, staying injury free; because if you're hurt you can't train. And if you add weight to the bar too quickly, you're going to get hurt. Your muscles, tendons and ligaments have to be ready for each poundage increment, and your nervous system must have learned the proper form before you increase the weight.

When the weights on the squat and sumo deadlift approached 300 lbs, I spread the exercises out over three days. And remember that Andy is a runner and continued to run two or three times a week. Here is the three-day divided schedule:

Workout A

1. Crunch situp: 1 x 20
2. Squat: 1 or 2 x 5

3. Stiff-legged deadlift: 1 x 10
4. Close-grip bench press: 2 x 5
5. Standing calf raise: 1 x 25

Workout B

1. Bench press: 2 x 5
2. Supinated pulldown: 2 x 5

3. Shrug: 1 x 10
4. Barbell grip: max weight x 60 seconds

Workout C

1. Side bend: 1 x 5
2. Sumo deadlift: 1 or 2 x 5
3. Standing press: 2 x 5
4. Barbell curl: 2 x 5

For the "barbell grip" exercise, Andy would hold a barbell while standing, as if in the top position of a conventional deadlift. Once he could hold a given weight for 60 seconds, the poundage would be increased next time.

As Andy got stronger, and had the ability to generate more force and effort, I simplified the workout even further. Training just twice a week, Workout A was performed on Monday, Workout B on Thursday, and Workout C the following Monday. I truly believe that as a man becomes more advanced his program must become even more abbreviated and less frequent. As he learns to put out more and more effort, he needs more rest.

Andy Greenspan sumo deadlifting an easy single rep with 370 lbs.

WORKOUT ATMOSPHERE

After a friendly greeting and a couple of minutes of light conversation we immediately begin to focus all our concentration on the task at hand. We do not talk about current events, politics, or sports. Conversation is kept to subjects pertaining to the workout, and any other talk is limited to instruction and feedback. Although Andy and I (and the other strength coaches that work for me) are good friends, we resist the temptation to let the workout deteriorate into a "bull" session. I want to emphasize that we work at this and it has helped Andy to give all he's got to each workout.

Within this "air of concentration" there are the moments immediately preceding each "live" set when Andy takes his aggression up a notch. He doesn't rant and rave and bounce around the gym in some pseudo display of aggression. Instead, he lets out a few grunts right before he grabs the bar and goes to work. He gets himself riled up right before every "live" set of every workout he performs. This

level of discipline has allowed Andy to become extremely consistent in the amount of effort he puts out, and the resultant strength and muscular development he receives.

PATIENCE

I need to impress upon you the absolute necessity to be patient if you are to succeed in developing your body to its absolute potential. I can best relate this by comparing it to the time it takes to get a formal education. If you consider the body's normal growth as your primary education up to your freshman year in high school, and your weight training as the start of your high school education, you can begin to put into perspective the time it takes to develop your body.

Consider it takes four years to get your high school diploma. If you train properly for your first four years you will have the equivalent of a high school diploma for your efforts. For example, a 5-9 trainee who weighs 140 lbs at the start of his weight training education will weigh about 175-190 lbs after four years of proper training. *This is realistic*. Not only is this realistic, it is a very good rate of progress! Not accepting this will make you fall for many of the phony training schemes that promise you the world but end up simply taking your money. Or, a worse case scenario, you will fall prey to the steroid dead end.

Some people may do better than this, but some may not do quite as well. But a gain of 35-50 lbs of muscle in four years is darn good. Now, if you train properly for the next four years you will have the equivalent of a college undergraduate degree. Our 5-9 trainee will now be between 205 and 220 lbs and will have developed an impressive level of strength, and the physique to match. Put in another 2-4 years, which is the approximate time it takes to get a Ph.D. in a particular field, and you will have developed a Ph.D. level of strength and development. Our hypothetical trainee will now be 225-250 lbs. *He can now move weights that will make most gym members run for cover*. So, after approximately 10-12 years of *proper* training you can come very close to reaching your genetic potential. It takes time to reach the top in any field of endeavor. In the above example it takes twelve years to reach the top in academia; why should it take any less time to develop your body to its potential?

THE BOTTOM LINE

The bottom line is progression. Andy – 40 lbs of muscle heavier than two years ago – sumo deadlifted 350 lbs for 5 reps the other day, wearing a belt as his only support gear. It was very hard work but his form was perfect and another 2.5 lbs was in the bag. That's right, "only" 2.5 lbs. How many of you have the foresight and guts to add only a measly 2.5 lbs at a shot? These little 2.5-lb increments, and the patience that is required to use them, is the reason Andy has added 305 lbs to his sumo deadlift in his first two years of training. (Remember that he used an empty 45-lb Olympic bar on his first workout.) As I look back in his logbook, I added 10 lbs to the bar per increment till he got to 125 lbs.

Then I added 5 lbs per workout till he got to 220 lbs, and then it was 2.5 lbs per increment thereafter. These were not pre-set goal weights. When I made the decision to go to smaller increments I made it based on how tough the set looked.

Andy did picture-perfect barbell curls (with a pause at the bottom of each rep, and no backbend) with 104 lbs for 5 reps. Another 1 lb in the bag. Yep, only 1 lb. I want you to understand that the body can continually adapt to these increments. And I want you to realize that Andy has trained two years without a plateau! In other words *he has never hit a sticking point and I don't see one in sight*. He just continues to put a little weight on the bar and keeps getting stronger and bigger. How many trainees can claim that? Can you imagine training for two years without a plateau? What do you think Andy's going to be lifting in two more years, and how do you think he's going to look? Pretty darn huge, I bet.

Andy and many others have proven that the body can continually adapt to these "small" increments. It has even caused me to question my own beliefs about the body needing periodic layoffs. I've personally had training cycles last up to eight months, but nothing like Andy has experienced. It makes me wonder if progress can continue on a linear basis for a long time.

From the earliest editions of HARDGAINER, Stuart, and other authors, have preached about the tremendous benefits of using "little gems." If you can get your hands on issue #35, there is a great article entitled, "Gemology 101." The author gives a great account of the psychological effect of these great little tools.

I think that the real key to using these tools properly is knowing when to use them. If you use them too early, when you're not already working hard, you're wasting time and dogging it. The little gems should be used when the work starts to get tough.

What constitutes "starts to get tough"? When a trainee is performing a 5-rep set, and at the completion of the 5 reps it looks as though he could do another 2 reps till failure. This is when I start using the small plates-the 1.25s, 0.5s and 0.25s.

I use the 1.25s (adding a total of 2.5 lbs on the bar) for squats and deadlifts, the 0.5s (a total of 1 lb added to the bar) on benches, presses, rows, pulldowns, chins, curls, and ab and calf work. I will use

the 0.25s (adding 0.5 lb total to the bar) for curls, presses and various rehab work. In time, as the weight builds on the bar, the trainee has to fight like hell to make the 5 reps (using a 5-rep set as an example), but he will be able to do this for a long time.

You see, as time passes, the trainee only knows success. In other words, he knows he will make the 5 reps. This is the psychological magic of the little gems – they help build confidence by allowing you to experience success at every workout.

THE LOGBOOK

Since its inception, the authors in HARDGAINER have preached the importance of keeping a logbook. All of my trainees have logbooks, and so should you. That's why I've included four pages out of Andy's logbook, to show you that we really keep one, and how we do it. Now you can "see" Andy's progress over the last two years.

Pages from Andy's logbook: October 1994, September 1995, June 1996, and November and December 1996.

Our logbooks are read left to right. The date is recorded at the top. The exercise is underlined and all sets are recorded, including warm ups. Once an exercise has been completed, one of the coaches that worked with Andy recommends the weight increase for the next workout. This is circled at the bottom of the last set of an exercise. Any rehabilitation work is also recorded in the logbook.

Andy stretches before and after every workout. After the stretching he does a few minutes of mild aerobic work. Then we go after the weights.

I've focused on his deadlift workout so that you can see how he's progressed on it. On Saturday 10/29/94 I took Andy through his first deadlift workout. I used an empty Olympic bar for 2 sets of 15 reps. I wouldn't recommend 2 sets on this exercise for someone who is training hard, but I wanted Andy to get more practice so he could perfect the proper technique. Though the 10/29/94 workout specifies "reg. deadlift," Andy never actually did the conventional deadlift. I had written up that workout prior to seeing Andy deadlift. He was much more suited to performing the sumo version, and has never done a conventional deadlift.

At the beginning of Andy's tenure with us we trained him at his home. It wasn't convenient for him to travel to my training facility until August of 1996. For his home training Andy purchased a power cage, bench, an Olympic bar, an adjustable dumbbell, and about 300 lbs of plates.

Getting support from your family can be a big asset. As evidenced by the "Keep going Andy" message at the bottom of one of the pages, Andy was getting support from his four-year-old daughter.

If you look at the workout from 9/23/95 you can see that I decided to break out the small plates (1.25 lbs each) and add 2.5 lbs to the sumo deadlift. Shortly after this session I dropped the 80% squat from the workout. I did this because he had developed good biomechanics on that lift and with the sumo deadlift getting hard I didn't want the squat to rob him of any energy. I also added a set of

floor back extensions to make sure his low back muscles were warmed up thoroughly for the deadlift – remember his workouts were generally performed at 6AM.

If you examine the workout on Monday 6/10/96 you will see Andy is now performing one "live" set on the sumo deadlift (using a very respectable 315 lbs for 5 reps). When the weight on the bar exceeded 247.5 lbs for his 5 reps, his biomechanics were perfect and the 3 "live" sets on the deadlift would literally wipe him out for the rest of the workout. So the need for multiple sets (for motor learning) ceased to exist. I really believe that on a big lift like the sumo deadlift a trainee only needs one "live" set performed with as much effort as possible to stimulate muscular growth.

As you can see, Andy sumo deadlifted 350 lbs for 5 perfect reps on Monday 11/25/96. He's still rolling, and as I said there's not a plateau in sight. You'll also notice the "ext. rotations" and "int. rotator str." notations. I have Andy perform a set of shoulder external rotations (to help balance the strength in his rotator cuff) using rubber tubing, this is followed by a stretch for his shoulder internal rotator muscles. I've had Andy perform these movements since the beginning of his training, only I wasn't recording them till now.

An interesting occurrence took place during this 11/25/96 workout. A relatively new trainee (he'd been training for about a month) was in the gym and witnessed Andy work out. They say a picture is worth a thousand words. Well this novice got so inspired from Andy's display of focused rage and strength that he (the novice) has been transformed from a guy who thought he was putting out a good effort to a guy who really understands what great effort is.

As you can see, as far as exercise selection goes, not much has changed from Andy's first workout two years ago. What *has* changed is the weight on the bar, the amount of effort Andy harnesses, and the corresponding muscle on his body; and these are the most important factors!

Follow the lead of Andy Greenspan. Train hard and progressively. And do everything in your power to be consistent. Andy's already received his M.D. in oncology and I'm confident that in the next **decade he'll receive his Ph.D. in strength and development, and so can you.**

The Basics Work Again!

From Hardgainer #50 – September/October 1996

In my last three articles I've given you real-world examples of the "basics" at work – and I hope you've paid attention, because the basics work every time. Almost all of the HARDGAINER readers that contact me are still wasting time "searching" for the ultimate program when they should be concentrating their efforts on consistency and progression.

You're going to need to want it bad enough in order to listen to the advice I'm about to give. You have to have "blind faith" in order to develop the patience that is absolutely necessary to succeed in your quest for strength and size. I don't know what I have to say to convince you of this fact. If you were training under my personal guidance *I would force you to stay the course*, but since that's not the case I'll give you *another* example of the basics in action.

Jon Anderson is a 21-year-old full-time college student, and baseball player. In July of 1996 Jon expressed a desire to get bigger and stronger to help in his pursuit of a professional baseball career. Not too many professional baseball scouts are going to notice a 5-11 and 170-lb catcher when the average size of a pro catcher is 6-2 and 225 lbs. So, we went to work. Here's his first program (and his working weights), which started on July 5, 1996.

Workout A

1. Crunch: 1 x 20 (20 lbs)
2. Squat: 2 x 8 (135 lbs)
3. Bench press: 2 x 5 (105 lbs)
4. Supinated pulldown: 2 x 5 (120 lbs)
5. Single-leg calf raise: 1 x 20 (50 lbs)
6. Static grip: 1 x 60-90 seconds (45-lb dumbbells for 60 seconds)
7. Internal and external shoulder rotation

Workout B

1. Side bend: 1 x 15 (30 lbs)
2. Sumo deadlift: 2 x 5 (135 lbs)
3. Military press: 2 x 5 (65 lbs)
4. Barbell curl: 2 x 5 (60 lbs)
5. Wrist curl: 1 x 20 (60 lbs)
6. Internal and external shoulder rotation

After several weeks of 10-lb jumps on the squat and deadlift (because he was able to maintain perfect form), Jon settled into 5-lb increases on these movements, 2.5 lbs on the bench press and pulldown, and 1 lb on everything else. As far as the nutrition was concerned, I had Jon slowly increase his caloric intake to 4,000 per day, via 5 or 6 "feedings" and at least one gallon of milk. I wanted to make sure that the new muscle Jon was adding was going to assist his baseball skills, not deter them, so I made sure that skill work (hitting practice, throwing, medicine ball work, stretching and running) was an integral part of his overall program.

On March 3 and 6, 1997 Jon (35 lbs heavier) performed the following:

Workout A

1. Crunch: 75 lbs x 20
2. Squat: 315 lbs x 5
3. Bench press: 197.5 lbs x 5
4. Supinated pulldown: 192.5 lbs x 5
5. Static grip: 95-lb dumbbells x 75 seconds

Workout B

1. Side bend: 110 lbs x 15
2. Sumo deadlift: 300 x 5
3. Military press: 100 lbs x 5
4. Barbell curl: 103 lbs x 5
5. Wrist curl: 122.5 lbs x 20

Now remember, Jon began this program to become a better baseball player not just a bigger and stronger guy. So all the muscle had to be functional. Jon finished the season, which ended in April

Jon Anderson squatting in the rack, from the bottom position

1997, hitting .380 with 4 triples (which shows an increase in foot speed), and a reduction in his throwing time to second base (which is an indication of an increase in arm power). During all this time I only worked with Jon in person twice, to implement the program and then stayed in touch via phone to monitor his progress. *I put him on the path, but he walked it.*

This program worked for two reasons. First, Jon Anderson is "hungry" to succeed, and put out tremendous effort consistently (in the weight room and at the table). Second, he was put on a basic

program (that he didn't try to alter in any way), based on progression at a rate that the body can handle. And that was it; nothing else!

In my last three articles I've given you real-world examples of the basics at work, from a 60-yearold cancer patient to a 21-year-old college student. These examples should give you faith that the basics work no matter where you are in life! I've had a lot of contact with HARDGAINER readers, and many of you understand the basics but are making major mistakes in application, most of which are associated with greed. It's absolutely necessary to have a burning desire to succeed, as long as that fire doesn't burn you up. What I mean by that is that your enthusiasm needs to be used to keep you on track for putting out maximum effort and being consistent.

Do not continually alter programs, and do not make the mistake of adding weight to the bar in toolarge increments. The latter is the mistake I see most often. Most trainees get to a weight that is the right "tool" for the job (for getting stronger and bigger) and then instead of *working with that "tool"* they add weight in a big "chunk" and change the tool and mess up the "job."

Let me digress for a moment. Once you are using a weight that allows you to perform, let's say 6 reps on the squat with the ability to perform one more rep, then you have arrived at the right tool for the job – for now. At your next workout, add no more than 2.5 lbs (my recommendation for the squat, less for the smaller movements) and you've picked the right tool again. *It's that simple, so don't make it complicated.*

Be like Andy (issue #47), Pat (#48), Jeff (#49), Mike (#43), Jack (#41) and Jon (or many other trainees I could write about), and put out maximum effort on every live rep you perform, add a little iron to the bar every workout, be consistent for a long time, and you will become, as we say at my gym, ***"one of us."***

No Excuses!

From Hardgainer #48 – May/June 1997

I'm going to tell you about a man who epitomizes the title of this article. His name is Pat Leraris, and he's one tough guy. This article should make you rethink what is possible with your own training program, encourage you to knock down barriers you have created for yourself, and help take you to new heights.

To the day of this writing, Pat has been training with weights for one year and four days, and all of it under the supervision of my staff and I. Just over a year ago Pat came and told me that he wanted to get as big and strong as possible. A prospective new client often follows the request to get as big and strong as possible by giving a number of excuses as to why achieving the goal won't be possible. Although Pat could truthfully use a number of excuses as reasons why he wouldn't be able to accomplish his goal, *he didn't, hasn't, and won't*.

He could have easily used his age (60 years young), his lack of experience of weight training (he'd never lifted before), or health, family or business-related problems as excuses. Since I didn't have to give Pat a lecture on why he can and should accomplish a challenging goal (like I usually have to, to people in his position), I just wrote down his first training program.

GETTING STARTED

Since Pat was coming off surgery and follow-up medical treatments, he had no aerobic conditioning base at all. The first thing I had to do was get Pat "in shape." I accomplished this with a super-circuit type of training program. Pat would go through a series of four exercises without rest and then perform 5-8 minutes of aerobic exercise, followed by another series of four exercises and more aerobic work. Pat would go through this circuit three times per workout. We used the big exercises and added a little dose of iron to the bar every workout. This program was performed for four months and got Pat in tremendous shape and ready to go into a full-bore strength program.

His first strength-training program started on June 14, 1996:

PROGRAM #1

Workout A

1. Shoulder external rotation: 1 x 12
2. Crunch: 1 x 20
3. Squat: 2 x 8
4. Bench press: 2 x 8
5. Supinated pulldown: 2 x 8
6. Static grip: 1 x 60-90 seconds

Workout B

1. Shoulder external rotation: 1 x 12
2. 30-degree back extension: 1 x 15
3. Side bend: 1 x 12
4. Sumo deadlift: 2 x 10
5. Lateral raise: 1 x 15
6. Front raise: 1 x 15
7. Barbell curl: 2 x 10
8. Wrist curl, forward and reverse

Pat trained three times per week, alternating the A and B workouts. When the weights started to push him we went to what we call a three-day split – Pat's second strength-training program.

PROGRAM#2

The second program was spread out over three workouts, but while training only two days per week, e.g., A on Monday, B on Thursday, C on Monday, A on Thursday, etc. The sets and reps I have listed below are only the "live" ones. Generally, a warm up set or two is/are performed before the live sets. I used a single progression format on all the exercises except for the static grip work (where I used a double progression format), and the shoulder external rotation work. For the static grip work Pat would use a weight he could just hold for 60 seconds, and add a few seconds each time he did the exercise, until he could hold the weight for 90 seconds. Then he would add 5 lbs to each dumbbell and start at 60 seconds again. The shoulder external rotations were not done progressively. A fixed resistance was used.

Workout A

1. External rotation: 1 x 15
2. Crunch: 1 x 15
3. Squat: 2 x 6
4. Stiff-legged deadlift: 1 x 10
5. Standing calf raise: 1 x 15

6. Static grip: 1 x 60-90 seconds

Workout B

1. External rotation: 1 x 15
2. Spread-eagle situp: 1 x 15
3. Bench press: 2 x 6
4. Supinated pulldown: 2 x 6
5. Machine shrug: 1 x 10
6. Close-grip bench press: 1 x 6
7. Grip machine: 1 x 20

Workout C

1. External rotation: 1 x 15
2. Side bend: 1 x 12
3. Sumo deadlift: 2 x 6
4. Front raise: 1 x 15
5. Shoulder press: 2 x 6
6. Barbell curl: 2 x 6

SPECIAL ADJUSTMENTS

Pat had extremely tight hip flexors, which prevented him from descending to parallel in the squat, and going low enough to initiate a good pull in the sumo deadlift. Also, his right shoulder was very dysfunctional. It caused him pain to lift his arm above shoulder height. In order to correct the hip flexor problem, I had Pat do special stretching movements to increase the flexibility of the top of his thighs (iliopsoas and rectus femoris), and his inner thigh (adductors). We also did a lot of flexibility work for his hamstrings.

To ensure that Pat was going to the proper depth that I deemed safe and effective on the squat, I placed a bungee cord across pins set in a power rack so that he hit the spot (one inch above parallel) on every rep he performed.

I also had Pat perform a special exercise known as the spread-eagle situp (that I learned from Louis Simmons) to increase the strength of his hip flexors. To perform this exercise you lay on the ground on your back, with your legs spread apart as far as is comfortable. You need some way to secure your feet to the ground. It's best to have a training partner do this for you. From here you lift your torso off the ground, bending at the hips like an oldfashioned military situp. But I want to give you a big word of *caution* for this exercise. *DO NOT* perform it unless your lower back muscles are very strong, and your entire back is injury-free. The reason why I had Pat perform this exercise was because in his initial squatting form he was relying heavily on knee flexion – he lacked strength in his hip flexors. But I wouldn't have had Pat do this exercise if he didn't have strong back muscles before starting the spread-eagle situps, and absolutely no back problems.

To correct Pat's shoulder problems we went to work on stretching his internal rotators, and strengthening his external rotators. To stretch his internal rotators I had Pat raise his upper arm until it was parallel to the ground, his elbow bent at a right angle, and hand pointing to the ceiling. I would then *very gently* push his wrist to the rear while supporting his elbow.

He did no overhead pressing at all to begin with because he was incapable of pressing overhead without great pain. Instead, we did front shoulder raises with palms facing each other and thumbs up, to a height where his arms were parallel to the floor. I used the same poundage progression philosophy on this exercise as on any other. In this case it meant adding a small dose of iron to the

Pat performing an upper-quad (hip flexor) stretch for his left side.

dumbbells every workout via wrist weights, building up to the next dumbbell size, and then working again on adding wrist weights.

After Pat's surgery he lost most of his sense of smell, which greatly affected his sense of taste. I had to get Pat's caloric intake up from about 1,800 calories to around 4,000. This is hard enough to do if your taste buds are doing fine, but it's a lot harder if you can't taste anything. I

turned Pat to liquid nutrition for getting approximately 30% of his daily caloric intake. But nothing fancy, just good protein powder mixed with milk and taken two or three times per day.

PAT TODAY

In one year Pat has gained 40 lbs, to his current weight of 190 lbs, at a height of 5-10. He looks like a big, thick guy and you would have no idea how old he is. No matter what anyone's circumstances are, the body, will respond to a slowly increasing demand. A little dose of iron added to the bar every workout, combined with a lot of effort and consistency, produces results.

To celebrate Pat's one-year training anniversary I let him max out on the deadlift for the first time. He pulled 285 lbs easily, and just missed getting 300. Not bad for a 61-year-old rookie. He can bench press about 190 lbs for 6 reps, and is handling 150+ lbs for overhead shoulders presses (his shoulder problem is history), does static grip work with 100-lb dumbbells for 90 seconds, and performs calf raises with over 400 lbs. He also does aerobic work three days per week, and stretches every day.

Pat Leraris takes on all challenges with guts and 100% effort, and makes no excuses. He's a man I am honored to call my friend. By the way, I neglected to mention that Pat has cancer. But he'll kick its ass too.

So what's your excuse?

A Common Path

From Hardgainer #49 – July/August 1996

Most of us start our weight-training journeys fueled with a burning desire to either change how we look, or to become much stronger. Many of us walk a similar path on our never-ending journey to get stronger and better built. Here is another man's story to inspire you to follow the advice in HARDGAINER, and walk "the path least traveled."

I started working with Jeff Bazuik on January 1, 1996. Jeff is a full-time college student majoring in kinesiology. But his iron journey started back in 1991 as a junior in high school. He just wanted to get bigger. The first program he thought would change his 5-7 121-lb body was a five-day-per-week affair. It didn't do a whole lot; but Jeff did gain a few pounds, which was some progress compared to what happened next.

Enter the influence of Arnold Schwarzenegger via his book THE ENCYCLOPEDIA OF MODERN BODYBUILDING. Now don't get me wrong, Arnold was my hero as much as anyone else's, but the information from this particular book is only useful for a steroids-using genetically-superior trainee. Jeff was working out on one of the programs that had him doing 15-20 sets per body part, training up to two hours per day, six days a week. The results were constant diarrhea, inability to sleep well, constant fatigue and flu-like symptoms, and a loss of 12 lbs of bodyweight. During this time Jeff made another mistake common to novice trainees. Although he had no muscle to speak of, he thought he was getting fat, and went on a diet.

After dropping down to pure skin and bones, a heavily-muscled gentleman who worked out at Jeff's gym stopped him from training six days a week, and got him training three days a week on the big basic exercises. This was an improvement, but Jeff still made major mistakes.

Later on, Jeff came across one of Stuart's articles, immediately ordered a copy of BRAWN, and started a 20-rep squat routine- on March 7, 1994. This was his biggest step in the right direction; but although the routine was sound, Jeff made serious mistakes in its application. The biggest mistake was that he didn't train hard enough. Also, his form on most exercises was poor, he was continuously adding new exercises, and always trying to find some new nuance to add to the routine. But even with all of these mistakes he got his weight up to 150 lbs.

He stopped the 20-rep squat routine on February 6, 1995. When he started the routine he could squat 20 reps with 140 lbs, and eleven months later he could use 195 lbs, but, as Jeff put it, "These were barely half squats, performed with terrible form."

I want Jeff to tell you about some of his later training experiences, leading up to the first time he telephoned me:

With all the good information that BRAWN offered, I still made all the mistakes. The squats, incline bench presses and seated presses behind the neck were all done in a Smith machine. My squats were done in partial fashion with a weird twisting of my butt that caused back pain. My bench presses were done with bouncing, and sometimes I didn't even go down enough to touch my chest. I realized I was working my ego and not my muscles. I worked out in this gym with steroids users and I didn't want to use the puny (but realistic) poundages that I should have been using in order to be able to use correct form. From this point until January 1996 I stagnated. But I did get one thing right – I got off the Smith machine and started to use good form. It took me eleven months to learn how to squat right.

I started to train my muscles and not my ego, but I still had to repeat most of the mistakes I made earlier on. I switched from routine to routine, never really progressing. I thought I was training hard, but wasn't. I thought that the weights would just feel easy as I moved up the poundage, but no! I was always adding poundage before I earned it, and added it in too-large increments. I always thought that I was at a plateau when all I needed to do was try harder. Instead I'd cycle up and down, waiting for the bar to feel lighter. I went in circles, and then I called you.

Jeff called me at the end of December 1995, after he had read my article "The White Moment" in the-then latest issue of HARDGAINER. This is the first routine I started Jeff on:

Monday

1. Bench press: 3 x 5
2. Barbell curl: 3 x 5
3. Crunch situp: 3 x 5

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Wednesday

1. Squat: 3 x 5
2. Stiff-legged deadlift: 1 x 10
3. Static grip: 2 x 45 seconds

Friday

1. Weighted chin: 3 x 5

2. Military press: 3 x 5
3. Standing calf machine: 3 x 5
4. Side bend: 2 x 10

I started Jeff on weights that he could use with perfect form, and had him add 2.5 lbs per week to the squat and stiff-legged deadlift, 5 lbs to the calf raise, and 1 lb per week to each of the other exercises, I emphasized that he must push every "live" repetition with all of the effort he could muster – this would ensure that he was working hard. In order to maintain discipline (to keep him from switching from routine to routine) I challenged him to stay on this routine for a minimum of twenty-five weeks, with any modifications *only* coming from me.

In mid March 1996 I modified his program to two times per week as follows:

Monday

1. Bench press: 3 x 5
2. Weighed chin: 2 x 5
3. Standing calf raise: 2 x 5
4. Crunch situp: 1 x 20

Thursday

1. Squat: 2 x 5
2. Stiff-legged deadlift: 1 x 10
3. Military press: 2 x 5
4. Barbell curl: 2 x 5
5. Side bend: 1 x 15

He maintained the progression for thirty-two weeks, until August 1, 1996. Jeff's bodyweight was now approximately 190 lbs, with no excess fat, and his strength had increased dramatically.

Jeff then wanted to try a singles program. Although I felt he wasn't ready yet for training on singles, he began this program in August, and kept at it until November. As I anticipated, it was a premature move, and Jeff's progress stalled. Since November until now (end of April, 1997) he has been on a fairly productive program (designed by himself) and has made some steady gains.

Jeff can now squat 280 lbs for 7 reps starting from a *parallel* position *off the pins* in a power rack, and can do calf raises for 5 reps with 550 lbs. Considering how little time Jeff has really been training properly, and that he is no genetic superior, he has made pretty good gains.

I can hear many of you thinking, "Yeah, if I had a strength coach working with me all the time I would make good progress, too." Let me tell you, I've never met Jeff Bazuik in person, he has never trained physically in front of me, he has never been to Indianapolis in Indiana, and I have never been to Bolder in Colorado. So let me make it clear that although I put Jeff on the right path (and kicked his ass every now and then, to keep him on the right path) he has walked the path himself, and deserves all the credit. I want to leave you with some of Jeff's own words from his last fax transmission:

Giving you all this information is a humbling experience. I truly made all the mistakes, and even made some big mistakes while you were training me over the phone. Recently I have been guilty of stagnating a bit, but have fixed that and have regained my focus.

Though I have made some good progress, I have to admit that it would *have been better if I had eaten more and stayed patient.* I'll page you on Monday at 8 PM my time and we'll fix that.

What will I tell Jeff? To get back to the basics of a simple program that emphasizes effort on every "live" rep he performs, to add a little dose of iron to the bar every workout, to add a little dose of food to his daily intake, to perform just two workouts a week (for at least twenty-five weeks without missing ***a workout), and to apply a massive dose of patience. .***

A Case Study: Lessons to be Learned

From Hardgainer #87 – November/December 2003

A couple of consultation clients came in from out of the country, to get my instruction. The father and son had been following abbreviated training for some time, and were not getting the results they felt they were capable of, although the father thought that they were doing most everything right. He felt they had tried various programs and approaches, and hadn't got the results they expected. They got injuries they didn't expect, however, and thought they would give my approach a try. They've allowed me to share with you what I discovered from their trip to Indianapolis. I spent over six hours covering virtually every aspect of training with them, to uncover a number of topics that I'm confident will help you with your training.

Joe's training history &goals

Now into his fourth decade, Joe has been under the iron for 25 years. At a bodyweight of 240 pounds, at 5-10, his best lifts were a 300 bench, 400 squat and 450 deadlift. Not bad, but they were done many years ago. He hadn't made progress in years, and had actually regressed substantially – with the addition of nagging injuries, some of which have kept him from training for up to one year. Over the past five years he has tried everything from high intensity training, to super slow, to a "singles" approach. He desired not only to regain his previous strength levels, but to lose bodyfat (he was over 30%).

Todd's training history &goals

Todd is 5-11, and weighs 160 pounds, with a bodyfat level under 10%. He's 17 years old, and has been lifting for the last couple of years. He has a decent level of strength but hasn't been able to progress for a while. He has also been plagued with injuries, particularly to his lower back. His goals are to get as big and strong as possible.

Hard work

In order to get stronger, and hence bigger, you have got to work hard on every work set that you perform. Just because a set feels hard, doesn't mean that you're working as hard as you need to, to make progress. If you discontinue a set with a couple of reps left in you, you're not working hard. This, however, assumes that you're *not* in a build-up phase of training, or are just starting out. Todd stopped a set of overhead presses at eight reps, put the bar back in the rack so fast I couldn't stop him. I asked, "What the heck are you doing?"

"I was tired. That was all I had."

During the four-minute rest interval, I gave him a reminder of who was in charge, and that he was never to stop a set unless I instructed him to do so. The next set, he completed 12 perfect reps. (He couldn't have made 13). "Tired" doesn't mean that the set is over, or that it was productive. I know many readers have mistaken my writings, and believed that I recommend stopping a set several reps short of what is possible. Well, this is false. To further clarify, the following is a list of the scenarios in which I would advise a trainee to terminate a set short of his or her limit. In other words, he or she may stop a set with three to five reps left to spare.

1. A trainee who has never weight trained.
2. A trainee whose form is terrible.
3. Starting a trainee out on an exercise that hasn't been done before, or hasn't been done in a while.
4. A trainee who is coming off an injury or illness, or who has had a layoff from training for more than two weeks, and is starting a new cycle.
5. A trainee who's physically exhausted from a poorly designed training program.

That's it. If you don't fall into these categories, then a set should be stopped when you hit your rep goal which should, at the most, leave one rep in you. It *might* leave one rep in you. Ideally, the last rep you complete is the last you could do. I have termed this "beating failure," verses going to failure.

While we're on the "hard work" topic, let's discuss super slow training, or "timed reps." Joe tried super slow training for a period of time, and I want to share with you what he had to say about it. He said that "super slow is a real hard way to train," and he "got a great pump," but he "had to lift very light weights and couldn't progress at all in size or absolute strength." I can't tell you how many times I've heard this. Whether it comes from a trainee who calls on the phone, to the many videos I've critiqued, to someone that I've worked with in person ...the results are the same – it doesn't work. This

really bothers me because I see trainees wasting valuable training time on a training philosophy that is worthless in my opinion, but I'm sure is making someone rich, somewhere.

Another thing that I see from the devotees of counting rep speed, is that its use doesn't guarantee good biomechanics. These trainees are so concerned about "counting," that their minds can't focus on the two most important aspects of a rep – good biomechanics, and effort. The best advice I can give concerning this, is to forget about trying to perform an exercise at a very slow speed. Use good form,

control the weight, and push or pull as hard and as fast as possible through the concentric contraction – that's it, end of subject as far as I'm concerned.

Genetics

While I was doing my customary client training profile, I discovered several other things of interest. Joe was very concerned about his and his son 's genetics. From all the reading he's done, he believed that they weren't "destined" for any further improvements in strength or development. He was busy telling me every genetic reason under the sun why he couldn't succeed. All I could keep thinking is "what a defeatist attitude." He was going on about his wrist size, length of bones, physical characteristics of his parents and grandparents, and an in-depth analysis of somatotyping. I could have sworn that we were going to get into the structure of his DNA next. In reality, this guy's wrist was over seven inches, which hardly makes him a small-boned individual. He also had very large knee and ankle joints – to the point where he could be classified as a large-boned man.

Throw the entire "somatyping" issue out the window. Here we have a guy who thinks he's smallboned, when in reality he has above-average bone structure in specific areas of his body. My advice to all of you is to forget about the genetic stuff, and train in a safe and progressive manner. And whatever you do, don't sell yourself short. If you do sell yourself short, you'll never become the best that you can.

I've had all kinds of trainees with a vast array of genetic differences who have reached levels of strength and development beyond what anyone thought was possible. And one thing that I can say, is that the trainees who don't have the best genetics are often the ones who are willing to work the hardest, and be the most dedicated.

Diet

Todd wasn't gaining weight at a rate that he thought he should be. One of the reasons he wasn't getting the results he desired was that his caloric intake was sub-par, and he was relying too much on supplements. I've written about this so many times, I get tired of hearing myself say it: If you want to really pack on the muscle, *eat*! Two thousand calories per day won't do it. Write down everything you eat for a couple of days, get a calorie counter, and add up what you're consuming. Then, progressively add calories, over time, until you get up to a minimum of 4,000 calories per day. If you want to really get as big as possible, you may have to exceed that. As far as supplements go, use them for what they were supposed to be used for – to *supplement* your food intake.

Joe's diet wasn't good either, but for a different reason. It was reflected in his bodyfat percentage, which was at an unhealthy level. He was heavily into supplements when he really needed to focus on cleaning up the types of foods he ate. He admitted that there was no real structure to his eating. What I taught him was to make sure that he eats every three hours, to ensure that blood sugar levels remained stable, and to ward off "hormonal hunger." Eating every three hours is also a great way to control caloric intake, because by the time three hours passes, you're not ravenous yet. So, you eat before you get really hungry, and this controls the amount of food you eat. I'm also having him control the amount of carbohydrates he eats. Read that clearly. I said "control," not "eliminate." By doing this, I've had tremendous success helping trainees cut bodyfat while actually increasing muscle tissue. Whatever you do, *don't* take this as advice, without knowing the specifics, and go out and put yourself into a state of ketosis (by *eliminating* carbs from your diet) and expect to cut fat, gain muscle, and feel great – because you won't.

If you want to learn more about a sensible approach to cutting bodyfat, get the book NATURAL HORMONAL ENHANCEMENT – See www.extique.com – and read it from cover to cover. This will help get you started.

Program design

Joe's program wasn't bad as far as how he had it structured. It was a whole-body routine performed twice in about a ten-day period. The major problem was in the frequency of his training. He trained every three to five days, depending on how he was feeling. If he was feeling tired, he would postpone the workout to the next day, unless of course he was tired again. This scattered the workouts all over different days of the week and, in my opinion, allowed too much leeway to use any excuse to put off today's workout till tomorrow or the next day.

There are legitimate reasons to postpone your workout a day. But, these reasons should be very few and far between. Joe believed his tiredness was because he hadn't recovered from his previous workout, when in essence it was the result of a poor diet and the lack of aerobic conditioning. I recommend a workout structure that puts weight training, aerobic conditioning, and sport-specific training on specific days of the week. This promotes one of the biggest character traits missing in most people's lives – discipline.

Todd's program was a three-day-per-week affair, but structured poorly. Monday and Wednesday had him performing all upper-body work, in an excessive manner. For instance, he was performing both barbell rowing and chin-ups on Monday, for multiple work sets, then would come back on

Wednesday and do pulldowns. Not only is doing two major movements for the upper-back musculature on Monday not needed, and counterproductive, but then to come back on Wednesday and perform another major upper-back movement, won't allow this area to recover (as long as the exercises were worked as hard as they should be). The same type of structure was being performed with pressing movements on those days. He did heavy bench pressing on Monday, and military presses and dips on Wednesday.

On Fridays, he was performing both the squat and conventional-style deadlift because. When he'd performed them on different days of the week, his back "just wouldn't recover." If you're squatting as hard as possible for multiple sets, it's my experience that it's impossible to come back in the same routine and perform a bent-legged deadlift with any kind of effort.

The reason his back wasn't recovering was due to his insufficient caloric intake, and improper back position while performing the conventional deadlift. Most trainees mistake a minor soft-tissue injury to the lumbar musculature, nerves, or discs, with simple soreness. I need to elaborate.

If you perform your bent-legged deadlifts, and your lower back is allowed to round (spinal flexion), especially while performing your heavy sets, you aren't constructively stimulating the muscles that should be maintaining the structural integrity of the spine (maintaining its normal or preferred alignment). What you'd be doing is "testing" how much distress your lumbar musculature can take while being elongated, and yet trying to contract (along with the severe compression and extension the intervertebral discs are trying to withstand). In other words, you'd be testing how much tension these muscles can take, while being stretched, before they tear.

When your pelvis is allowed to rotate into a posterior position, which is what happens when your lower back "rounds," while under the heavy loads of a deadlift (or the squat), it makes it easier for the hamstrings to contract, thus getting the weight off the floor easier, but at the greatly increased risk to the lower back. The trauma to all the musculature, nerves, and discs from the aforementioned position, is tremendous. And it will not allow recovery in the time period that I recommend between workouts. I'd be surprised if a trainee can recover in a couple of weeks from that kind of destruction.

When I hear from trainees that their backs can't recover from squats on, say, a Tuesday, to be able to perform a bent-legged deadlift on Friday, I'm 99% sure the reason for this is what I've just described.

If a trainee maintains spinal extension (no rounding of the back) while performing his deadlifts and squats, the constructive "damage" to the lower-back musculature is at an appropriate level, and the trainee is able to recover within a couple of days. These are the reasons why I have most of my trainees use the sumo-style deadlift over the conventional style (not counting the parallel-grip deadlift), because it's much more in accordance with the majority of trainees' length of levers. It takes a special body type to be able to perform the conventional deadlift while utilizing heavy loads and maintain an arched or flat back. It's for these reasons that I switched Joe and Todd to the sumo deadlift.

I restructured their workouts to be performed twice a week, on specific days. These were two, fullbody routines utilizing different exercises each workout. Outside of their differences in how they structured their routines, the other problems that they faced were pretty much the same – exercise selection, exercise technique, and the lack of a progression scheme.

Technique adjustments

How to perform a rep

The first change I made to their technique was to get them to perform each rep one at a time. Instead of pounding off a set of ten reps non-stop, I had them stop at the beginning of each rep, take a big breath, and then perform the rep with as much concentration and effort as they could muster. When the rep was completed, they would then return the weight to the starting position, take another breath, and lift the weight again. You wouldn't believe how effective this technique is for enhancing biomechanics, effort, and the overall stimulation of a set. You have to reach a point in your ability to concentrate so that you approach every rep as if it's a workout into itself.

Squatting technique

Another glaring area that needed work, was squatting technique. They were both what I classify as "knee squatters." What I mean by this is that they would simply break at the knees and go down. What happens is that the knees jut forward greatly, exceeding what's known as the "knee-toe line." In other

words, their knees at the bottom of the movement were sticking out beyond their toes by about four inches. This position causes incredible stress to the knee connective structures, and over time can cause serious problems. Now, I know that there are trainees who can squat in this fashion, and not experience any problems, but in my experience they are the exception, and not the rule.

Unless you're an Olympic lifter, or simply wish to squat in the aforementioned fashion, then to squat with the technique that I'm about to describe will deliver the goods in size and strength as well as anything, while reducing the risk of injury. If you want to perform the Olympic-style squat, and your body structure will at least allow a rough approximation of it, you should *still* focus on "sitting back" during the descent. I'll describe this in a moment.

If you study the top Olympic lifters, you'll notice that their knees do extend out beyond their toes, but

by only a small degree. This is due, in great part, to the length of their levers, but also due, in part, to their conscious execution of the lift.

Another thing you'll notice is that, on their ascent, the hips move dramatically rearward and the knees pull back very rapidly behind the knee-toe line. When a trainee starts the descent, the first thing that should move is the hips – they should move back, and continue to do so, until the trainee reaches the bottom position. At the bottom, the knees should be behind the imaginary knee-toe line.

In Todd's case, his knees went from four inches beyond his knees, to three inches behind them, after I corrected his technique. He also couldn't believe the stimulation in his entire lower body even though he used a weight well below what he was using while incorporating the other technique.

Let's talk about the bottom position for a moment. I try to get all of my trainees to go to parallel or slightly below parallel. There are some trainees who can go much lower and *still* maintain spinal extension (an arched or flat back). If a trainee desires to go that low, then so be it, but it's not necessarily going to develop them more than if they stopped just below parallel. My best advice is to strive to go to parallel as long as you can maintain spinal extension. If you can't, then go as low as your structure will currently allow, and then work on improving the flexibility of your hamstrings (and your entire body in general), and strengthening your lower back through the use of back extensions or stiff-legged deadlifts.

A Case Study: Lessons to be Learned, #2

From Hardgainer #88 – January/February 2003

Technique adjustments

Side bend

When I read on Todd 's fax that he was using 110 pounds for two sets of ten reps on the side bend, I thought, "This guy is very strong for his bodyweight, or his technique is not right." Watching him perform the movement, confirmed my second thought.

Todd was doing a one-armed, modified, partial, round-back, stiff-legged deadlift performed at a 45-degree angle. It was ugly. Instead of keeping the dumbbell moving in a plane up and down the side of his leg, he was bringing the weight in front of his leg, allowing the lower back to go into flexion (round). Instead of bending sideways, he was bending forward, heavily utilizing his lower-back muscles, which was taking the load off the obliques (where it belongs). Then, he would stand erect to complete the movement, and the dumbbell would end up on the side of his leg. To complete the movement and get a full contraction of the oblique, you need to continue to bend to the other side (opposite the side of the dumbbell) before returning to the starting position.

When I had Todd perform the movement correctly, with a 40-pound dumbbell, he felt his oblique working to the maximum.

By the way, when performed correctly and at the right intensity, I never recommend more than one work set of the side bend, because the involved muscles are getting hit hard during heavy squats, deadlifts, and overhead presses.

Bent-over rowing

Todd was performing the bent-over row with a barbell, and as I read directly from his fax, it said "Can't move up in weight!" As I mentioned in Part 1 of this article, there are several contributing factors for Todd's lack of progress, including diet, and program design. But in directly addressing this one exercise, I know that there was another contributing factor.

I don't have a single client performing the barbell row. I haven't recommended it for at least the last 15 years, maybe longer. It's not that the barbell row, in theory, is a bad movement, but in practicality, when the weights get to an appropriate level to stimulate change – in other words, when the weights get heavy – it negatively affects the proper biomechanical position that the exercise needs to be performed in to promote maximal gains while minimizing injury. In other words, when the exercise gets hard and the weights get heavy, I've never had a trainee, even ones who have tremendously strong lower-back muscles (myself included), who are able to maintain at least a flat lower back.

At the least, what happens is that you end up working your lower back like crazy and it gives out – can't keep it flat – before you can properly stimulate the upper-back muscles. At the worst, you suffer a lower-back injury because you don't care that your lower back is rounded. If you keep the lower back in flexion (rounded) for an extended length of time – even the time it takes to perform a set of just three reps – while under the heavy loads that can be handled in this movement, you're begging for a possibly crippling injury. The muscles can't maintain proper spinal integrity, and more than likely you'll suffer a disc injury.

I prefer the one-arm dumbbell row. When performed properly, this exercise works the heck out of the upper back, with minimal stress on the lower-back muscles as compared to the barbell version. Both Joe and Todd assured me that they had tried this movement before, but "got nothing out of it." The reason that they got nothing out of it was because, as the dumbbell was being raised, they were allowing the torso to rotate. Think of the torso, when it's parallel to the ground, as it should be when performing the one-arm dumbbell row, as the top of a table. When the dumbbell is being raised, the top of the table should remain level. As they were performing the exercise, they were "tilting" the table top (their torsos) onto the two legs opposite the dumbbell. So, instead of getting a strong contraction of the upper-back muscles at the top of the movement, they were getting a good biceps workout getting the dumbbell to what is essentially half-way up, then rotating the torso to complete the movement.

When this exercise is performed properly, the elbow should end up well above the back at the top of the movement. In my case, my elbow is roughly eight inches behind my back while my torso remains completely flat. I had Todd perform the exercise correctly, and I thought his entire latissimus, trapezius – heck, his entire upper back – was going to cramp. He couldn't believe it.

Another technique flaw that I encounter frequently with this exercise, is that the dumbbell is purposely pulled to the hip. This is a good *general* recommendation but, as with many exercises, there's going to be variation dependent upon one's particular length of levers. Many trainees that I've worked with end up with the dumbbell in front of the hip, or at the oblique. My best advice is to pull the

dumbbell up while trying to contract the upper back as hard as possible, and your body will determine the best path for the dumbbell to take.

Abdominal work

The exercise of choice for my clients is the old-fashioned crunch. These are not your "curl up the shoulders a few inches" variety. I guess you could call the ones that I recommend "supported crunches." The feet are placed on a bench with the knees bent at 90 degrees, like with regular crunches, but the feet are secured to the bench. This allows a much heavier weight to be used and, when performed correctly, the trainees get an abdominal workout they can't believe. Critics of this style will claim that this is bad for the lower back, or that you use too much hip flexor involvement when performing the movement.

This movement is only bad for your lower back if you have a current lower-back injury or limitation of some kind. If, when performing this movement, you "feel it in your back," then either your back is weak or you lack flexibility. I've worked with many trainees who had lower-back injuries, and after a period of rehabilitation I get most of these trainees performing this exact movement without incidence, and with great benefit.

As far as the hip flexors go, yes, they are heavily involved, but so what? Let me say this loud and clear: *It s impossible to isolate any muscle!* And why would you want too? The body isn't designed to work in "parts." It's designed to work as an integrated unit. In this particular example, the hip flexors are supposed to be working with the abdominals. You'll not be selling the abs short because you 're using the hip flexors.

Unless you perform this movement correctly, you won't understand what I mean. And this is exactly what happened with Joe and Todd. Joe had been performing the "move the shoulders a few inches" type of crunch with a 40-pound dumbbell, and Todd had gone to a machine crunch in which he stated that he "can't move up in weight." I feel that 90% of all abdominal machines are junk! When Joe performed the movement correctly, he could barely complete ten reps with his bodyweight; and Todd was about to cramp again when he completed ten reps with 20 pounds. Neither gentleman said a thing about how "fried" their hip flexors were. Instead, they couldn't believe how worked their abs were.

A good minimum in this movement, for a man, is 80 pounds for ten reps. My General Manager – Mary, a non-powerlifter who lifts to stay "toned" – has performed ten perfect reps with a 100-pound dumbbell and a one-second hold at the top of each rep. So, perform this movement correctly, develop real strength, and move some serious weight.

Lower-back work

Joe was performing the stiff-legged deadlift for his lower-back work, while Todd was relying on his conventional deadlifts to take care of that area.

Joe has been dealing with lower-back injuries since he was 18, and his performing the stiffs wasn't improving things. There are several reasons why they weren't working. First of all, Joe was maintaining a flat back while performing the exercise, not allowing the spinal erectors to go through a range of motion. In essence, by maintaining a flat lower back position throughout the movement, he was developing some static strength of the lumbar musculature, and working the heck out of his glutes and hamstrings. In order to completely strengthen the lower back, you must work the erectors from flexion to extension. If you maintain a flat lower back, this doesn't happen. When you bend down to pick up the bar, the lower back should be allowed to round *some*! In other words, if you don't consciously hold the lower back flat, the body will naturally go into a *limited* degree of spinal flexion. But, you don't want to force your lower back to round (go into spinal flexion) more than what's natural. This is another reason that I never recommended anyone stand on an elevated surface to perform the movement. I know that there are many that can perform the movement this way – heck, I used to – but in my experience, you can accomplish the same results by starting the movement off the floor, and greatly reduce the risk of injury to the lower back. As the bar is moved off the floor to the standing position, the lower back goes from flexion to extension, thereby giving great stimulation to that area.

Another great movement that I highly recommended is the back extension. When performed properly, and eventually with very heavy loads, it provides a level of stimulation to the lower back that's equal to anything. I've had clients perform this movement with over 100 pounds for ten reps, with a one-second pause in the contracted position of each rep. I had Todd try this movement, and as usual I found a double-bodyweight deadlifter who couldn't perform 12 reps with his bodyweight. He couldn't believe how worked his lower back was, and how sore it was the next day.

Joe couldn't even perform a few reps – he's a previous 450-pound deadlifter – so, I had him start out with the floor version. To perform this variation, lie face-down on the floor with someone (or something) holding down your feet. Then, with your arms at your sides, lift your shoulders as high as is comfortable, which should create an arching (spinal extension) of the lower back. The top position should be held for one second, then return to the floor to begin the second rep. When you can perform

20 of these, you should be able to move to the 45-degree back extension and make at least ten reps.

To wrap up, I consider the stiff-legged deadlift and back extension safe, round-back exercises *when done properly.*

Any type of bent-legged deadlift – performed properly with the lower back in extension – will make

the lower-back musculature stronger in a static position, but once you leave this position you'll be very weak. Also, experience has taught me that if you want to continue to improve your static strength for the squat or the deadlift, you must work the lower-back muscles through a range of motion. Relying on bent-legged deadlifts to completely strengthen your lower back, is like relying on a static contraction of the pecs via barbell holds in the rack with several hundred pounds over your best bench, to strengthen the pecs. The pecs will only be stronger in the completely contracted position, with no carryover to the full-range movement.

I've had a number of deadlifters that could move a significant weight in the deadlift, albeit progress had stalled, but couldn't complete eight reps with their own bodyweight in the 45-degree back extension. Once they get the back extensions going to the point where they can handle at least 20% of their deadlift weight for eight reps, the deadlift improves. These same proficient deadlifters, who only rely on the deadlift to strengthen the back, are usually dealing with some sort of lower-back injury. Again, once they get the back extensions up to speed, the injuries disappear.

The overhead press

Both Joe and Todd where making the same mistake that I've seen trainees make countless times. They were using an incorrect bar path. Starting at the collarbone, they were pressing the bar straight up. What this results in is the bar ending up in front of the head, throwing the body into an unnatural biomechanical position. In this position, you have reduced leverage which will not allow you to use the maximum amount of weight possible, but will jeopardize the health of the rotator cuff and cervical area. These areas are at an increased risk because the scapula can't stay in retraction – shoulder blades squeezed together – therefore leaving the shoulder joint in a relatively unstable position.

Performed correctly, the bar should move back approximately two to four inches (depending on the individual) once the bar clears the head. In other words, the bar should move vertically up from the collarbone, and once it passes the head, it will move back a little as it continues on a straight line until it ends up straight up from your head. If you would view the entire body with the bar completely locked-out, in the standing press, the bar would be directly over the middle of your feet. When performed properly, you won't believe how contracted or tight the entire shoulder musculature and upper back are.

When a trainee makes the switch to performing the press properly, a rep that would usually fail at the mid-point, just above the head, will easily be driven to completion. Because the bar moves back, you gain leverage, allowing you to lift more weight, which in turn will produce more strength and mass. One caveat is that you shouldn't try to force the bar too far back. As the bar passes the head, just allow it to go back a little, and it will find its own path. A good test to see if you've got it right, is that when the bar is locked out, you'll feel perfectly balanced.

You must tighten your entire body while performing the press. I've seen too many trainees "just stand there" and press. Many times, the legs are completely straight. Performed properly, the legs will be bent and the muscles tensed.

If you consider all exercises "whole body" movements, not just for any particular prime mover, you'll start tensing your entire body while performing the lift. This will give you added leverage, allowing you to lift more weight, and it will also reduce the risk of injury.

The Program

I put Joe and Todd on my twice-a-week, A and B Program – nothing fancy, just the basics. Warm-up sets are additional.

Workout A

1. Crunch: 1 x 10
2. Squat with a one-second pause at bottom: 2x8
3. Bench press: 2 x 8
4. Dumbbell row: 2 x 8
5. 45-degree back extension: 1 x 15

I had Joe perform the floor back extension.

6. Static dumbbell grip: 60 to 90 seconds

Workout B

1. Side bend: 1 x 10
2. Sumo deadlift: 2 x 8
3. Military press: 2 x 8

4. Barbell curl: 2 x 8
5. Triceps pushdown: 1 x 8
6. Wrist curl: 1 x 20
7. Reverse wrist curl: 1 x 15

The prescribed starting weights left a couple of reps left in them on each set, but within about four weeks or so, with the progression scheme that I recommended, they will be pushing with all they have, to make the required reps. Their starting weights were chosen to allow them the four weeks or so to

work on the technique modifications that I recommended. If I had chosen weights that would have pushed them from the start, it would have been virtually impossible for them to master the new motor skills.

In closing

This article has pointed out some of the real-world mistakes that trainees make, and how I go about getting them on the right track. The mistakes that I see are almost always the same:

1. Poorly designed workout routines.
2. Exercise technique that is less-than-optimal, to downright dangerous.
3. Eating habits that are poor to terrible.
4. No progression scheme, or ridiculous progression schemes.
5. Not enough effort.

I've written this many times – *you need to study HARDGAINER magazine.* The points mentioned above are all covered in the magazine. I, as well as many other authors, have covered these things many times. So, what gives?

If you're not making progress, take a step back and look at your entire program. Then, make a commitment to change what needs change. It really *is* that simple. That's all I did for Joe and Todd, and I'm confident that within a couple of years they'll be enjoying the fruits of their labor.

I want to thank Joe and Todd for allowing me to use their data for the sake of helping other ***trainees. I'm grateful.***

Learning to be Patient

From Hardgainer #58 – January/February 1999

What does $50 mean to you? If you lived here in Indianapolis, Indiana, that's what you would have to hand over every hour that you worked with me. Would you listen, and at least try everything I told you to? Would you be patient? I'm sure you would. So, please make sure you listen to this article, and take it to heart, because you're getting it at just the cost of this magazine, which isn't 50 bucks.

I'm going to drive home once again the "magic" of consistency and progression, and I'm going to do this using another real-life example. I've come to realize that so many trainees must fail over and over again before they finally come to realize that they need to be patient in order to achieve their potential. If you try to rush the process, all you'll end up doing is actually lengthening the process! The man (Danny) that I'm writing about in this issue made some of the same mistakes I'm sure many of you are making. I'm not using Danny as just an example of someone who made mistakes. I'm using Danny as an example because he made mistakes and had the guts to be honest and put the blame on himself, and not his program, as to why he wasn't achieving his goals. Most people won't do this. They would rather put the blame on the routine and just go and find another routine (and end up failing again). I respect Danny because it takes a big man to understand his faults, take responsibility for them, and then make the necessary changes to achieve his goals.

This article's routine isn't going to be much different to those you've seen me write about before, so don't expect to see some "secret" high-tech mass routine that I've been keeping from you. Let me say once again, there's no "magic" in a routine. The "magic" comes from doing what you're supposed to be doing day after day, month after month, year after year. What are you supposed to be doing? Training with good form, adding weight to the bar at a rate your body can adapt to, working out two or three times per week, never missing workouts unless you're sick or hurt, eating well every day, putting out as much effort as you can muster for every rep of each "live" set you do, and being patient. That's pretty much it. Still doesn't sound too complicated does it?

Before I get into the gist of this article I need to comment on something I read on the HARDGAINER web site the other night (Yes, I do check out what you guys are saying on The Round Table). A young man had been following one of my routines and was asking what to do because he had plateaued after 7 weeks on the program. Let me tell you, if you plateaued after anything less than 25 weeks on a program that I designed, you either started the program with too much weight, or you added weight in too large increments. Seven weeks is nothing on a good program. And when I said 25 weeks, that's a minimum.

The beginning

I started working with Danny approximately three years ago. But his weight-training journey started well before that. Danny started training in October of 1991, weighing 170 pounds and, as he put it, "pure fat." At first his training consisted of simply doing a few haphazard exercises with a dumbbell he had in the garage. At this point, his brother, who had done some powerlifting training, told him to start doing some squats and deadlifts. Danny remembers his first deadlift workout where he performed 6 reps with 95 pounds. He thought this was no big deal, didn't know what muscles the exercise worked, and dropped the movement. So, Danny did what many of us did at some point – he enlisted the help of a very muscular "friend." This friend put Danny on the five-day-per-week split routine garbage. Of course this routine produced no results, and later on Danny found out that his friend used large amounts of steroids.

Not knowing what to do, Danny jumped around from routine to routine, getting hardly any results. In 1993 he ordered BRAWN out of a popular muscle magazine and you would think this would be the turning point, but it wasn't. As I've preached over and over again, there's no magic in a routine – even a good one – if you aren't training consistently, progressively, and with the patience to wait for the results. Please read that again, because it's so important for your success.

Once again, Danny jumped around using various routines from BRAWN with minimal results because he never stayed with a routine long enough. He would add "extra" exercises, and he added weight much too quickly. Also, he believed that you should only train for eight weeks, and then take two weeks off no matter what, and then cut back the weights and start a cycle over again. You can't make good progress after only eight weeks of training, unless it's the eight weeks in the middle of a long cycle. Anyway, after the two weeks off he was always weaker than before he started the previous cycle. At this point, Danny was very frustrated and didn't know what to do.

Enter HARDGAINER

Luckily, about this time, Danny received his first issue of HARDGAINER. It was issue #37, which contained my article on how a training cycle works. He saw my phone number listed, and gave me a call. As I didn't have time to take Danny on as a full-time consultation client, I spent about an hour with him on the phone, cleaned up his routine, and vehemently stressed the importance of making a

routine last a minimum of 25 weeks, and to shoot for 50. Since he still weighed about 170 pounds, and desired to get much bigger, I taught him the basics of how to eat to gain muscle. This was in November of 1995. The following is the program that he had designed for himself:

Workout A

1. Squat: 2 x 5
2. Bench: 2 x 5
3. Pulldown: 3 x 5

Workout B

1. Deadlift: 3 x 5
2. Shrug: 3 x 5
3. Chin: 5 x 5
4. Close-grip bench press: 3 x 5

Not bad, but I would have added ab, calf and grip work. Also, since at this point I'd not seen a video of Danny training, I took his word that his form was good. Later I was to find out it was horrible.

Every month or so, Danny would write or call to update me on his progress. During some of these phone conversations I had to get "a little unpleasant" because Danny would start making what would become a series of mistakes due to his lack of patience. He would add exercises to the routines that I designed. He would also increase the rate of progression (for example, instead of adding 5 pounds to the squat, he would add 20). What happened was that Danny would start making progress (unbeknown to him) by adding the appropriate amount of weight for six weeks or so, start feeling strong, lose patience, and think to himself "I'll add 20 or 30 pounds to the bar." This would destroy the foundation he was starting to build. His form would immediately deteriorate. This is what many of you do, and it's wrong!

I'm going to break away from Danny's story for a moment, in order to explain something that I think many of you are misinterpreting.

The build-up phase

Let's get something straight – I hate to train easy. I wish I didn't have to make anyone train easy (relatively speaking). Training easy doesn't build any muscle. But there are times when training has to be easy. You don't have a choice. This is your body's decision, not yours! One of these times is when you're rehabilitating after an injury, but that's not what I'm discussing here. Another time is when you're starting a new exercise program or starting a new exercise, and this is what I want to address now.

Many of you think that starting out with weights that are relatively light for the prescribed reps are a waste of time for building muscle. And you would be absolutely right, but you would also be absolutely wrong! Why the double-talk?

Well, it depends if you're looking at building muscle for just 4-8 weeks, or if you want to continue to get as big and strong as your genetics will allow over the next few years. Yes, lifting weights that are already easy for your body to lift won't build an ounce of muscle. But lifting weights that make you compromise your form – even a little bit on the last couple of reps of a set – will destroy motor learning. And if you don't develop the motor skills completely (i.e., develop great form), you'll then lose leverage, become inefficient, and lose power. Without maximizing the leverage of your body you'll never reach your potential.

You want all the leverage advantages that your body has to offer in order to move the heaviest weights possible, which in turn allow you to build the most muscle possible. Also it takes much longer for the body to build the strength of the tendons and ligaments, and if you rush this you'll get hurt! So here's the deal according to the body: You want to start out using a weight that allows the muscles to work to a certain level without compromising the job your nervous system is trying to do. Ideally we want this phase to be as short as possible, because you don't want to be training for very long at a level that doesn't stimulate muscular growth. The key word there is "ideally" because of what I said earlier – we have to go at a rate that your body dictates, not at the rate that your emotions or desires want to go at.

My 20+ years of training experience have taught me (as well as college physiology) that it takes approximately 4-8 weeks for the body to start to develop the motor skills to become efficient at any new "motion." This time varies because everyone responds differently. Some trainees are more

coordinated than others, and some have more experience than others. For instance, if I want to start doing dips in my program it won't take me as long to master the motion (i.e., develop the motor skills) and condition my ligaments and tendons as it would with someone who has never done the dip before. I've performed the dip in the past for cycles lasting a year or more. So, it may only take me a 3-4 week build-up period before I can really start to push myself, because my body will remember that I've done this before. For the new trainee it may take somewhere between 4-8 weeks without destroying what the nervous system has to do – which is to learn to master the motion (exercise).

Don't fret, you won't lose that much, if any, muscle during a build-up period. You should be able to handle a weight that's about 70-80% of what you could handle if you went "full-bore." This level of

intensity is sufficient to prevent atrophy and may actually stimulate some growth. But who cares if you don't stimulate growth right away, if this build-up period helps you to reach your potential in a few years?

Once again, it stinks that you have to train a little below full-bore for a while. I don't like it either. But you have to have a good attitude about it because, in my opinion, it's absolutely necessary. And remember, these aren't my rules, they are your body's rules. I simply follow them and get great results. By the way how have your results been?

Let's get back to Danny's story...

December 1996

Ten months after our previous conversation, Danny called me and let me know that he had reached 260 pounds. I was floored. I was also concerned. I know you can't gain that kind of weight and not gain a lot of fat. As the conversation continued, Danny informed me that he was experiencing extreme "night sweating," and after a doctor's appointment he found out that he had developed high blood pressure. Although I'm not a doctor, I suspected that Danny was having symptoms of overtraining combined with a large fat gain.

Danny came clean and told me what he had been doing. He had not followed the routine that I'd designed for him. Instead he had altered things because, simply put, he lacked patience. He had added exercises, added weight too fast and in large "chunks," and had taken my nutrition advice to an unhealthy extreme. I witnessed the results of all this when I received the first video of Danny training. Although he was doing some things right, he was making some glaring mistakes, mistakes that were obviously not good for his immune system. Your health is more important than the size of your biceps!

I asked Danny how he was eating, and found out that he took my original advice to an unhealthy extreme. His diet was horrendous. His fat intake must have been near 60% of his total caloric intake. He drank his milk all right, but to the tune of 2-3 gallons of whole milk per day, and devoured cheeseburgers like there was no tomorrow. This is absolutely the wrong way to go about getting big.

For my trainees that want to put on as much muscle as possible, I expect a fat gain, but one that isn't unhealthy.

What's unhealthy? For men I don't want their bodyfat level to exceed 20%. This is the absolute top end. You need to create a caloric overload if you expect to gain as much muscle as possible but – and this is critical – you still need to eat healthfully. Do not let your fat intake exceed 30% of your total caloric intake. And make sure you do aerobic work!

I cut Danny's calories to 3,000 per day and had him start performing aerobics at least two times per week. I changed his lifting program so that it used up more energy. This involved the use of high reps with shorter rest intervals. There are several ways to accomplish fat loss, depending on the trainee's goals, and current condition – this is just one method. I put Danny on the following program:

Workout A

1. Crunch: 2 x 30
2. Squat: 2 x 15
3. Close-grip bench press: 2 x 15
4. Supinated pulldown: 2 x 15
5. Static grip: 1 x 60 seconds

Workout B

1. Side bend: 1 x 15

*Danny bench pressing 255 pounds for 5 reps. Notice how high his chest is, due to great retraction of his upper*61

2. Deadlift: 2 x 15
3. Lateral raise: 2 x 20
4. Barbell curl: 2 x 12
5. Wrist curl: 1 x 20
6. Reverse wrist curl: 1 x 20

I don't have the space to go into it during this article, but performing high reps does not "cut up" your muscles. You can't "cut up" a muscle; all you can do is lose fat off the top of it so you can see the muscle better. The high reps simply make the body use more energy (in the form of glycogen) which, coupled with the right diet, makes your body metabolize fat for a long period of time following this type

of workout.
You'll also notice that Danny was not performing the bench press or any overhead work in this program. He developed severe shoulder pain in both shoulders during his "get big and fat phase" due to practicing a bench pressing technique that, in my opinion, is potentially dangerous for your shoulders. This technique involves forcing the bar way back after leaving the chest, to a point up and over your eyes. This causes impingement of the bicepital and supraspinatus tendons of the shoulder. Do not bench press in this way! See the second (and current) printing of THE INSIDER'S TELL-ALL HANDBOOK ON WEIGHT-TRAINING TECHNIQUE, and Stuart's article "Technique Improvement" in HARDGAINER issue #54 for correct bench press form. I've never personally witnessed anyone consistently bench press in the exaggerated fashion without incurring shoulder pain.
After several months of training using the routine just listed, which allowed his shoulders to heal, I taught Danny how to find his groove on the bench press. I had Danny lower the bar to his chest and just simply press it up. Where it ends up is his particular groove. Whatever you do as far as technique is concerned, don't go to extremes! After several months on the new program and diet, Danny lost 32 pounds, the sweating stopped, and his blood pressure returned to normal.
Danny was now ready to resume his quest to get as big and strong as possible. At this point he had come to realize his major fault – impatience – and was determined to correct it, with the resolve to never rush the process again.

The next 49 weeks

On September 7, 1997, Danny came on as a full-time consultation client of mine. Danny lives in Texas, not Indianapolis, so he could not train in my facility. I started him on the following program, listing only "live" sets:

Workout A
1. Crunch: 1 x 15, 15 lbs
2. Squat: 2 x 6, 250 lbs
3. Bench press: 2 x 15, 75 lbs
4. Supinated pulldown: 2 x 6, 125 lbs
5. Static grip: 2 x 60 seconds, 200 lbs

Workout B
1. Side bend: 1 x 10, 50 lbs
2. Sumo deadlift: 2 x 6, 255 lbs
3. Lateral raise: 1 x 15, 5 lbs
4. Barbell curl: 2 x 6, 80 lbs
5. Single-legged calf raise: 1 x 15, bodyweight
6. Wrist curl: 1 x 20, 80 lbs
7. Reverse wrist curl: 1 x 15, 20 lbs

Danny squating 360 pounds for 5 reps.

On October 1 and 5, 1998, Danny completed his 97th and 98th workout without missing a single session, and he was appreciating the value of consistency and patience. Here are his workouts on those two days:

Workout A
1. Crunch: 1 x 15, 114 lbs
2. Squat: 2 x 5, 370 lbs
3. Bench press: 2 x 5, 259 lbs
4. Supinated pulldown: 2 x 5, 224 lbs
5. Static grip: 2 x 60 seconds, 241 lbs

Workout B
1. Side bend: 1 x 5, 132 lbs
2. Sumo deadlift: 2 x 5, 410 lbs
3. Lateral raise: 2 x 15, 15 lbs

4. Barbell curl: 2 x 5, 109.5 lbs
5. Single-legged calf raise: 1 x 12, 97-lb dumbbell
6. Wrist curl: 1 x 20, 102.5 lbs
7. Reverse wrist curl: 1 x 15, 38 lbs

Danny does not train according to a seven-day-per-week time frame. He performs workout A on day one, rests one day, does 45 minutes of aerobic work on day three, rests a day, then does workout B on day five, rests a day, does his aerobic work again (day seven) rests a day, then repeats the process. His workouts are on an eight-day format. We've found this works best to allow him to recover from his workouts, maintain an active family life (a wife and two children) and a job that requires physical exertion. This sort of training schedule is one that will work well for many other people too.

Danny now weighs 250 pounds. He performs his aerobic sessions with no problems whatsoever, maintaining a heart rate of 140-150 beats per minute. His shoulder pain and high blood pressure are gone. He is big, strong and, most importantly, healthy.

Please recognize the mistakes you're making. Be totally honest with yourself. Then develop the fortitude to make the necessary changes needed for making progress. Then be patient and in a year you'll be happy with the results.

Strength Weekend 1999: Lessons to learn

From Hardgainer #60 – May/June 1999

This was certainly one of the best days in the fourteen-year history of my company. What made it so great was that the workouts performed that Saturday afternoon in Indianapolis – at The Total Fitness, Inc./HARDGAINER Strength Weekend 1999 – were filled with as much effort and concentration as I've ever seen (and that's saying a lot). The way these men supported and challenged each other, it was as if they had been training together for years. Here was a bunch of guys from different parts of the country, and with different backgrounds, family and job responsibilities, who had never met but who nevertheless were connected through the understanding of what it takes to deliver the results they want. They all understood the amount of effort and patience each had to put out to achieve their goals. What brought these men together was a search for a better way to train. They all had experienced the frustration arising from the lack of results produced by conventional methods of training. In their search they found HARDGAINER, and are all reaping the benefits of intelligent, progressive training. I'm going to give you some comments and observations on three men who came in for our first annual strength weekend. I believe there are many things you can learn from their experience.

Danny Skinner

Danny made the trip to Indianapolis from Dallas, Texas. There's a saying in Texas that goes "everything is big in Texas." Well one look at Danny and you can see the truth in this statement. He also had the personality to match. (After his deadlifts he said that he gets so hungry that he could "eat the rear end out of a dead rhinoceros.") This was the first time I'd met Danny in person. I've been professionally consulting with Danny for a little over a year, but have been giving him advice on and off for about three years. A couple of issues ago (issue #58) I did an article on Danny's journey. You may want to read it to get up to speed.

My first impression was "this is one thick guy." Danny's not your small-waisted type of physique, but that's not his goal. He's carrying some fat around the mid-section but he's very heavily muscled everywhere else. At just over 5-10, and 254 pounds, his quads measure over 30 inches and I taped his arms at just over 18 inches. His neck must be at least 19 if not 20 inches, and his chest around 52. Danny exudes power. This is a long way from the guy I first talked to who tipped the scales at 170 pounds.

When putting Danny through his workout the first thing I noticed was that his form was not as "clean" as Craig's or Kent's. I could have predicted this, as this was his first time getting hands-on professional instruction. Craig and Kent had already made two previous trips to my facility, and it really showed in their superior form.

I had to teach Danny to take one rep at a time. He learned that a set of 5 reps, for instance, needs to be approached as a set of 5 singles. I really believe that you have to take each rep one at a time to reap the maximum benefit from each. In my thinking, the goal of a set is not only to make your goal number, but to get the most benefit out of each rep. If a trainee is just rushing to get to that goal number, his technique can deteriorate very quickly. To put it another way, I believe that to get to the top of a ladder you have to concentrate and put maximum effort into each step. This almost guarantees that you'll succeed and get to the top. If on the other hand you try to rush to the top, barely touching some of the steps, there's a greater chance that you'll never make it because you'll be less efficient and possibly fall off the ladder.

Using Danny's barbell curl as an example, when he completed the concentric part of the rep he would lower the barbell till his elbow joint was completely open, touch his thighs, and immediately return to his contraction. The whole set was one continuous motion. By the time he got to rep three he had his hips starting to get into the act, swaying back and forth, gaining momentum with every rep, therefore taking some of the work away from the biceps.

Shannon (one of my strength coaches) dropped Danny's 6-rep weight by 15 pounds and had him perform the set correctly, by pausing between reps and then getting a full set of lungs before each rep. Danny couldn't believe how tremendous this set felt. When I picked him up the next morning to take him to the airport, he commented that his arms were sore and still felt "pumped up."

Dan Skinner benching 280 pounds for reps, at The Strength Weekend 1999.

The other fact that really stuck out was that Danny didn't know how to "get it up" before a set. Now I'm not implying that you have to run around the gym screaming to get "fired up" before a set; but you sure as heck can't go into a set as if you're having ice cream with your girlfriend. Getting stronger and hence bigger requires you to handle weights that you haven't handled before. These weights are going to try to beat you. It's a battle, a fight, a great challenge. You have to approach a set this way. Get "fired up" to win. Shannon did a great job teaching Danny how to summon up all his energy before entering the arena (the set). By the time Danny had completed his workout he had learned this lesson.
Although Danny is not interested in maintaining the "ripped" physique of a competitive bodybuilder, he definitely wants to keep any fat gain to an absolute minimum, and wants to keep his heart and lungs in good shape. So, twice a week Danny goes for a run on his treadmill for 45 minutes, maintaining a heart rate of 150 beats per minute.
Many people who are trying to gain weight omit aerobic work all together. In my opinion this is a big mistake. I know many of you think that aerobic work will take away from your workouts and also eat up calories that will prevent you from gaining weight. If aerobic work is implemented correctly, the above statement couldn't be further from the truth. Done properly it will actually *help* you to recover from workouts, and if you're eating properly it will not take away from your weight gain efforts. Here's the deal: If you're not doing your aerobic work, don't think for one moment – no matter how much weight you can lift, or how massive your muscles are – that you're in "good shape." Aerobic work is essential for the health of the most important muscle of the body – the heart. So, if you're not doing it, start today. There are no excuses. In issue #57 I wrote about how to implement aerobic work into your program.

Kent Masias

Kent (6-0 and 235 pounds) flew in from Denver, Colorado. I've been professionally consulting with Kent for about a year and a half. This was his third trip to Indianapolis, and to watch him work out made me proud to call Kent my student. When Kent first contacted me he said that he had terrible genetics and wasn't sure if his body was even capable of performing some of the most basic exercises. I remember watching the first video of him. His form was terrible on almost all the exercises. He was also performing the Trap Bar deadlift while standing on an elevated surface, because he read somewhere that his bodytype couldn't perform the regular deadlift, and should instead do elevated Trap Bar deadlifts. This advice turned out to be false, and really shouldn't have been given in the first place unless an *expert* coach had seen Kent in *person*, in the gym, training.
As a result of the wrong advice, Kent didn't even try to deadlift with a barbell (or Trap Bar) from off the ground. But he kept injuring his back and didn't know why. When I observed his performance of the elevated Trap Bar deadlift I could feel my back starting to hurt. His low back was completely "rounded," which compromised not only his low back muscles but the vertebral discs as well.
Don't trust some arm chair theoretician's writing in a book or magazine. Become your own best coach. Get Stuart's technique book and study it, and practice it. Try the different basic exercises to find out which ones work best for you. With minor adjustments you'll find out you can perform almost any exercise in that book.
Upon working with Kent during his first trip to Indy, it turned out that, as he suspected, he doesn't have the best genetics in the world (length of levers in this instance), *but* we discovered he can perform *all* the basic exercises regardless. And much to his surprise, he happens to be especially made to *sumo* deadlift!
Kent has worked so hard on his technique that, on his third visit here, it's near perfect. He's also learned to harness and channel all his aggression into that perfect technique. Whenever a consultation client comes in for the first time, one of the most important things that they learn is to put out maximum effort. Well, Kent latched onto that right away, but in the subsequent videos that I received I watched his aggression *but lack of concentration* destroy his technique and produce injuries. Over the next year or so, after recovering from several injuries (and another trip to Indy), he dedicated himself to perfecting technique while maintaining a maximum level of effort. Upon witnessing his latest workout here, I can say Kent has done just that.

Kent Masias sumo deadlifting for reps with 350 pounds, at The Strength Weekend 1999.

At the time of his 1999 visit, Kent was into his 25th straight week of training injury-free and while handling the heaviest weights he has ever lifted. By the way, Kent also does aerobic work two or three times per week for 45 minutes each session.

Craig Rasmussen

In issue #55 I wrote an article on Craig titled "Fifty-Two Weeks of Training." It documented his completion of fifty-two weeks of training without missing a single workout. He actually completed seventy-four weeks till he came down with the flu. He missed two workouts – one week – then started another run which is currently around thirty weeks. So, in 105 weeks of potential workouts that I've been consulting with Craig, he has made 104 – that's 208 workouts out of a potential 210. Now, that's what I call consistency. The results for this kind of effort speak for themselves.

When I first started working with Craig he tipped the scales at 180 pounds (at 6-1). At The Strength Weekend he weighed in at 247 pounds. I accurately measured his arms, cold and flexed, at 18 inches. (After his curl workout they were half an inch bigger.) His chest – not inflated, and lats not flexed – taped at 50 inches. He has a 19-inch neck (not flexed). His legs taped at 29, with a 36-inch waist. When you first see Craig you think "bodybuilder."

As with Kent, watching Craig was rewarding. This was Craig's third visit to Indy also. He has learned to summon all his effort into every live set that he performs. For the duration of his entire workout he's imbedded in concentration. His form is near perfect. But, even after two years of dedicated training (and my consultations), there are still things he learned from the weekend. One was his performance of the single-legged calf raise. The problem with this movement is that it seems so simple to perform – you go up and down on your toes, right? Wrong. That technique makes it too easy to get momentum going and stealing the effects from the movement.

Here's how the one-legged calf raise should be performed: First of all you need to stand on a elevated surface. I recommend a height of 1.5 inches. Most of the time, a 25-pound Olympic plate works perfectly. Put the plate near an upright (for example a power cage/rack) that you can hold onto with one hand. Position yourself so that the ball of the foot is on the plate. Lock your hanging leg behind the Achilles tendon of the leg you're going to work. Now here's the most important part. On the leg you're working, flex your quad and keep it flexed throughout the entire set. This technique will lock your knee back and put all the stress on the calf. (Unless you can hyperextend your knee, this technique is safe – do not hyperextend your knee.) Locking your knee prevents you from doing a "mini-squat" to get to the top when the reps get tough.

At the top of the movement, don't just pause, but actually try to extend just a millimeter higher. This does look like a pause, but you really need to try to get higher. Then lower slowly till the heel just touches (not bounces off) the floor, then drive to the top – while keeping the knee locked – and then again squeeze for the extra millimeter at the top. To accomplish this we had to drop some 50 pounds from the weight Craig was using. He was wondering why his calves (at 17 inches) weren't responding as well as the rest of his body. The reason? He wasn't using great technique.

The decision to lose Fat

Craig and I had decided that we would check his bodyfat when he came in. Craig felt that he was getting to the point where his bodyfat was getting too high. I measured it at 17%. My ceiling for bodyfat for someone who is trying to gain as much mass as possible is 20%. If one of my trainees does push this envelope, I make sure that during the "climb" to this level, aerobic work is performed consistently to keep the heart and lungs are in good shape. Craig decided that he now wanted to drop some fat, and then start another "build-up" phase. Personally I would have had him keep gaining up till about 19%, but with an increase in his aerobic work (what's known as "low-level aerobic work") to three times per week.

To accomplish this fat loss I've increased his rep goal to 10 on all his big basic movements, while still adding a little iron to the bar every workout. This rep target was chosen simply to help expend more energy during training. I've also increased his aerobic work to 3-4 days per week -- 1 day for mid-level aerobic work, 2 or 3 days for low-level aerobic work. I've also decreased his caloric intake by 500 calories per day. As Craig starts to lose fat we will slowly decrease this further.

Craig Rasmussen coming up with 390 pounds from 2 inches below parallel.

Just like gaining as much mass as possible takes patience, so does losing fat. You sure as heck don't want to lose muscle during the fat-loss process. With the approach that Craig adopted, he should actually gain some muscle as long as he stays progressive in his weight training.
Our goal is to get Craig to about 225 pounds by September. This 27-pound drop in fat should put his bodyfat at about 10%.
There's quite a misconception about percentages of fat that equate to a lean physique. You may have heard or read that you need to get to below 5% to be "cut." The truth is that a *true* bodyfat level at around 10% has no really visible fat. In a future article I'll write about what it takes to lose the fat and still gain muscle.

The final message

The last point I want to make about The Strength Weekend is that all these "big" men achieved their gains while training two times per week, on basically the same routine. As I've said many times, what produces results is adding a little weight to the bar every workout for a long period of time.
Even though these men have achieved great results, they are all basically just beginning. They have only been training properly for two years or less. Imagine what they're going to look like in another two years. At that point it will only be four years of proper training. How about in ten years? See, these men have mastered patience and true dedication. You could also receive tremendous results in the next year or two if you stay dedicated to the basics of good form, hard work, a little iron to the bar every workout, training two times per week, an abundance of good food, aerobic work, and consistency.
Danny, Kent and Craig, and two other consultation trainees, are planning to come to Indy in September. I'll give you another update on their progress then. That's it for this issue. Once again, ***enough talk – let's get to work.***

Craig Rasmussen "Updated"

From Hardgainer #70 – January/February 2001

It's been a while since I've written about any of my students. I thought I would give you an update over the next few issues on students I've previously written about, to share with you the various lessons learned. I'm going to start with Craig Rasmussen.

Craig has been a consultation client for three years and eight months to the day of this writing. I wrote an article on Craig entitled "Fifty-Two Weeks of Training" (issue #55), and also mentioned him in another article entitled "Strength Weekend 1999: Lessons to Learn" (issue #60). In that first article I chronicled Craig's first year of training under my guidance.

To get the full details you'll have to read those two articles, but I'll provide a summary. Here's his first program, which was performed twice a week on Wednesdays and Saturdays, started late February 1997.

Workout A (started 26 February 1997)

1. Crunch: 1 x 15, 35 pounds
2. Squat: 2 x 15, 45-pound bar
3. Stiff-legged deadlift: 1 x 15, 65 pounds
4. Bench press: 2 x 5, 185 pounds
5. Supinated pulldown: 2 x 5, 115 pounds
6. Static grip: 1 x 60-90 secs, 100 pounds

Craig is genetically gifted with long fingers relative to his forearm length. This helps him to excel at gripping. Most trainees have to start with 35-40 *pounds in the static hold.*

Workout B (started 1 March 1997)

1. Side bend: 1 x 15,30 pounds
2. Sumo deadlift: 2 x 15, 45-pound bar
3. Standing military press: 2 x 5, 95 pounds
4. Barbell curl: 2 x 5, 75 pounds

There was nothing special about the program – just basic stuff. What made it special (and made it work) was that Craig was progressive and consistent. If you think you've been consistent in your training, I challenge you to match it against the following. In his first year, Craig completed 104 workouts in a row, without a miss – twice a week, just like clockwork. Craig isn't an "oddity" when it comes to consistency, at least not with the clients that I consult. Many of my clients make one year of consistent training. Anyway, in that time Craig went from 180 pounds to approximately 210. He actually went on to make 74 weeks of training without missing a single workout. That's 144 progressive workouts in a row!

At the 74th week mark he tipped the scales at 223 pounds. The only changes I made to his program during this time were the additions of an exercise for his external rotators, calf work, and some additional work for his wrist flexors and extensors. *His workout remained virtually unchanged for almost a year and a half* This is what it looked like in February 1998.

Workout A

1. Lying L-fly (for the external rotators): 1 x 20, 11 pounds
2. Crunch: 1 x 10, 101 pounds
3. Squat: 2 x 5, 280 pounds
4. Stiff-legged deadlift: 1 x 10, 257 pounds
5. Bench press: 2 x 5, 259 pounds
6. Supinated pulldown: 2 x 5, 231 pounds
7. Wrist curl: 1 x 20, 78 pounds
8. Reverse wrist curl: 1 x 20, 22.5 pounds

Workout B

1. Lying L-fly: 1 x 20, 11 pounds
2. Side bend: 1 x 10, 90 pounds
3. Sumo deadlift: 2 x 5, 302.5 pounds
4. Military press: 2 x 5, 149 pounds
5. Barbell curl: 2 x 5, 112 pounds
6. One-legged calf raise: 2 x 10, 40 pounds

7. Static grip: 120 pounds x 72 secs

Craig was finally forced to take a week off after coming down with an illness. He missed two workouts then started another streak that lasted about 30 weeks. At this time he put together a gym in his garage, so I had to change a couple of exercises due to lack of equipment. I put him on the following program. The weights listed are the ones he was using 30 weeks later. Since he'd been sick for a week, I started this program with weights that were approximately 85% of what he'd been using

previously. Some of the new exercises were started from scratch.

Workout A

1. L-fly: 1 x 20, 16 pounds
2. Crunch: 1 x 5, 148 pounds
3. Squat: 2 x 5, 315 pounds
4. Bench press: 2 x 3, 286 pounds
5. Dumbbell row: 2 x 5, 103 pounds

Workout B

1. Lying dumbbell triceps extension/press: 2 x 8, 40 pounds
2. Lying posterior delt fly: 1 x 15, 11 pounds
3. One-legged calf raise: 2 x 8, 71 pounds
4. Static barbell grip: 2 x 60 seconds with 226 pounds
5. Horizontal back extension: 2 x 5, 39 pounds

Workout C

1. Side bend: 1 x 5, 130 pounds
2. Sumo deadlift: 2 x 5, 345 pounds
3. Military press: 1 x 3 with 165 pounds, and 1 x 8 with 141 pounds
4. Barbell curl: 1 x 3 with 117 pounds, and 1 x 8 with 96 pounds

As you can see, we went to three workouts per week. I added one workout specifically devoted to assistance work for Craig's weak points. When the assistance workout started to push him, we went back to two workouts per week, thus rotating the three routines over two workouts each week, e.g., A on Monday, B on Thursday, C on Monday, A on Thursday, etc.

Craig wanted to try back extensions instead of stiff-legged deadlifts, and found the former to be much more beneficial for his lower-back strength. He performed a type of "triceps extension." This isn't what many of you know as a traditional triceps extension which can be very hard on the elbow. It's a "hybrid" exercise that's very easy on the elbow joint.

The "lying posterior delt fly" is performed while sitting on the end of a bench. The torso is bent over until the chest and abs are resting on the thighs. Dumbbells are held in each hand. The arms are hanging straight down from the shoulders. While keeping the arms straight they are lifted out to the sides till the arms are parallel, or higher, in relation to the floor. It's used in the "mainstream" bodybuilding world to "isolate" the rear delts. That's not the reason I utilize it. I've taken an exercise from the field of physical therapy to improve the functionality of the posterior shoulder girdle. I utilize this movement to help with retraction and stabilization of the glenohumeral joint – for the bench and military press. It helps the trainee to "pin the shoulders back." It does a tremendous job when rowing isn't getting the job done by itself. Most trainees (especially beginners) don't need it – rowing or some form of pulldown/pullup will do the job.

You'll also notice that on a couple of the exercises I had Craig do one set of low reps followed by a set of higher reps. I wanted him to experience this, as I've had great success with this on intermediate level trainees. The "back-off" set of higher reps helps to create more hypertrophy. This in turn provides more muscle tissue for the lower-rep set to innervate. As you can see from the weights he was using on the big basic movements, he continued to make steady progress.

This brings us to the end of January 1999. Craig flew in to Indianapolis at this time, so I got to see first hand his transformation after 23 months of training. At 6-1 and 247 pounds I measured his arms at 18 inches, his chest was over 50 inches and his legs 29. These measurements were performed without any "pump." The leg measurement made him chuckle because after many years of squatting (incorrectly) his legs were still very skinny, so he thought he would have "bird legs" all his life.

So, in about 23 months of training Craig had gained over 60 pounds. His bodyfat was 17%. This indicated that Craig was carrying 42 pounds of fat and 205 pounds of lean body mass. Lean body mass is the composite weight of muscle, water and bone mass. It's used as the indicator to determine if a trainee is gaining or losing muscle. I'll come back to the significance of these numbers later. At this time he decided to drop bodyfat but wanted to continue getting stronger, with an eventual goal to compete in a powerlifting meet in the fall of 1999, at a weight under 220 pounds.

In the light of his new goals, I made some adjustments to his program. I increased his rep target on all his big basic movements to 10, with the goal (as always) of adding a little iron to the bar every workout. This rep target would help him expend more energy while he was training. I increased his aerobic work to 3-4 days per week, and decreased his caloric intake by 500 calories per day (from approximately 6,000, down to 5,500) for the first several weeks. As he lost fat I would slowly drop the caloric intake further. At the start of September I would drop his reps (to 5, 3, and then singles) in preparation for the powerlifting meet.

The update

Approximately nine months after his "fat-loss" decision, Craig tipped the scales at 217 pounds. His weight-training program remained virtually unchanged except for the rate of poundage progression on

the bar – which I slowed down – and his training rep range (which as, I mentioned earlier, was increased to expend more energy and then, later on, was decreased to prepare for the powerlifting meet). The greatest modification, however, was in his diet (slowly decreasing his caloric intake) and an increase in his aerobic work. His strength continued to increase throughout his weight-loss period. So, everything was going great (so I thought).

At this time Craig made his fourth trip to Indianapolis. At first sight I knew everything hadn't gone as "great" as I'd thought, and his bodyfat test confirmed it. I measured him at 13%. This represented a 14-pound loss of fat *but* it also indicated a 16-pound loss in lean body mass. Realistically, of this 16 pounds, 2 or 3 were water, which left about 14 pounds. In other words he'd lost muscle – about 14 pounds! Craig looked "cut," and still had plenty of muscle tissue (his arm measured about 17) – but he could have done better, *much* better. He shouldn't have lost any of that hard-earned muscle.

I had to get to the bottom of this. Craig confided in me that he hadn't followed the dietary recommendations, and believed that he cut his calories too much, too fast. Some of you may be wondering how his strength went up while he lost muscle. The answer is innervation. Even though he was losing muscle, his nervous system was becoming more efficient and was learning to recruit more of the muscle that he had. Most of this took place during his contest preparation, when I lowered his training rep range. Another reason was that he maintained a good protein intake, and was very consistent in his training.

Another thing which was interesting was that up to this time in our relationship, Craig had suffered only one injury – a minor one. He sustained a minor quad pull in his 21st month (which could have been avoided with more concentration on his stretching). This, along with the fact that he completely transformed his strength and physique in less than two years, is a testimony to utilizing proper progression and great technique. *But,* as I mentioned earlier, he could have done much better if he'd gotten all the elements of successful training right (namely his eating, stretching and aerobics).

The powerlifting meet

Craig did very well at his first meet despite all that he could have done better during his weight-loss program. Our goal at the meet was to complete all attempts, abiding by the strictest of powerlifting rules. Specifically, we wanted to make sure his squats were well below parallel and that he benched with a "dead" pause on his chest. I made sure that Craig was not under any illusion about the amount of weight he would lift. Our goal was to improve on his previous bests (which were performed at a much heavier bodyweight).

In retrospect, I may have been too conservative with his attempts, for after witnessing his performance he could have lifted much more. Craig squatted 420 pounds (if he'd another attempt I'd have had him try 440), benched 315 pounds, and deadlifted 460. The 460 was so easy he could have done 3 reps with it. So, with the strictest of form, in a competitive environment, Craig reached two of three of his long sought after goals (which are the goals Stuart had first set out in BRAWN) – a 300-pound bench press and 400-pound squat. He also came very close to getting number three, a 500-pound deadlift.

As a side note, let me mention that even though I know he could have lifted more, if we did it over again I would have him attempt the same weights. Almost all powerlifters make the mistake of going to their first meet with false hopes of lifting weights they couldn't complete even in their dreams. By playing it conservatively and making all the lifts, the first-time powerlifter leaves the meet feeling a great sense of accomplishment and really looks forward to the next meet.

Up to November 1, 2000

After the meet we discussed Craig's goals for the coming year. He really enjoyed the contest and wanted to enter another. He wanted to compete in the 220-pound weight class, and to stay lean for his upcoming wedding. So, this meant keeping his weight down while trying to get as strong as possible. This can be done (as Craig did before – albeit incorrectly), but it's much more difficult to do (verses gaining weight and getting stronger) and the trainee increases his risk of injury and illness.

I don't like recommending that any trainee try to do the above combination for a long period of time (several years), because there comes a point when, I believe, the body can no longer keep innervating its current level of muscle mass. So, if the trainee is already very lean (and therefore can't replace fat with muscle), and won't or can't gain new muscle tissue (due to weight classification in a sport), gains will stop. Also, due to the lack of essential calories, injuries and/or illness generally occur.

There are techniques (manipulation of rep ranges, partials, dynamic training, etc.) that one can use to try and sustain progress in the strength department while maintaining a lean physique and without a gain in muscle mass. But, in my experience, these stop producing results after awhile.

Don't misunderstand me here. I'm not saying that every trainee has to gain 30 pounds in a year to make sustainable long-term progress. What I'm saying is that, there has to be some addition of muscle tissue (as little as a half pound per month, which on a low-fat physique will show on the scale) to continue to get stronger past a certain point. For instance, I'm currently training a client who has very

low bodyfat and who doesn't want to gain anymore bodyweight. He has gained only 8 pounds, yet has gotten much stronger over the two years under my tutelage. This trainee understands and accepts the fact that his strength progress is going to be painfully slow relative to the trainee who wants to gain muscle mass *and* bodyweight. But if someone has 10 pounds of fat to lose and can replace it with muscle tissue, then this trainee can stay at the same bodyweight and continue to get much stronger but with a smaller risk of injury or illness.

You can probably guess what all this is alluding to. Over the last 12 months or so Craig was plagued with several injuries and became ill much more than usual. These events disrupted his training consistency on several occasions. If you can't be consistent, you can't make progress. On his wedding day (a little over a month ago from the day of this writing), Craig tipped the scale at 214 pounds. He'd lost quite a bit of strength since he'd just recovered from another bout of illness. This was a far cry from the 104 weeks of consistent training that Craig was used to.

Lessons learned

Here are the main things that Craig learned during the three years and eight months under my guidance, in Craig's words.

I've had some great experiences and learned a tremendous amount in the last three years and eight months of my weight training journey. I would like to highlight some of the major things I've done which have been "right" and also those things that I've done which have been "wrong," in the hope that all this will help others achieve success and avoid making the same mistakes I did.

Major things I did right

1. *Consistency:* In weight training, consistency is everything. *Don't miss workouts.*
2. *Progression:* Weight was added at a rate my body could adapt to, using single progression.
3. *Form:* I learned and practiced proper biomechanical exercise technique.
4. *Effort:* I learned to demand full effort from myself in each workout.

Major things I did wrong

1. The major mistake (I'm ashamed to admit) happened twice – once while I was gaining, and also when I was trimming down. That mistake was not monitoring my calories closely enough, and eating too inconsistently. If I'd done a better job of keeping tabs on my calories, I know I'd have done even better when gaining bodyweight (gained more muscle tissue) and would not have lost as much muscle when trimming down. I certainly don't plan to make this mistake again. *Keeping tabs on your calories is critical.*
2. The other major thing I did wrong was that I didn't do my aerobic work on a consistent basis. In fact, I did none at all for the first year and a half, and only very sporadically after that point up until the point I got to 245 pounds. John had stressed the value of aerobic work on a couple of occasions, but for some reason I didn't think it was that important and I never really followed up or asked John much about them. He'd always assumed I was doing them on a consistent basis. I was under the mistaken belief that any aerobic work would not allow me to gain muscle, and would hinder my strength and size gains, so I simply didn't do them. This was a big mistake and I really heard it from John when he asked how my aerobic program was going. He broke it down and explained the importance of a *proper* amount of aerobic work and how it would actually aid my recovery and minimize fat gain, along with other benefits. I then began an aerobic program, started to see these benefits, and realized how much of an error I'd made. In my next building cycle, aerobics will be a vital part. *Aerobic work is a huge aspect of a total program.*

The future

Craig wants to gain as much mass and strength as possible for the next year. Here are his goals for December 31, 2001:

1. Bodyweight: 250+ pounds
2. Military press: 220 pounds
3. Bench: 350 pounds (with legal pause)
4. Squat: 500 pounds (belt only)
5. Deadlift: 550 pounds (belt only)
6. Perform two low-level aerobic sessions per week for one hour each.
7. Perform one mid-level aerobic session (running) per week for 30 minutes.
8. Track caloric consumption on a consistent basis.

Throughout the next six issues of HARDGAINER I'll give you updates on his progress. These will include his training weights on the lifts mentioned above, his routine, caloric intake, bodyweight and bodyfat percentage. This will give all HARDGAINER readers a chance to "witness" the effects of single progression, combined with a nutritious diet and consistent aerobic work. I know the basics deliver results every time, and I've no doubt that they will deliver again this time, *so long as they are implemented properly.* So, I challenge you to recommit yourself to your total training program – as ***Craig has – and I welcome you to travel through a productive year of training.***

Craigs Vision quest

Authors note

This article is a compilation of a series of updates that I wrote on Craig chronicling one year of training. Throughout the year, at the end of various articles, I gave readers updates on his progress including his routine, training weights, calorie intake, and bodyweight and body fat percentage. This gave readers the opportunity to see the effects of Micro-loading, combined with a nutritious diet and consistent aerobic work over a one year period. It will also show you how to handle your training when life doesn't go as you plan. This “vision quest” series began after I penned the article Craig Rasmussen- Updated.

The vision quest part 1

Craig wants to gain as much mass and strength as possible for the next year. Starting at a bodyweight of 215 pounds, these are his goals for December 31, 2001:

1- Bodyweight 250lbs +
2- Military press: 220lbs
3- Bench: 350lbs (with pause)
4- Squat: 500lbs (belt only)
5- Dead lift: 550lbs (belt only)
6- Perform 2 low level aerobic sessions per week for one hour each
7- Perform one mid level aerobic session (running) per week for 30 minutes
8- Track calorie consumption on a consistent basis

The Vision Quest Part 2

As mentioned in the previous issue, I'm going to give regular reports on Craigs progress. Craig got his body fat measured at 15% at a weight of 219lbs. If you're thinking, “That guy is fat!” let me assure you he isn't. You can plainly see his abdominal musculature. In the real world of body composition measurements., a body fat percentage of 10 or less produces a “look” that all trainees would call “ripped”. As opposed to the lie that is propagated in the steroid filled world of the glossy muscle mags where, to be considered “ripped” you need a body fat less than 5%. Craig had the test performed at the University of Southern California. The person, who administered the test, has tested hundreds of athletes from its prestigious athletic teams commented that most male athletes fall between 10% and 20%. He used the hydrostatic weighting method, which is considered the “gold standard”, although its margin for error is plus or minus 3%. If you figure this out, Craig could be as low as 12% or as high as 18%. The reason I'm explaining this is that I'm not so much interested in determining precisely what his body fat truly is, but more so as a relative means of determining how much muscle and fat Craig will be gaining over the next 52 weeks.

Here's the program I've had Craig on for the past five months. He was coming off a period in which he sustained several injuries and bouts of illness. I started this cycle with rep targets in the 10-15 range on the big basic movements to re-establish his motor skills, and recondition his tendons and ligaments for the heavier training to follow. Since then I have brought him slowly down to a 6 rep target.

Workout A
Lying L fly 1x20 15lbs
Crunch sit-up 1x6, 114lbs
Squat 2x6, 300lbs
Stiff legged dead lift 1x12, 265lbs
Bench press 2x6, 220lbs (one second pause on chest)
Chin 2x6 BW+19lbs
Static barbell hold 2x60 seconds, 219lbs
Finger extension (in rice filled bucket) 1x15
**Reverse calf raise 1x20, 54lbs

Workout B
Side bend 1x6, 109lbs
Sumo Dead lift 2x6, 340lbs (with pause on floor)
Military press 2x6, 135lbs
Barbell curl 2x6, 100lbs (pause at bottom with no elbow movement)
Close grip bench press 1x6, 200lbs (with pause on chest)
Single leg calf raise 1x15, 25lbs

Wrist curl 1x15, 76lbs
Reverse wrist curl 1x15, 30lbs

** The reverse calf raise is for the tibialis anterior muscle on the front of the shin. I have students perform it to rehabilitate or prevent “shin splints”. The success rate with this is nearly 100%. The exercise is performed with the trainees head, back and glutes against a wall. The feet are about 6-10 inches apart. With the quads flexed, the trainee lifts his toes as high as possible while pivoting on his heels. The toes are held for a second at the top, and slowly lowered to the floor.

This program is to increase his muscle mass and relative strength which will prepare him for the next program which will be designed to keep increasing his mass but will focus on the development of his absolute (one rep) strength. In the next issue I'll explain that program in detail; it employs Micro-loading in a unique way.

The vision Quest part 3

Craig is now up to 234lbs. I have him performing a cycle that alternates weeks of using five, then three, the single rep targets on the squat, bench press, supinated grip chin, dead lift and military press. He Micro-loads appropriately, adding to the weight that he used during the previous week in which he had the same rep target.
Here are his current 5 rep numbers as of April 18, 2001:

Workout A
L-fly 15lbs x20
Crunch 145lbs x5
Squat 330lbs x5
Stiff legged dead lift 305lbs x10
Bench press 237.5lbs x5 (performed with a pause on the chest)
Supinated grip chin bodyweight +33lbs x5
Static barbell hold 230lbs x60seconds
Finger extension 1x15 (in a bucket of rice)
Reverse calf raise 35lbs x20 -Had to lower weight from previous workout to work on technique

Workout B
Side bend 120lbs x5
Sumo dead lift 372.5lbs x5
Military press 145lbs x5
Barbell curl 112lbs x5
Close grip bench press 215lbs x6
**Hip belt calf raise 200lbs x10
Wrist curl 90lbs x15

**Craig switched from single leg calf raises to the hip belt calf raise so that he can work on both calves at the same time. This was done to prepare him for using a calf raise machine that was to be delivered at a future date

In my next article I'll give you an update on Craigs body fat level, and break down the composition of his bodyweight gain.

The Vision Quest part 4

Craig is now up to 238lbs which represents only a 4lb gain in the last 8 weeks. He's not eating as he should be or he'd be up at least 8 lbs. He's doing well otherwise, as his strength in all his lifts continues to climb. Although I'd stated in the last issue that I would update you on the composition of his weight gain, I've delayed that till he gains more weight:

I've asked Craig to write up a little piece on his view of things so far. Here it is:

Its a little over the half way point of my personal “vision quest” and I'm pleased with the way that things have gone thus far. I've found the program of rotating weeks of five reps, then threes, then singles to be a fascinating way to train. I find that I'm very motivated and excited to break my old personal records every

time I enter my gym to train. I would like to discuss what I feel I've done well so far, and what I've struggled with, to this point.

The good news thus far is that I'm very motivated to train since I'm very focused on my goals- I've them written down and posted on a board in my garage gym- and I'm giving my all in trying to attain them. I feel I'm doing a very good job in maintaining proper biomechanical technique in my exercises, which is imperative as the weights get heavier and heavier and heavier. Incidentally, I've remained completely injury free, which I'm very happy about as I was slightly concerned that the severe hamstring pull I suffered in a flag football game quite some time ago may rear its ugly head and give me some trouble. I'm being very confident in my flexibility, weight training and aerobic work. I've been very happy with my training weights as they continue to climb steadily.

The single progression approach (using micro-loading) has been the backbone of my training, as its been simple and very effective in allowing me to add more and more weight to the bar on a regular basis.

John and I have talked about how effective single progression and micro loading has been, and we've also discussed some very important things to be aware when using it.

Don't become complacent when using single progression, that you limit your progress. For example, lets say that you're adding a pound a week on your bench press (say you're performing 2 sets of 6 reps) and you're past the early build up part of a cycle. Perhaps you could have handled a couple of increments of possible 5 pounds each in your last two workouts as you've been “rewarded” by your body with this strength increase. A one pound increment would not be enough, and you should have added more weight so that you receive the stimulation that you should be getting. How do you know that a single pound was not enough? If rep was not almost impossible to complete, and you have reserve reps in you, you know that you could have added more weight. John has, on occasion had me try to take extra reps above my prescribed reps, to see if I have any reserve reps in me, and to find out if I should be adding more weight. If I do have extra reps, I add a larger “chunk” of weight next time.

I know that I must stay focused, buckle down and pay extreme attention to putting out full effort and concentration in the next six months if I'm to reach the goals I've set. All in all I feel that I have all the components of my training program down pretty well./ The bad news to this point is that I'm still struggling with something that has plagued me throughout my entire weight training career more than anything else- my eating patterns. This is one area that I struggle to be consistent in. The only excuse that I can give is pure laziness and thinking that I can make up for it later- which of course, I can't!

At this point, I finally am giving the same kind of effort to keeping records in my caloric intake log as I do my training log. I wrote down all the different types of meals that I could eat in order to quickly track my calories. Of course, I could make adjustments to those meals as needed. It actually sounds like much more work than it is. Its simply a matter of sitting down and taking a few minutes to do it. If you work out two meals a day for a week, you'll have fourteen meals referenced (assuming that you have that much variety in the meals that you eat). In the future you'll only have to do any major calculations of foods you don't already have in your log, which should be a few. This makes calorie counting east, and it will make tracking your calories in the future much less of a chore. I'm greatly looking forward to the challenge of the next six months.

I was recently sitting around with some friends and one of them was reading a book of quotes. One of my friends mentioned a quote that I really liked. The quote was, “desire will only take you as far as dedication will allow”. A very simple quote, but very true.

The path to getting bigger and stronger is not complicated. For all of you who have tried multiple programs and have gone nowhere in the last couple of years, quit wasting time. I suggest you pick a good program that focuses on making you stronger, thus bigger, and stay with it for at least six months.

The Vision quest part 5

Sometimes life just throws you a curve ball.

Craigs vision quest was interrupted in the early fall when he suffered a severe ankle sprain while playing softball. Due to this injury, Craig couldn't do any form of squatting or dead lifting for 8 weeks, and he couldn't perform any aerobic work. This caused a loss of muscle in his lower body, and interrupted his caloric overloading as he didn't want to continue with a caloric intake that, without lower body weight and aerobics, would only produce a large fat gain.

Here's how he ended the year:

Height 6-1

Weight 245lbs (goal was 250+)
Bench press 310lbs (goals was 350lbs)
(with pause on chest)

Military press
(started with pause
on chest) 179lbs (goal was 220)
Strict barbell curl 145lbs

One rep strict chin bodyweight plus additional 78lbs

Squat and dead lift are back
in the build up stages easy 300lbs for 10

His training on all these lifts was hampered by the ankle injury. He had to take time off from training these due to the fact that he couldn't put any pressure on that foot which, even though these are “upper body” exercises, they still require the trainee to “push” with hi legs

Even thought this injury all but ended his Vision Quest, he has maintained a great attitude, is working hard to heal his ankle, and has continue with some upper body work. It has also strengthened his resolve for the next year of his training.

Jon Anderson "Updated"

From Hardgainer #73 – July/August 2001

My first article on Jon appeared in issue #50 (September-October 1997). As of the time of this writing it's April, 2001, so a few years have passed since that first article. I'll give you a brief rundown of that first article and then bring you up to date on Jon's progress, and most importantly the lessons he learned on the way.

I started working with Jon in July of 1996. He was a 21-year-old college baseball player who had aspirations of becoming a professional. As a former professional baseball player I knew, as he did, that it would be difficult to get "noticed" at 5-10 and 170 pounds. The average size of a pro catcher is 6-2 and 225 pounds. So, we went to work to make him bigger and *functionally* stronger. Just to make Jon bigger and stronger, without regards to the skills (functions) required by his sport would only hinder his progress as a baseball player. Here's his first program which started on July 5, 1996:

Workout A

1. Crunch: 1 x 20 (20 pounds)
2. Squat: 2 x 8 (135 pounds)
3. Bench press: 2 x 5 (105 pounds)
4. Supinated-grip pulldown: 2 x 5 (120 pounds)
5. Single-leg calf raise: 1 x 20 (50 pounds)
6. Static grip: 1 x 60-90 seconds (45-pound dumbbells for 60 seconds)
7. Internal and external shoulder rotation

Workout B

1. Side bend: 1 x 15 (30 pounds)
2. Sumo deadlift: 2 x 5 (135 pounds)
3. Military press: 2 x 5 (65 pounds)
4. Barbell curl: 2 x 5 (60 pounds)
5. Wrist curl: 1 x 20 (60 pounds)
6. Internal and external rotations

To make sure the new muscle and strength Jon was developing would help him as a baseball player, he performed skill work (hitting practice, throwing, running), medicine ball work and stretching throughout the program. I also had him slowly increase his caloric intake to 4,000 calories per day via five to six "feedings." Eight months later, at a bodyweight of 205 pounds, he completed the following:

Workout A

1. Crunch: 1 x 20 (75 pounds)
2. Squat: 2 x 5 (315 pounds)
3. Bench press: 2 x 5 (197.5 pounds)
4. Supinated-grip pulldown: 2 x 5 (192.5 pounds)
5. Static grip: 1 x 75 seconds (95-pound dumbbells)

Workout B

1. Side bend: 1 x 15 (110 pounds)
2. Sumo deadlift: 2 x 5 (300 pounds)
3. Military press: 2 x 5 (100 pounds)
4. Barbell curl: 2 x 5 (103 pounds)
5. Wrist curl: 1 x 20 (122.5 pounds)

So, you're probably wondering how 35 pounds bodyweight, and a big increase in overall strength affected his playing abilities. Jon finished the 1997 season hitting .380 with 2 homers and 4 triples. He also registered a reduction in his throwing time to second base (which is an indication of an increase in arm power). These statistics show an increase in performance over his previous season.

Now, I'm sure many of you are thinking "those statistics aren't that great for such an increase in strength, particularly in the home run department." You're right, *but,* as I've always said, change takes time. Jon had a few friends and family members that also started questioning the reasoning for what he was doing. Jon, though, had faith that it would take some time for his body to adapt its new strength and size to the particular skills of baseball. He also had faith in me.

The update

Throughout the 1997, summer baseball season, Jon continued to strength train and continued to make subtle improvements on the field-nothing earth shattering yet, but I could see that Jon was starting to convert his strength to his skills on the field. His program wasn't much different to what he was doing before. The only differences were a reduction in training volume – only one live set per exercise – and on Workout B we replaced the deadlift with lower-body *conservative* plyometric work, box hops, and dropped the military press and instituted medicine ball work for his upper body.

Only the choice of plyometric exercises, and the total volume of plyometric work, was conservative

relative to what a lot of other strength coaches recommend. Jon's effort on the plyometrics was anything but conservative.
When the season ended, I designed the following program, listing work sets only – warmups are additional:

Workout A

1. Crunch: 1 x 5
2. Squat: 2 x 5
3. Bench press: 2 x 5
4. Seated row: 2 x 5
5. Static grip: 1 x 60 to 90 seconds

Workout B

1. Box hop: 2 x 10
2. Forward abdominal throw: 2 x 10
3. Side abdominal throw: 2 x 10
4. Chest throw: 2 x 10

(I described the latter four movements in detail in issue # 65)

5. Side bend: 1 x 5
6. Leg curl: 1 x 10
7. Lateral raise: 1 x 15
8. Posterior delt raise: 1 x 15
9. Lying triceps extension: 1 x 8
10. Barbell curl: 1 x 8
11. Back extension: 1 x 8

I know Workout B looks high in volume, but in application it actually isn't. Most of the movements on B aren't very stressful systemically, with the exception of the plyometric work. Jon actually called Workout A the hard workout.
As many of you know, I don't usually recommend small isolation-type movements in my workout programs. I only recommend them if there's a direct application to one's sport, which is the case with Jon. Six months after beginning this program, Jon, at 230 pounds, was performing his box hops to a surface that was over 30 inches high. He was using a medicine ball that weighed 18 pounds. Box hops to 30 inches and medicine ball work with an 18-pound ball are very, very good accomplishments. At this time Jon was able to squat (one inch below parallel) with 425 pounds and could bench (touchand-go style) 275 pounds.
These numbers represent a very good accomplishment for roughly a year and a half in the weight room on a proper program, but you must remember that Jon was weight training to become a better baseball player. The true measure of the program was in the upcoming season – that would tell the story.

The 1999 season

In August of 1998, Jon's statistics looked like this: a .404 batting average, 15 triples, and 34 home runs. These were accomplished in a season in which he played only 100 games. At 5-10. and 230 pounds Jon now also looked very much like a professional catcher – big and durable. He made many "all-conference" type teams and the professional scouts now had their eyes on him for his senior season (1999). Now, I want you to remember that it took almost two years of extremely dedicated training to start to positively affect his abilities on the field. How many of you can stay the course for two years to "start" to make good progress? How many of you can then stay with it for another three years to really make a dramatic change? To really change your body and your strength takes time.
At the conclusion of the 1998 season Jon and I talked about his training goals for the next six months (the off-season). Well, it should come as no surprise to the readers who have read my work, his goals were the same as from day one – to get stronger, and gain muscle. What changes did I make to the program so that Jon would be at his strongest ever? None! That's right – *none.* He used

the same basic, single-progression approach as he did from the start – he just needed more time on the program. See, this is where most trainees go wrong. They start to make progress on a good basic program, but want the results to come faster than is possible, so they invariably change to a marketed "wonder program" and end up getting nowhere except hurt or sick. I've said it many times, but it deserves repeating: To make great progress you must adhere to a basic program based on progression, good technique, training two to three times per week, for many, many years-period.

March 1999: The setback

Jon now weighed 240 pounds and had increased his strength another 10-20% on all movements – utilizing good *old* single progression. He was able to run the 60-yard dash in 6.9 seconds (faster than when he weighed 170 pounds), which is considered very good for a professional catcher. He had worked very hard on his skill work during the off-season and was primed to make his mark this season so that he could earn a professional contract. Well, at least that's how we planned it. During the

second week of the season, Jon suffered a fracture of his wrist during a game. He would miss his entire senior season, and have no college eligibility left.
A college athlete has only four years of eligibility to participate in his or her chosen sport. Actually they have five years to participate in four. The NCAA – the governing body of college athletics – gives the student athlete one "grace" year that can be used due to an injury (if it occurs early enough in the season), or if the athlete transfers from another university (he must sit out one year). The rule can get pretty complicated, but that's the gist of it. When an athlete runs out of eligibility, it becomes very, very difficult to showcase talents to any professional scouts.
You can just imagine what a blow this was to Jon, to have no college eligibility left. We all must handle setbacks if we're to succeed. I assured Jon that his dream of becoming a professional athlete didn't have to end if he didn't want it to. He didn't. So he went back to work. Throughout the season he helped the team, while letting his wrist heal following surgery. He continued to work out around the injury (performing the exercises he could).
By August 1999 the wrist had healed, and Jon went back into a full training program, with as much drive and determination as I've ever seen. It was at this point that I let Jon in on a secret training program that would get him stronger in less time than ever before. I'm sure you've all heard of these "secret programs," and for the right price I can get you one. Well, if you believe that then I've got some ocean front property in Montana that I'd like to sell you! Guys, I was just testing you. There are no secret programs! You know what I had Jon do? He went right back to his same old (some would call boring) program. Once again he just needed more time to get more results, not a new program.
Now that Jon had no eligibility left, we had to come up with a way to get Jon's abilities noticed by scouts so that he would have a chance to be offered a pro contract. What Jon did was to write letters and call all the scouts that showed interest after his tremendous 1998 season. By September 1999 Jon got offered a contract to play in the prestigious (on the minor league level) Northern League. He would report in May 2000. So we had nine months left to make Jon the strongest, most well conditioned, baseball player he could be.
In November, he got his bodyweight back up to 242 pounds and had regained most of his strength on all exercises, and had actually gotten stronger on a few. His squat was back up to around 420 pounds, and his bench press was up to 270 pounds (now with a one second pause at the chest). We decided that Jon now needed to drop a little bodyfat (though, believe me, he wasn't fat) to ensure his speed and quickness. So, I altered his diet (simply dropping a few calories) and increased his lowlevel aerobic work. Jon was also sprinting two days per week. So, you may be wondering how Jon squeezed all this into a seven-day week and without overtraining. Simple planning!
He would perform two weight workouts per week. He would sprint on one of the workout days (this constituting his leg work for the day), and then again another time during the week on the same day that he would perform skill work. He then also did one day of low-level aerobic work on a stationary bike for over an hour. Mixed in was another day of skill work. So, all told Jon had three days per week where he could recover (two complete days of rest, and the one day of low-level aerobics which aid recovery). Also, I need to mention that during this time Jon held down two jobs to make ends meet. So, don't think all he did was train and eat.
By May 2000, Jon tipped the scales at 228 pounds and was now stronger and better conditioned than he had ever been. Yes, he lost weight and got stronger. If you know what you're doing, and are patient, you can accomplish these goals at the same time. Just understand that you'll have to decrease the rate of progression on the weights, increase low-level aerobic work, and cut back the calories slightly and slowly. That's it!

The big decision

Jon was one month into his first professional season when he was forced to make the toughest decision of his young life. Due to personal (family) circumstances, Jon had to give up his professional baseball aspirations. I can't go into the details of what happened, but I assure you most people would

have crawled into a shell for a while. Jon didn't, even though he had just given up his dream of playing pro baseball. He went back home, got things worked out, and in August of 2000 Jon was back in school completing his education (that would get him in Chiropractic College), holding down two jobs, *and* he informed me that he wanted to compete in powerlifting.

August 2000 to May 2001

This will bring us up to the date of this writing. Jon now weighs 250 pounds. Here's his current program. See if it's much different than the original, except the weights used, of course.

Workout A

1. Internal shoulder rotation: 20 pounds x 20
2. Crunch: 130 x 10
3. Squat: 435 x 5 (505 x 1)
4. Bench press: 265 x 5 (315 x 1) performed with a pause on the chest

5. T-bar row (seated): 172.5 x 5
6. Static barbell hold: 185 x 2 x 60 seconds

Workout B

1. Internal shoulder rotation: 20 pounds x 20
2. Side bend: 130 x 5
3. Spread-eagle situp: 130 x 15
4. Sumo deadlift: 400 x 5 (450 x 1)
5. Military press: 150 x 5 (190 x 1) performed with a pause on chest
6. Barbell curl: 125 x 5 (145 x 1)
7. Barbell calf raise: 345 x 20
8. Reverse calf raise: 30-pound 'bells x 20

For the powerlifters I train, I use a 5-3-1 weekly rotating rep cycle. Now don't freak out and think that I'm getting complicated on you – I'm not! All this means is that one week you perform the "big" movements for 5 reps, the next week for 3 reps, and then the third week for "working singles." I have them perform only two live sets except for the singles week in which they perform three live sets. The program is still based on single progression.

Progression means that every week the lifters add a little dose of iron to the bar dependent on what they did the last time on that particular week. When the cycle gets hard, a trainee can usually only add a pound to the fives and maybe 2 pounds to the threes. On the singles they can usually sustain from 2 to 5 pounds for many months. Of course, this is all dependent on whether the trainee is gaining a lot of weight, maintaining, or losing weight.

I've found that this type of "cycle" keeps the powerlifter ready to hit a max single at any time. This type of cycling is not only for the competitive powerlifter, but I wouldn't recommend it to beginners or intermediates for I feel their goals would be best served by utilizing a fixed rep range for the first couple of years.

You'll notice that Jon also performs "singles" on curls. In the type of competition that he's entering ("powersports"), they not only perform the squat, bench press and deadlift, but they also perform a strict curl. Powersport competitions are drug tested and performed "raw" (no support equipment other than a belt). As a matter of fact, Jon had only been wearing a belt on the squat for the mistaken reason that he thought I didn't want him to wear it on anything else (which I've now changed).

The weights that he uses on the crunch, side bend and spread-eagle situp have been "fixed" at these poundages for quite some time due to the fact that the heaviest dumbbell in the gym where he trains weighs 130 pounds. He's working on rectifying this.

Along with his weight training, Jon performs aerobic work two days per week for one hour. He also runs (mid-level aerobics) one time per week for 20 minutes.

In conclusion

The first article I wrote on Jon was titled, "The Basics Work Again!" Almost five years later I could use the same title. I want to reiterate that I've been instructing Jon for the goal of becoming a better baseball player (until the last eight months or so). If his goal from the start was to just get stronger and bigger, his lifts would be 10-20% higher than they are now. Also, please realize that Jon trains alone – no training partner and no hands-on coach.

After 27 years under the iron, I can honestly say that it doesn't take a complicated program to reach one's strength and size goals. What it does take is faith in a simple program based on progression. It takes tremendous effort and dedication. It takes real desire to "get it up" week after week, month after month, year after year on a program that, for those who aren't really focused on

changing themselves, would seem "boring." You see, if you're like Jon – making the kind of progress he's making now – you wouldn't get "bored." Believe me, there's nothing like progress to make a simple program exciting and challenging.

In Their Own Words

From Hardgainer #75 – November/December 2001

First of all I want to apologize to all the HARDGAINER readers who read my articles, for missing a couple of issues this year. To say the least, it's been a very busy year for me for a number of personal and professional reasons. Even with my usual schedule it's very difficult to make the editorial deadlines for this magazine – even with the extensions that Stuart gives me. I don't have the luxury of starting an article well before the deadline. I'm usually banging away at the keyboard late at night several days before an article is due. This is not the best or preferred way of getting it done, but it's the best I can do for now; and as long as I know I'm still helping people, I feel it's worth the effort.
Throughout the year I've been updating you on clients that I've written about in previous issues of HARDGAINER. In this article I want to update you on Andy Greenspan, from issue #47, and along with this I've asked several of my clients who I've written about in previous issues to write a little about their experiences with rational programs that promote great technique and progression.
I started working with Andy in 1994. At 5-10 he tipped the scales at 150 pounds. His goal was very simple. He wanted to get bigger and stronger. Andy had never weight trained before and felt, at age 37, he should get proper instruction. The fact that he had never weight trained before was a big asset in that I didn't have to dispel any of the incorrect training practices that are so i prevalent in today's gym scene.
Andy is intelligent, and understood my philosophy of using an abbreviated program of basic exercises, and developing the ability to put out maximum effort for every live set. He also fully understood that he must be patient and concentrate his efforts on being consistent and progressive.
Most of our workouts were performed at 6 am – being a doctor with two young children means that Andy has a very busy life. Here's his first program, listing work sets only:

Workout A

1. Crunch: 2 x 20
2. Squat: 1 x 20
3. Stiff-legged deadlift: 1 x 15
4. Bench press: 2 x 10
5. Barbell row: 2 x 10
6. Barbell curl: 2 x 12
7. Hanging grip work: 1 x time

Workout B

1. Side bend: 1 x 15
2. Sumo deadlift: 2 x 15
3. Military press: 2 x 10
4. Shrug: 2 x 10
5. Close-grip bench press: 2 x 10
6. Hanging grip work: 1 x time

The program is very basic. At first I alternated these workouts while Andy trained three times per week. I was able to do this because the weights were light, and the increased frequency allowed Andy's nervous system to "learn" the particular motor skills of each movement faster. When the weights started to push him, I decreased his training frequency to twice per week, to allow for recovery.
Andy understood that his goals would take several years to accomplish. This allowed his ego to tolerate, to start, training squats and deadlifts with an empty Olympic barbell. This really paid off because it allowed Andy to develop a perfect lifting "groove" on these movements. The point is that Andy was very patient.
Two years after Andy's empty bar deadlifts, he completed 5 perfect reps with 350 pounds and had added 40 pounds of solid bodyweight. During these two years Andy's program had changed very little.

Andy updated

Today, seven years after Andy had set his goals to get bigger and stronger, he has done just that. He still tips the scale at 190 pounds (though he looks more like 210 pounds) but has substantially reduced his bodyfat and continued to add muscle. He looks much different than when he first hit 190 pounds five years ago.

Andy has always been one of the most patient trainees I've ever worked with, and he remains so today. His technique on all lifts is perfect. His goal in the weight room is to add 5% per year to his big lifts while continuing to whittle away at his bodyfat percentage. He wants to continue to improve upon his cardiorespiratory conditioning program, and stay injury free. Andy could easily weigh 230 pounds and squat and deadlift in the 500-600 range if he desired, but that's not his goal.
Don 't mistake patience with lack of desire or effort. Andy is an animal in the gym. If you were to

observe him before a set, he resembles an animal stalking its prey. Andy is just not under any illusions about what the human body can accomplish in a short time frame, which is why he's done so well in the years under my tutelage.
I've talked to so many trainees who are just fantasizing about what can be accomplished in a sixmonth period. Some would have you believe that they can gain 20 pounds of muscle in that time. In all fairness it's probably not the fault of the trainees, but more the fault of all the "mainstream" instruction that's out there. Most of the instruction on weight training that's available, is, for lack of a better word, garbage. This "misinformation" is actually what's better known in the business world as "marketing."
Here's Andy's current program, again listing only work sets – warmup sets are additional:

Workout A

1. Crunch: 1 x 5
2. Squat: 1 x 3
3. Stiff-legged deadlift: 1 x 10
4. Bench press: 2 x 3
5. Row: 2 x 5
6. Calf raise: 1 x 15
7. Static grip: 1 x 30 seconds

Workout B

1. Side bend: 1 x 10
2. Sumo deadlift: 1 x 3
3. Standing dumbbell press: 2 x 5
4. Standing barbell curl: 2 x 5
5. Wrist curl: 1 x 20
6. Reverse wrist curl: 1 x 15

Pretty simple stuff, huh? Let me tell you, you don 't need fancy programs to reach your goals. All you do need is to add weight to the bar, use perfect form, and be consistent. I don 't know how many times I've said those words in this magazine, but that's the truth. And it needs repeating over and over again.

In Andy's words

The most important lesson I've learned in my time under John 's guidance is the need for complete confidence on workout day for achieving that day's goals. Single progression develops confidence. You know you'll make that day's weight and rep goal, which allows you to concentrate on the technique of the movement. I feel this confidence is imperative in order to avoid injury. It's very important to be aggressive when going into a set. You have to focus and "get it up." I've been training under John's guidance since October of 1994, and I've had only one major injury in that time.
Keeping a positive nitrogen balance is very important when you 're really pushing hard. I'm not interested in gaining a lot of weight per se, so I need to keep my protein intake high. I've noticed that my injuries (all minor other than one) have followed a distinct pattern. I'll break back into my previous "best weights" on the big movements (after a layoff), my appetite becomes voracious (which I don't completely satisfy because I don 't want to gain weight), then fatigue sets in, usually followed by a tendon inflammation of some kind. I haven 't had many of these, but there's a distinct pattern to them. I get all the muscular stimulation that my body needs, in order to grow, while utilizing a weight that I could actually perform one more rep (maybe two) beyond my rep goal on a particular set if I pushed to "failure." If you keep more than two reps "in reserve" then I feel that adequate stimulation won't be achieved. I've learned that there has to be a very narrow window between utilizing the correct weight for a specified rep goal to achieve maximum muscular stimulation, and utilizing that same weight and going to failure. In other words, you have to push as close to failure as possible, but don 't fail. And you must do this for a long period of time.

Jon Anderson updated again

I recently completed an article on Jon, but wanted to update you on his first powerlifting competition. Jon competed in late June at the NASA Powersport Tri-State meet in Flora, Illinois. This meet is drug tested and no support gear other than a belt is allowed. Competing in the 227-pound weight class, Jon

made the following lifts: strict curl 145 pounds, squat 500, bench press 300, deadlift 500. He won his division and was awarded the best lifter trophy. Not bad for his first meet.
I also want to point out that Jon went alone to this meet – due to personal reasons I could not attend. The reason I point this out is that the single progression system gave Jon absolute confidence in what he could do – he really didn't need me or anyone else there to help him. As a matter of fact, Jon told me that after he squatted 500 pounds, everyone in attendance applauded (a first-time lifter squatting 500 without support gear is pretty amazing), and he couldn't understand why. He couldn't understand everyone's amazement because, using small doses of iron every workout, he had slowly crept up to and passed the 500-pound mark in training, so it was pretty routine for him.
At the time of the meet, Jon had successfully completed 170 workouts in a row (twice a week for

over a year and a half) using good old single progression. Read that again – 170 workouts in a row without missing! Now, check your training journal. How many workouts have you completed in a row?

Kent Masias

I wrote a small piece on Kent in issue #60. He has been a consultation client of mine for about four years now. About a year ago Kent reached an all-time high in strength and size (6-0 and 250 pounds). As an interesting side note, when I first started working with Kent he assured me that he didn't have the genetics to build big arms, although this was something he had high on his goal list. And to be honest, his genetics aren't the best in that department. But, I assured him that with enough time and bodyweight he could make them much bigger. At 250 pounds they measured 17.5 inches cold. After reaching 250 pounds, Kent decided he wanted to drop some bodyfat. I slowly altered his caloric intake and increased his aerobic work – while his weight training program stayed the same – and he's now down to 215 pounds. Before suffering a recent tragedy, his strength was virtually the same as when he weighed 250.

Kent's words

I've learned a tremendous amount of knowledge in the four years I've been under John's guidance. I've learned to perform each lift with proper form, stay consistent, eat to gain, and later to eat to lose bodyfat. Along the journey I was reminded that consistency – not just in lifting, but in other areas such as keeping tabs on caloric intake – was a major player in successful strength training. Before becoming one of John's students I'd been following several different abbreviated routines, with minimal success. Looking back I was breaking a lot of rules. Here are a few of them: trying to get big when my caloric intake was barely at maintenance level; jumping from routine to routine (cycles were only 6-10 weeks); and including no cardio work. No wonder I wasn't recovering – I wasn't eating enough and I was out of shape!

I don't break as many rules these days, but staying focused for months at a time is very challenging. So is eating quality food day in and day out, doing cardio work, stretching and getting enough rest. After four years of productive training I can see that staying consistent for a long time is what brings results, but most people have a hard time being consistent (along with being progressive).

Craig Rasmussen's progress

Craig is now up to 238 pounds; and to be quite honest he should be heavier at this point (see below). He's doing well otherwise, as his strength in all his lifts continues to climb. Although I'd stated in issue #73 that I would update you on the composition of his weight gain in this issue, I want to hold off on that till his bodyweight is heavier.

Craig's words (written mid-June)

It's a little over the half way point of my personal "vision quest" and I'm pleased with the way that things have gone thus far. I've found the program of rotating weeks of five reps, then threes and then singles, to be a fascinating way to train (see John's article in issue #73). I find that I'm very motivated and excited to break my old personal records every time I enter my gym to train. I would like to discuss what I feel I've done well so far, and what I've struggled with to this point.

The good news thus far is that I'm very motivated to train since I'm very focused on my goals – I've them written down and posted on a board in my garage gym – and I'm giving my all in trying to attain them. I feel I'm doing a very good job in maintaining proper biomechanical technique in my exercises, which is imperative as the weights get heavier and heavier. Incidentally, I've remained completely injury-free, which I'm very happy about as I was slightly concerned that the severe hamstring pull I suffered in a flag football game quite some time ago may rear its ugly head and give me some trouble. I'm being very consistent in my flexibility, weight training and aerobic work. I've been happy with my training weights as they continue to climb steadily.

The single progression approach has been the backbone of my training, as it's been simple and very effective in allowing me to add more and more weight to the bar on a regular basis.

John and I have talked about how effective single progression has been, and we've also discussed some very important things to be aware of when using it. Don't become complacent when using single progression that you limit your progress. For example, let's say that you're adding a pound a week on your bench press (say you're performing 2 sets of 6 reps) and you're past the early build-up part of a cycle. Perhaps you could have handled a couple of increments of possibly 5 pounds each in your last two workouts as you've been "rewarded" by your body with this strength increase. A one-pound increment would not be enough, and you should have added more weight so that you receive the stimulation you should be getting. How do you know that a single pound was not enough? If rep six was not almost impossible to complete, and you have reserve reps in you, you know that you could have added more weight. John has, on occasion, had me try to take extra reps above my prescribed reps, to see if I have any reserve reps in me, and to find out if I should be adding more weight. If I do I have extra reps, I add a larger "chunk" of weight next time.

I know that I must stay focused, buckle down and pay extreme attention to putting out full effort and

concentration in the next six months if I'm to reach the goals I've set. All in all I feel that I have all the components of my training program down pretty well.

The bad news to this point is that I'm still struggling with something that has plagued me throughout my entire weight-training career more than anything else – my eating patterns. This is the one area that I struggle to be consistent in. The only excuse that I can give is pure laziness and thinking that I can make up for it later (which of course, I can't).

At this point, I finally am giving the same kind of effort to keeping records in my caloric intake log as I do my training log. I wrote down all the different types of meals that I typically eat throughout the week. Then I made my own personal log of meals I could eat in order to quickly track my calories. Of course, I could make adjustments to those meals as needed. It actually sounds like much more work than it is. It's simply a matter of sitting down and taking a few minutes to do it.

If you work out two meals a day for a week you'll have fourteen meals referenced (assuming you have that much variety in the meals you eat). In the future you'll only have to do any major calculations on foods you don't already have in your log, which should be few. This makes calorie counting easy, and it will make tracking your calories in the future much less of a chore. I'm greatly looking forward to the challenge of the next six months.

I was recently sitting around with some friends and one of them was reading a book of quotes. One of my friends mentioned a quote that I really liked. The quote was, "Desire will only take you as far as dedication will allow." A very simple quote, but very true.

In conclusion

The path to getting bigger and stronger is not complicated. For all of you who have tried multiple programs and have gone nowhere in the last couple of years, quit wasting time. There have been many good programs presented in this magazine over the years. I suggest you pick one and stay with it for at least six months.

I'm confident that if I could personally train all of you who desire to get bigger and stronger, for the next three years, you would be the happiest group of trainees on the planet. If you currently weigh 130 pounds, I'll have you up to 180. If your arm measures 16 inches at 170 pounds and you desire 18-inch arms, I can get you there. If your bench is stuck at 290,I can get you to 350+.

I'm not just saying these things to boast of what I'm confident I can do. I'm trying to give you faith. For if you believe in what I'm saying, let me assure you that you don't need me to coach you to achieve your goals. I've started many trainees on the correct path by giving them the knowledge to achieve their goals, but they walked the path. If you choose to follow my teachings, great; but *really* follow them. Be religious.

I've given you enough information in the pages of this magazine over the last five years to accomplish your goals of getting bigger and stronger. Study the material. Really study it. Then put it into practice, give it time to work, and don 't let anyone steer you off the path. I know you can do it – have faith.

How to Eat to Get Big

From Hardgainer #54 – May/June 1998

The formula is simple. Doing it requires some effort. As with most activities, most people don't succeed because they are not willing to put out even the minimum amount of effort that is necessary to make progress. People have a tendency to be lazy, period. So if you want to eat to supply your body with the nutrients to gain as much muscular bodyweight as possible, you're not going to be able to guess your way through it. You are going to have to put out effort. And let me remind you, there are no excuses.

Before you start learning how to eat correctly, you are going to have to find out how you are eating now. You have to find out how many calories, and grams of protein, carbohydrates and fat that you are consuming now. You also need to discover at what times you are eating. Once you determine this, then you can work on getting on the right path. If you don't know where you are now, how are you going to find out where you want to go?

The first thing you need to do is get a notebook and a calorie counter (these are cheap, you can get them at almost any bookstore), a good pencil, and the resolve that you are going to do what I tell you to do. If you don't want to do this, don't read this article, because you're not ready to make the commitment to change.

Now, for the next two days, write down what you eat, the approximate amounts (best done in cups or ounces), and when you ate. It will look something like what you see in the sidebar.

To determine the percentages of each macronutrient, take the total number of grams and multiply by 4 for protein and carbohydrates, and by 9 for fats. Then divide this number by the total calories. This will give you the percentages of each macronutrient. I feel the goal should be 40% carbs, 30% protein, 30% fat. But this is an individual thing. If you are dragging your feet, take the carbs intake up and drop the fat intake by 10%.

Now take a good look at how you're eating. Are you getting all 5 or 6 "feedings" every day? How many total calories are you consuming on a daily basis? How many per meal? Is your consumption fairly balanced throughout the day? If you don't come up with adequate numbers, you need to make some adjustments as to what you're eating, when you're eating, and how much.

The sample diet I've given you is a near-perfect model of how to eat to gain a lot of size if you have very-high caloric needs, *but* you have to work up to this level slowly over time – just like adding small doses of iron to the bar over time. If you try to add calories too fast you'll have intestinal troubles and most of your food will go right down the toilet, or around your waist line. So, here's how I would recommend going about "cleaning up" first, then "adding to" your present eating program.

First you need to make sure that your are getting 5 or 6 feedings every day. You need to eat every two and a half to three hours if you are serious about gaining weight. Get rid of as much junk food as possible. Have an occasional bag of chips, some ice cream, or a beer or two, but keep it to a minimum. Now add about 300-500 calories to your daily intake and maintain this level for a few weeks. Then add another 300-500. Repeat this till you reach a level where you are gaining 1-2 lbs per week.

To give you an exact caloric level for *you* to achieve this is not possible because it varies from person to person. To help give you some idea, take your bodyweight in pounds and multiply by 11. This gives you the number of calories your body needs to maintain everyday function of your vital systems (also known as your basal metabolic rate). Now you need to add enough calories to take care of your energy expenditure at work. Finally you add the calories to take care of your training expenditure *plus* the additional calories to recover from workouts and gain muscle. As you gain weight your corresponding caloric intake will have to go up in order to continue gaining weight. In other words, when you weigh 160 lbs you have to eat like you weigh 170. Then when you hit 170 you need to eat like you weigh 180. As you get heavier your caloric intake must go up if you want to keep gaining weight.

Supplements

There are a few useful supplements, but there are many that are absolutely useless. Protein powders, multi-vitamin and multi-mineral tablets, and carbohydrate drinks are ones that I recommend, and that's about it. Make sure that you purchase a good quality protein powder, not one that is surrounded by a lot of gimmicky advertising claiming to transform you instantaneously into a monster. You also don't want one that is loaded with every exotic herb or other scientific BS ingredient. There are two brands that I use and recommend. They are "Just Protein" by IronMind Enterprises, and "Designer Protein" by Next Nutrition. Now as far as carbs powders are concerned, I feel they can be useful but are not necessary. If you want a quick source of carbs, just drink some fruit juice or eat a piece of fruit. This does the job just as well and costs a lot less.

48

carbs fat protein cals

6AM

3 cups corn flakes 36 6 168

3 cups skim milk 39 1.5 27 277.5
1 banana 26 0.5 1 112.5
1 cup orange juice 25 2 108
TOTALS 126g 2 36g 666
9:30AM
roast beef sandwich:
2 slices wheat bread 32 8 160
8 ozs sliced roast beef 14 64 382
1 slice cheese 0.5 9 6 107
1 tbls light mayonnaise 1 5 49
2 cups skim milk 26 1 18 185
1 apple 21 84
TOTALS 80.5g 29g 96g 967
12 noon
turkey sandwich:
2 slices wheat bread 32 8 160
8 slices turkey breast 3.2 42 197
1 tbls light mayo 5 45
1 slice Swiss cheese 1 7.5 8 104
cold pasta salad:
2 cups pasta 80 2 14 394
1 tbls light dressing 0.7 3
2 cups skim milk 26 1 18 185
1 apple 21 84
TOTALS 160.7g 18.7g 90g 1,172
3:00PM
2 bagels 82 5 18 445
2 tbls light cream cheese 2 13 6 149
2 cups skim milk 26 1 18 185
TOTALS 110g 19g 42g 779
6:30PM
2 baked chicken breasts 12 100 508
2 baked potatoes 100 9 436
2 tbls butter (light) 12 108
steamed broccoli 8.5 5 54
2 cups skim milk 26 18 185
TOTALS 134.5g 24g 32g 1,291
9:30PM
2 boiled eggs 11 12 147
2 boiled egg whites 7 28
2 slices wheat toast 32 8 160
1 tbls butter 12 108
Totals 32 23g 27g 443
DAILY TOTALS 643.7 115.7g 423g 5,318
multiply by: 4 9 4
calorie totals: 2,575 1,050 1,692
divide by: 5,318 5,318 5,318
% of calories: 48% 20% 32%
carbs fat protein
1 oz = 27.5 g
1 cup = 0,25 liter

Let the next sentence really sink into your head. *Supplements are only used to supplement a good eating program.* Without a good diet they are worthless. So get your eating together.

Let me address creatine for a moment. Creatine (along with its many variations) does produce a noticeable gain in lean bodyweight, but this is due initially to the muscle getting supersaturated and then storing an additional 30% more creatine than normal. If you stop taking it you will lose that extra 30% and lose the weight that it produced. I think creatine's greatest benefit lies in the fact that it allows your muscles to constantly replenish their energy stores throughout your workout. But once again, if you're not eating right it won't mean a thing. So, I think a creatine supplement may be worthwhile if you want to take on the extra expense.

I have helped many men get very big and strong without taking anything more than a multi-vitamin and multi-mineral tablet. If you get caught up in any "new supplement" craze it may dilute your efforts to get your eating in order, which is the most important factor (along with proper training) for gaining muscle.

Gaining fat

When I train someone who has not been able to gain weight in the past, and they start getting bigger and stronger for the first time, a concern almost always arises. The trainees notice that although they are gaining a lot of muscle, they are also gaining some fat around the waist. Let me tell you that in my twenty-four years of training experience I have found that in order to gain a lot of muscle you are going to gain some fat in the process. The key word there is *some*.

The ratio I look for, for someone who needs to gain a lot of weight, is that for every 10 lbs of weight you gain, I expect 2 lbs of it to be fat. When you gain at this ratio it most likely will not cause your

bodyfat percentage to increase, and this is the main factor in maintaining good health. As long as you are performing aerobic work within your target zone two or three times per week, your heart and lungs will be in good shape and so will your blood chemistry. In other words you'll be in good health.
Once you get very big it is easy to lose the fat that you have gained, while keeping all the muscle. From a metabolic standpoint, it is easier for the body to metabolize fat than it is for it to synthesize new muscle tissue. I know this methodology is similar to the old-time method of "bulking up" and then "trimming down," but the difference is that I want to control the amount of fat gained. Also I don't want the fat intake above a healthy 30% of the total caloric intake.

Gaining on a budget

You're probably thinking, "All this food is going to cost me a lot of money." Yes, it's definitely going to make a dent in your wallet, but this is no excuse for someone who really wants to get big and strong. You will have to learn to budget your resources better. Cut out some of your non-essential expenses. You might as well stop buying clothes for a while because if you follow what I say, the clothes you have at present won't fit you six months from now. My point is, if you really want to get a lot bigger and stronger, you'll make the necessary adjustments in other areas of your life.
Let me give you a few tips on how you can save some money and eat better quality food in the process. First of all, quit eating out. No fast food at all. Prepare your own food-don't be lazy. For a fast food meal that would provide the calories you need (although lacking in nutrient value, and much higher in fat) you would spend in excess of $12. You could prepare a meal that is much more nutritious for less than $3. You don't have to be a good cook to eat to get big. Preparing your own food can save you a considerable amount of money. With the money you save you could probably afford to buy some protein powder. Speaking of protein powder, a very inexpensive form is powdered non-fat dry milk. Add this to milk along with some fruit and ice cream, and you've got a very inexpensive protein drink. This was one of my staples for years.
The following foods are the most nutritious and cost effective: rice, pasta, potatoes, fruit, whole chicken, canned tuna and chicken, oatmeal, milk, ground turkey, corn flakes, and sliced beef, chicken and turkey.

Food preparation vs. the "I don't have time" excuse

"When I'm at work I don't have time to go home and cook a meal," and, "I don't have time in the morning to prepare food for the entire day" are legitimate reasons, but poor excuses.
The key to a busy schedule is food preparation. Several years ago, before I opened my training facility, I used to train people in their homes. I would leave my house at 5 every morning, and most days would not return till after 9 at night. At the time I was a competitive bodybuilder training three times per week (two would have been better) and consuming in excess of 6,000 calories per day. It would have been easy for me to make excuses and eat out all day, but I didn't.
In order to thrive while maintaining an 80-hour per week work schedule, and living out of my van all day, every day, I would prepare most of my food for the week on Sundays. I would cook large quantities of rice, pasta and oatmeal, and put them in Tupperware containers. I would flavor then with various sauces or spices. I would prepare 10-15 sandwiches and put them in zip-lock bags. I would also prepare various pasta and beef or chicken dishes that I could reheat quickly when I did get time to stop by the house. I would pack all the food I needed for the day in a cooler with a couple of ice packs, throw it in the van, and I was set for the day. During one of the busiest times of my life I increased my bodyweight from 205 lbs to 252 lbs because I wanted it bad enough and did what I had to do to succeed. So, what's your excuse?

Milk

Milk is one of the best foods on the planet, in my opinion. You have read numerous authors mention the tremendous benefits that milk has to offer anyone who desires to gain muscle. You may be asking which kind of milk you should drink. You can't go wrong drinking skim milk. It has the same amount of protein as whole milk, but with virtually no fat. If you find it tastes like colored water, I suggest trying 2% milk. This is the "kind" of milk I recommend most often because the fat is still low and the taste is better (although personally I really don't care about taste as long as it benefits my training). In cases where someone is having a real hard time consuming enough calories, I suggest whole milk.
If you have no trouble digesting milk, I would suggest you build up to at least one gallon per day. If you haven't been consuming much milk, then build up slowly starting at a half gallon. Maintain this for four or five days, to give your body a chance to manufacture lactase – the enzyme responsible for digesting the milk sugar lactose. At this point increase it to three quarters of a gallon for another 4-5 days, then go to one gallon. If you have problems digesting milk, you can purchase a product called Lactaid. Consume some of it before drinking milk. I have had some problems digesting milk, and this product has worked well for me.
You need to spread out your daily consumption. Don't try to guzzle a gallon at the end of the day. All this will do is give you intestinal problems. At my gym we have a cabinet where we store towels for

the customers. On top of this, on any particular day, you would see two or three one-gallon containers of milk. My strength coaches are all trying to get bigger and stronger, so while they are working they will go to the cabinet and take a drink or two while their clients are between sets. This goes on all day. They remind me of large cattle grazing in a field all day. Maybe you're not in a position to do this, but you should spread your consumption out over the day.

Final thoughts

Just like lifting, the process of eating to get big is simple. Doing it is the hard part. Most people are just too lazy to do what I have recommended. Instead they would rather fool themselves, make excuses that they are too busy, and run out and buy the latest "super supplement." But a year later they don't look any different. If you really want to accomplish something, you'll happily do whatever is necessary. Keeping a nutrition journal is very important because you can see what you are really doing – no more guessing. Once you get good at knowing food values you won't have to keep a journal on a regular basis. But, I would recommend a checkup (keeping a journal for a couple of days) every couple of months or so, just to make sure you're still on track. Once you get your eating together you won't believe how great you'll feel, how much more completely you'll recover from workouts, and how much strength you'll have during workouts.

If you have fooled yourself into thinking that you were consuming many more calories than you actually are, and make the adjustments that I've recommended, you are going to be very surprised at how light your once-heavy weights will become. I'm telling you, *how you eat is very critical to your success in this game.* So, if you really want to derive all that you can out of your training, get your **eating in order. Don't be lazy and don't make any excuses. Now get to work!**

How to eat to lose bodyfat

This article is missing from the archives, but there are many diets out there so it is not as critical. I am sure Coach Christy would have said “consistency”.

The White Moment

From Hardgainer #40 – January/February 1996

Berserker (noun):
An ancient Norse warrior who worked himself into a frenzy before battle.

Do you understand what I'm getting at? It's aggression, pure 100% focused effort. You can use the "perfect" routine, sleep eight hours a night, eat great, concentrate, visualize, feel the movement, and do everything "right," but get minimal results unless you experience what at my gym we call "the white moment." You 'II never come close to reaching your potential without it, no matter how perfect you do everything else.

Ken Leistner calls it "going balls to the wall." Brooks Kubik describes it as "approaching it as though it were a life or death situation." Mike Thompson describes it as "committing homicide on a loaded barbell." Bob Whelan describes it as "going all out as if you have a gun to your head." Other HARDGAINER authors have also mentioned the importance of giving it your all. At my gym, what we call the white moment is the time immediately before you approach the barbell. A time when the mind is filled with white-hot aggression, *with pure rage*, ready to attack the barbell to get that new max or that extra rep.

Dr. Ken has mentioned, and I agree, that most properly-designed weight-training programs (like those in HARDGAINER) fail or fail prematurely not because of the program, or because you've "plateaued," but simply because *you're not trying hard enough!* I've prevented many training cycles from coming to a close by simply *demanding more effort*.

We are not machines. You can't continually put your one pound on the bar every week and expect to get your reps by just going through the motions, with no spirit, without a burning desire to excel. You have to be fired up with emotion. You have to want it worse than anything. I'm not saying you have to bounce around the gym yelling, and pounding your head against the bar till it bleeds. Although I've seen this work for some, I feel it wastes too much energy, and you could get seriously hurt. Everybody is different. Personally, my white moment looks outwardly calm, but if you look into my eyes you'll see a tiger ready to attack. It doesn't matter how you get that internal rage going, as long as you don't hurt yourself, waste too much energy, or lose focus on good technique.

While a focused rage is a must to achieve one's ultimate goals, a wild rage will destroy you. Like a fire out of control burns all the trees of the forest and not just a select few, unfocused aggression destroys the body (through poor form, resulting in injuries) instead of building it. Your aggression must be focused like a laser beam. A laser is a focused concentration of light that can cut through anything.

Staying aggressive is not only important when you're moving your biggest weights. *It's important every time you train. YOU MUST NOT GET COMPLACENT!* You must monitor yourself so that you never fall into complacency. Over the past ten years of personally training hundreds of athletes, I have recognized that there are several times when you become vulnerable to the dreaded disease called complacency.

Early part of a training cycle

During the very early stage of anew training cycle, when the weights are at 80% or so of your previous best, it doesn't take 100% effort to move the weights and get your prescribed reps. I've seen trainees "cruise". their way through this early phase of a training cycle, not giving it their all. They get to about 90% of their previous best and then *fail to get the target reps*. They wonder what happened. Well what happened was that they trained their minds and bodies to operate at less than 100%. Being aggressive is a learned skill. It must be practiced if you are to get good at it.

When you are beginning a new training cycle it's critical that you don't let down mentally. Since the weights are light you may feel you don't have to push or pull as hard as possible. This spells training disaster.

Let me further illustrate my point. If it requires you to give 100% effort to press 200 lbs with relative ease, at 95% effort it will be extremely difficult, but at 90% effort it won't go. This is just an example. I don't know at exactly what percentage it will get tough, but I do know that anything less than 100% will make it harder than it should be. What you should do is approach the bar as if you're going to exceed your previous max, *and rip the bar apart with 100% effort.* You should concentrate and get psyched up for the set. Now the weight will feel like it's only 85% or whatever of your best, as it should early on in a cycle. Don't misunderstand me though-you are not to throw the weight, or get out of control with it.

Just push or pull as hard as you can while maintaining perfect form. You want to dominate the rep, not just complete it.

Before continuing, I want to make it perfectly clear that I am not an advocate of or tolerant of sloppy form, *ever!*

When "cleaning up" your technique

This is another time when I see a "let down" in effort. For instance, let's say you read one of Brooks

Kubik's fine articles on improving your bench press technique. You 're ready to apply a one-second pause at your chest because you realize that you've been bouncing the bar off your chest. (The bruises on your chest, the pain in your shoulders, plus the lack of pec improvement made you decide.) After the pause on your chest, make sure you push the bar as hard as possible. Drive it with maximum force! Just because you're improving your technique, and initially using reduced weights, is no reason to let down in the effort department. But be sure to brake the speed of the rep near completion. Don't keep accelerating so that you slam into the lockout.

Concentration on perfect form without concentration on giving 100% effort will fail to bring the results that improved technique should deliver. *Aggression, 100% effort, is a constant-it always has to be there.*

After breaking a long-sought-after goal

So you finally did it: 300 x 5 in the bench press. You've been training for six years and you finally made it. Next week, the 301 x 5 feels unbelievably hard. You just don't feel motivated. Then the excuses set in. You say to yourself, "Well, maybe I've reached the end of the cycle. I hit the 300, now it's time for a rest." Wrong, *wrong, WRONG!* If you're not experiencing any of the symptoms of overtraining (see my article in issue #37), then you need to keep pushing to derive all this cycle has to offer. You have to drain it dry. What you need to do is to set a new goal, immediately. Start thinking about getting 315 lbs-three big plates on each end of an Olympic bar. If you don't set the new goals right away, complacency will get you, I promise.

The new weight trainee

Some trainees crash through the front door of the gym with so much fire they could burn the place down. But many more come through the door with barely a glimmer of pilot light burning. But that's okay because if there is a trickle of a flame you can create a tremendous blaze. I often hear, "I'm just not an aggressive person."

My response to that is, "Yes you are. You just don't know it yet." Just as a good coach puts his charges on a good program, and teaches them how to eat right, I feel he also needs to teach them how to give 100%. "Getting up" for training is a learned skill (behavior) just as is learning the proper way to squat. Just as it takes most beginners time to learn to squat, it also takes time to learn to get aggressive, to give 100%. You have to practice it every time you lift. What I do is constantly remind them (sometimes calmly, other times by getting in their faces) to get aggressive, to try hard. *That effort is one of the most essential parts of good technique!*

One way I teach aggression is to shock them into it. I have them think of something that really riles them. That's right, I want them to get *mad-REAL MAD.* The set that was once hard to complete is now completed with ease. Now I know this may sound pretty radical to some, but it has never failed to get the response I'm after. Once they experience this (not the "getting mad" part, but the aggression that was the result of getting "mad") there is a complete understanding of the importance of "getting up" and giving it all they've got.

Most of the time though, I don't have to get this radical. All I have to do is get them to follow one of the basic principles that is constantly promoted in HARDGAINER: Start the trainee out slow by handling weights within his capabilities, and then add a small dose of iron to the bar each workout. As he sees the bar "grow" it fuels his desire, which in turn makes him want to put out more effort. *His motivation then grows from within, instead of relying on me, or anyone else to provide it.* He gains confidence that he *can* get bigger and stronger. What was once a "pilot light" has grown into a small but strong flame. This "spirit flame" will grow stronger each year and he will want to put out more and more effort.

I believe effort is the product of desire. If you want something bad enough you'll put forth every possible effort to get it.

I want to leave you with a quote from a man I consider one of the greatest coaches of all time. Vince Lombardi, the legendary coach of the World Champion Green Bay Packers football teams, had this to say about effort:

I firmly believe that any man's finest hour is that moment when he has worked his heart out in a good cause and lies exhausted on the field of battle, victorious.

Enough talking. Enough analyzing your program. Go and get your butt into the gym; and when you sink your fingers onto the metal, commit yourself to trying as hard as humanly possible on every rep of every set you perform. Learn a lesson from the Berserker, and get fully prepared for your next battle.

Dedication

From Hardgainer #85 – July/August 2003

Did you have breakfast this morning? Did you get up early enough to make some eggs and toast, possibly some oatmeal (the good stuff, not the instant), or did you wolf down some cereal in a few minutes. So, you got up and were sore from yesterday's workout – did you take five minutes to stretch and loosen up this morning, or were you too tired because of a late night and just "blew it off"? As you were leaving for work or school, did you have your cooler ready to go, packed with the sandwiches, protein drink, and other food you would need today to ensure that you would maximize the muscular growth stimulated at yesterday's workout? Or, did you just tell yourself that the protein bars you grabbed would be good enough today?

Is that enough questions to give you the gist of this article? No matter how you slice it, if you aren't dedicated to giving your all to something, you'll never achieve your heart's desire. In other words, you may be on the best training program in the world, but without the dedication to everything that supports that training program, you'll achieve minimal results. So, what I want to do is cover the dedication it takes, specifically to the "support systems," and why it's critical to your success at getting very strong and big.

I can hear some of you right now. "John, I just don't have time to do all these things." Well, first of all, "all these things" don 't take long to do. Second, if you aren't willing to reorganize your day in order to do the "things" that make all the difference, then I guess you don't really want to get big and strong. I'm *not* talking about giving up a balanced life. I'm *not* talking about taking time away from your family, career, school work, hobbies, church, or whatever else. That would be the last thing I would want you to do. And it's the last thing you *need* to do. But, I can guarantee that anyone can find time to do the things necessary to help recover from workouts.

I need to break away from the gist of this article, and give my two cents to a thought process that I feel is out of line and is getting used more and more as an excuse to avoid doing the things necessary to succeed in this game. I find it amusing when I talk to "real hard gainers" who tell me that they just can't do aerobic work a couple of days after a workout. They're just too tired. It's amazing that they have convinced themselves that their bodies are somehow "frail" and unable to do anything but one or at most two weight – training sessions per week – and nothing else.

When I go to dig further, I find out that these "real hard gainers" eat horribly, and are in pathetic cardiorespiratory condition. It's no wonder they're tired all the time. Believe me, I understand that there are genetic types whose bodies don 't respond as quickly to weight training as some others. But they *do* respond. And contrary to what most have convinced themselves to believe, they need to do *more* on a daily basis to help them recover than someone who has average or superior genetics. Yes, I said *more*.

If you fall into this category (extreme ectomorphy – and fewer do than think they do) remember that your body is not suffering from some kind of disease. The reality is that you've been blessed with a healthy body that simply has a light bone structure and "biochemical" systems that will need more time and, most importantly, *more care* to develop strength and muscular size. And that's it! Quit trying to turn it into more than that. What I'm about to address in this article pertains to all trainees, but most of all to *you*.

Okay, here's what you need to do. First, go shopping. No, don't wait for the weekend – go tonight. Heck, go now! Walk up and down every isle and get all the nutritious food you need to get big and strong. When you get home, start making the food you'll need tomorrow, or make enough for at least several days. If you're really trying to pack on weight, make sure you buy some dry milk powder (along with a couple of gallons of milk) so that you can make a weight-gain drink before going to bed tonight and every night.

I can hear you starting to think right now. You're starting to make excuses. Hey look, decide if you really want to get big and strong or not!

Now, get to bed a half hour earlier and set your alarm to get you up a half hour earlier than normal, so that you can take ten minutes to warm-up lightly and stretch, and twenty minutes to make a nutritious breakfast. You won 't believe what a difference this will make in how you feel, not only right off the bat, but in particular over the long haul.

That "little" warm-up and stretch every morning brings nourishing blood into your muscles, greatly aiding recovery. A good protein-based breakfast gives the body a rush of amino acids to help heal your muscles. It's not complicated stuff, but over time it makes the difference between a guy who can bench 350, and a guy who's stuck at 280.

So, you worked out on Monday and now you need complete rest to let your body grow and recover so that you can be ready to go by Thursday, right? *Wrong!* Let this soak into your head: If you do

nothing between those two workouts, you'll actually be *hampering* your body's ability to recover!

Hampering! For some reason, many of you think that "as hard gainers" the only thing you should do is lie on a couch and not move till your next workout! Here's what you need to do to maximize recovery and growth:

Using the above schedule, mid-level aerobic work should be scheduled for 20-30 minutes on Wednesday. If you haven 't been doing any, just start with five minutes. Yes, I said a measly five minutes. Even though you feel as though you could do more, *don't*, because your body isn't ready for it. And, it could negatively affect the workout the next day. Build up slowly by adding one minute every aerobic session. During this session, you should stretch before and after the aerobics. If desired, some *low-level* medicine ball work can be performed, as well as some *low-level* plyometrics. If you haven't been doing any aerobic work, hold off on the medicine ball stuff until you get the aerobics to 20 minutes. For more detail on this, get my two-part article entitled "Complete Training," in issues 63 and 65.

Some of you will still be thinking that this will take away from tomorrow's (Thursday) workout. It won't *if* you implement it slowly; and once conditioned, it will help prepare your body for the next workout. Without this aerobic session – or, maybe I should call it "recovery session" – you'll go into Thursday's workout stiff and with a nervous system that needs to be re-awakened – maybe that's why you need all that coffee to get the workout going. With the recovery session in-between, you go into Thursday's workout ready to go – no stiffness, no aches or pains, and with a nervous system primed and ready to go.

On Thursday you hit the weights and have a great workout, it didn't take nearly as long to get warmed-up, and all the weights you were to use were so easy you had to put an extra pound or two on every exercise. You've been stretching every morning, and eating great. Another thing that you'll notice is that as you get in shape you'll recover faster (restore your ATP faster) between sets.

All right, now Saturday comes along and it's time to hit the aerobics again. And you must stretch before and after every aerobic session. Now, I know it's the weekend, so you should sleep in to noon or so, and it's okay to slack-off on breakfast, yes? Wrong, *wrong, WRONG!* It's okay to get a little more rest, but if you really want to succeed in your quest for strength and size, you'll never slack-off on breakfast, or any other feeding for that matter. Hey, I'm not recommending that you become a slave to your quest, but there's a way to achieve balance in everything you do. So, to be more specific, if you stay out a little later on Friday night, sleep in a little later Saturday morning, but don't let up on the eating or the aerobics for that day.

Now for the extras

Once you get the above schedule down pat, there's actually more (yes, more) that you can do to enhance your recovery abilities. Don't freak out, because once again what I'm about to recommend doesn't take much time. Following the schedule that I recommended above gives you three days of complete rest. If you're motivated to do so, there are some little things that can be done on those days to, once again, aid in recovery.

If you can afford it, get a massage once a month. Just make sure you can find a massage therapist who knows what he/she is doing. If you have access to a hot tub, jump in for ten minutes, and stretch afterward. Perform some *low-level* aerobic work. This type of aerobic work is very easy to do and greatly aids in recovery. Your heart rate must be kept at about 60% of your max (no higher) so as not to stress your body systemically, and thus not require any recovery time. To offer an example, my lowlevel aerobic work (during the spring and summer months, in Indianapolis) consists of mowing the yard for an hour on Sundays.

One of the greatest things you can and should be doing is getting yourself more educated about what you're doing. How good is your technique when you squat? Do you know the difference between poor and good quality protein sources? How many calories are you consuming every day?

Get Stuart's technique book and really study it. Buy BRAWN. Get some back issues of HARDGAINER that contain material in the areas of your training that need work or that give you more information on your particular philosophy of training; and read my articles in those back issues too. Video tape a training session, and study it.

Just one thing you must be aware of when acquiring knowledge – consider the source, because there's a lot of misinformation out there that will throw you off course.

In summary

To be truly dedicated to your training goals, you must sacrifice some time spent doing unnecessary things. It doesn't require that you sacrifice time doing *necessary* things. Strength training should be an enriching part of your life – *not* your whole life.

If you find the extra time to do the things described above, I *know* it will make a world of difference to your training.

Mid-Year Checkup

From Hardgainer #61 – July/August 1999

By the time you receive this issue of HARDGAINER we will be about half way through the year. So it's
a good idea to take stock as to how your training is going so far, so that you make the rest of the year as productive as possible.

Question #1

Are you stronger now than you were at the beginning of the year?

This will always be my number one question. If you've been training consistently for the past six months, you should be stronger now than you were in January. If you aren't – why? If you're a beginning or intermediate weight trainee you should have increased your strength on the big basic movements by at least 10%. An advanced trainee should be up at least 5%. For instance, if you were training under my. guidance and were capable of completing six reps with 200 pounds on the bench at the start of the year, you would be handling at least 220 pounds by now. By the end of the year it would be at least 240 pounds for six. If you're not making this kind of progress (and your goals are to get bigger and stronger), your training isn't working. There may be many reasons for this. The following questions should help you realize the answers.

Question #2

Are you breaking the rules of sensible weight training?

If you're using a single progression format, are you adding weight at a rate that the body can adapt to, or are you letting greed run the show – making weight increases that are forcing poor form and stagnation, and possibly injuries? If you're using a double progression approach, did you really make the "goal rep" in good form? Or did you cheat a little so that you could add weight? If you want to get results, you need to follow the rules. If you've been a regular reader of HARDGAINER you know what I'm talking about. If you're new I suggest that you purchase some back issues or, more importantly, buy BRAWN. This masterpiece will get you up to speed fast.

Question #3

If your goal is to get bigger, how much weight have you gained since January?

You should be at least 12 pounds heavier by now. That's 2 pounds per month. At my facility, if someone wants to seriously gain some weight, we would be pushing for 3-4 pounds per month. How would you feel right now if, for example, you weighed 180 pounds instead of the 160 pounds you started the year at? I can tell you from witnessing this that you would feel great! So, why haven't you gained the weight? I can probably tell you. You haven't dedicated yourself to getting your six "feedings" in every day for six months. Tell me – why not? And don't make excuses because making excuses won't help you to correct the problem.

One of the major reasons for not getting your six feedings in every day is the lack of preparation. Think of how many times you knew that you should be eating and you only had a 15-minute break at work, and you had no food prepared. I've heard this scenario before – you have to plan and you have to prepare!

As I've stated before, use Sunday as your food preparation day. Make a bunch of pasta or rice, put it in a container so that it can be flavored quickly, heated up or even eaten cold. Make 10-15 sandwiches and stick them in the fridge so that you don't have to make them in the morning before work (when you should be preparing and eating breakfast). Mix up enough protein drink so that it will last you at least a couple of days. Prepare a dozen hard boiled eggs – talk about protein to go! Like anything else, if you want to succeed bad enough, you will do it. Do this so that you can make the most out of the rest of the year and be 10-20 pounds bigger.

Question #4

How many different programs have you tried over the past six months?

Four or five? You tried a particular program for several weeks but it just wasn't bringing home the results. Then you read a great article about 20-rep squats, and you were sure that they would give you

the results you desired. After about three weeks you tired of them, and you've a buddy who tells you that high-intensity training is the way to go. Of course, after a couple of weeks you're off looking for something else. On and on and on. If this is you, you better make a decision to stick with a tried and true program for at least six months, and follow the "rules" of the program to the letter! If you don't, you're in for a long haul of frustration and unproductive training.

Question #5

Do you have a lingering ache or pain that's coming from a particular exercise that's not severe enough (yet) to make you stop doing it?

If you're getting pain, something is wrong. For instance, if dips are hurting your shoulder, you're going to have to stop doing them for a while, till the pain subsides. "But," you say, "I love dips and the pain really isn't that bad." I'm not saying you have to stop doing them forever, but you better let the pain disappear and then reapproach the exercise slowly, making sure your form is perfect. If you're getting pain, you're doing damage and some day the pain will get severe. So, address it now and clean up your form so that you can enjoy doing the exercise for a lifetime.

Question #6

Have you been performing aerobic work two times a week for at least 20 minutes, and stretching before and after workouts?

In my opinion, aerobic work should be performed by everyone – period. Even a trainee who is extremely skinny should do aerobic work. The aerobic work is not going to prevent you from putting on muscle as long as you implement it correctly and are getting a caloric overload. As a matter of fact, it will actually help you in your weighttraining efforts by increasing the rate of recovery between workouts, and help to limit the fat that you gain. Most of all, aerobic work will keep your most important muscle in shape – your heart.

You need to stretch. Yes, I've read the various "reports" that stretching is not necessary. My opinion? There are more studies supporting stretching than against it. As a matter of fact I don't really care what some report says. I *know* that stretching is important – from working with a thousand trainees over the last 14 years! You don't have to devote an hour to stretching and try to become some kind of human pretzel. Our basic stretching program takes approximately seven minutes. *Seven minutes!* We do this before and after every weight workout and aerobic session. I promise you that a basic stretching program performed consistently will help to prevent injuries, and. may relieve some of the joint aches and pains that you have.

Miscellaneous thoughts

Be careful whose advice you listen to, but be respectful of someone trying to help you. Many people are giving advice that – in my opinion – is ridiculous. I don't just mean in mainstream "muscle magazines" either. The internet is full of it. Even our own HARDGAINER Round Table has its share. Now don't get me wrong, I think TRT is great! I really believe that these people mean well. Many of them are giving advice based on many years of their own experience in the gym. Some of this advice is good, but only if you're put together (physically and lifestyle wise) the same as they are. And that's the key point.

The side bend is an important secondary exercise at John's Gym. On the top is Danny Skinner using 140 pounds, and Craig Rasmussen with 125 pounds. Note the hands of Craig's spotter, just below the dumbell.

In my opinion, an authority in the Iron Game is someone who has logged many hours in the gym "under the bar" *and* has helped many, many other trainees (with various physical and lifestyle differences) to achieve their goals. I know that what has given me my understanding of this "game" is not so much my 25 years "under the bar," but logging (in training log books) over 35,000 hours of training, hands on, on a very diverse cross section of the population. *And let me tell you that I still don't have all the answers!* There are many fellow trainees out there that you can learn from – just be

careful who you listen to.
My purpose in telling you this is that I've been hearing from readers who are not selective enough in the advice they listen to. Not only are they not getting anywhere, but they are getting hurt. Some of the time, the advice that was given wasn't that bad, just not applicable to that particular trainee's physical and lifestyle "makeup." I want you to be successful and not waste years of your training life doing things wrong. Stay with the basics of sound exercise programs and good nutritional practices.

Curl challenge update

If everything always went as planned, I'd have 25-inch arms by now. About a month ago my curls were "rolling along" at a pound a week, and then I came down sick with an upper-respiratory infection. When I was in my teens or twenties this would have thrown me for a loop, but being an experienced trainee I knew that this was just a temporary set back. I was forced to miss a couple of curl workouts. So, what did I do after missing two weeks of curls? I put my old weight back on and being the "bad ass" that I am, I hammered out the reps – only to cause an injury to my elbow! *Just kidding.* I took 90% of my last curl weight and started over by using that. The next week 95%; and the third week 100%. So, four weeks after getting over the infection I'm into "new territory" again. No big deal. Listen, this sort of thing is going to happen from time to time – don't let it throw you.
To update the scoreboard I'll be up 27 pounds for 6 reps (instead of the 32 pounds if I hadn't been sick). Not bad progress for 32 weeks of training. I expect that all of you are up 32 pounds if nothing has side-tracked you. For the next issue I should be up another 8 pounds (as well as another notch or two on my arm size), along with many of my students; and so should you be if you've accepted this challenge.

Recommended reading

Leafing through some back issues of HARDGAINER I ran across one of my favorite articles. It's Stuart's article entitled " All-Time #1 Article." It's in issue #28. If you have it, I suggest you study it. If you don't, you should get your hands on it. It's great. I would like to leave you with an excerpt from this article:
"I'd be experiencing the most important motivating input of all for my unrelenting efforts on the mighty fivesome [squat, deadlift, bench press, pulldown or row, and press] – bigger muscles from month to month. How many of those who go through scores of different exercises over each year can say the same? Results are what count, remember, not hours in the gym, not exercise variety and approach according to the current commercial angle, and not keeping up with supplement fashions. Results! And they come from focus and progression."

The Art of Concentration, Part 1: The transition

From Hardgainer #79 – July/August 2002

11:45 pm Thursday

I hear my three-year-old daughter coughing so I go running down the hallway to her room. As I open her door I witness her throwing up all over the bed and herself. Ten minutes later, after cleaning her up and changing the sheets on her bed, she falls back to sleep. I head back to my room knowing she's got stomach flu and just hoping she gets some sleep.

12:20 am Friday

Round two of the throwing up. I can 't recover the bed this time, so after cleaning her up again, we (my wife is involved now) get a mattress set up on the floor beside the bed for the girl to sleep on. This time I call the doctor – he 's been seeing a lot of this problem lately. The vomiting usually stops in 12 hours or so, he says. This time I decide to sleep in the same bedroom as my daughter (her screaming convinced me). I hope that's the end of the vomiting for her sake, and then for my sake as I have a heavy deadlift workout later today.

1:00 to 5:00 am Friday

Three more vomiting sessions (at least that's what I can recall).

6:30 am Friday

When my alarm goes off, I'm not sure where I'm at, then I recognize the guest bedroom. I think, "Thank goodness I got to sleep in this morning." I feel dead, but at least my daughter is sleeping soundly.

7:15 am Friday

I've showered, I've had a good breakfast (I pat myself on the back for boiling some eggs last night) and I'm in my coat and tie heading to my first job as the Chief Operating Officer of the American Lite Co. I fired four employees the last week and this company is undergoing major restructuring. I'm feeling tired but I tell myself that I'll get in a nap before my workout today.

9:30 am Friday

I'm in transit to my other place of work, Total Fitness Inc., to train two clients and then meet with my managing partner, Mike, about several pressing issues. While in transit I eat several cheese sticks and about 3 ounces of almonds.

11:30 am Friday

I'm eating my pre-workout meal (I pat myself on the back a second time, for having two well-stocked refrigerators at the gym) and still making decisions with Mike.

12:15 pm Friday

I'm back at the American Lite Co., meeting with a bank president to try and secure a $1.5 million loan (that the company desperately needs).

1:00 pm Friday-workout time

Well I didn't have time for a nap. My mind is on the health of my daughter, and the meetings I had this morning – the things I should and shouldn't have said. My mind is also on the calls that I need to make, concerns about my brother's well-being, concerns about my parents' health, and somewhere in the deep recesses of my mind, there are thoughts about today's workout. Actually, working out is one of the last things on my mind, but it mustn't be if I'm to have a successful workout.

And that's what this article is about – transitioning from my everyday world to my workout world.

Is the itinerary above a typical day for me? No. Is it close? Very much so – minus the vomiting.

The transition

There's no way that I can just change into my workout clothes, start hitting the iron, and expect to get the best out of my body with all that other "stuff" cluttering my mind. I have to get focused on the task at hand, *and so do you.*

I've taken many trainees and taught them how to get focused on their workouts, and you wouldn't believe what a difference it makes. I'm going to describe how I do it, but you'll have to develop your own way. The "transition" is a highly personal procedure. You'll have to utilize various "tools" that

create motivation, aggression and specific concentration on the task at hand. By specific concentration I mean that you have to "pre-set," in your mind, the technique or "feel" of each exercise you 're going to perform that day.

Here's how I do it: After changing into my sweats I grab a cup of coffee – the only time I drink coffee is before my workouts. I then move to a quiet place with a desk, where I won 't be disturbed by anything. I put music in my CD player – usually various movie soundtracks that conjure up images of battle – and put on some headphones. I have my workout book in front of me and I write up today's planned workout. As I write up each exercise, I perform at least three "live" reps in my mind.

I want to explain this procedure thoroughly, and as realistically as possible so that you can truly understand how to do it. For instance, with the bench press, I feel myself laying on the bench and grabbing the bar as tightly as I can. I feel my lower- back muscles flexing, and my upper back

retracting. I feel myself take a giant breath and remove the bar from the racks. As I steady the bar over my chest I breathe out and then fill my lungs again. Now I completely focus on the muscle group that's the prime mover for this exercise. I imagine the prime mover stretching and flexing against the resistance.

With my arms extended over my chest, I can feel my pecs are completely contracted. Then I feel my pecs lowering the bar under complete control as they stretch on the way down. I can then feel the bar resting on my chest with my pecs feeling like stretched rubber bands just waiting to explode, and then in an instant the bar explodes to arm 's length, and during the entire contraction I can actually visualize the muscle fibers "sliding" together.

I then repeat this process for two more reps, before I move onto another exercise. This visualization mirrors what I concentrate on as I'm actually performing the exercise. I'll discuss this more in part two of this article. If you've never done this type of visualization, you won't believe the positive effect it'll have on your workout. When you try this for the first time, you'll be surprised at how difficult it'll be to concentrate on just three reps for every exercise you'll perform that day. Usually your mind will drift to something else. The visualization is truly a trained behavior. You'll get good at it the more you do it.

By the time I finish writing up my workout and going through the procedure described above, I've started to break a sweat *and I haven't even moved to warm up yet* !

What I've described above usually takes less then ten minutes. If I'm more rushed than normal I'll do my visualization while I'm on the bike or treadmill, while warming up. After writing up my workout I'll take a couple more minutes, with the music going full-bore, to conjure up images that motivate me – that make me aggressive. I really love that part of weight training. I love the battle. I love getting aggressive. I love being a warrior.

As much as anything else I've described here, the essence of "the transition " for me is to convert from the John who s *a husband, father, coach, businessman and friend, to the John who'*s *a warrior and needs a physical battle to fight.*

In summary

I can't stress enough the importance of utilizing your mind to achieve the most out of your training. As a matter of fact, I can state that *if you don't learn to concentrate before and during training, you'll never achieve your goals in the gym.*

If you've been a subscriber to HARDGAINER for a while you'll notice that no matter how different many of the programs are that are prescribed, there are common threads in all of them. The common thread that's easy to see is about basic, abbreviated training. The thread that's not so easy to see, or is easily overlooked, is that most of the writers somewhere along the line mention the importance of developing the ability to concentrate on the task at hand.

What I've described above is my way of getting ready to lift. You 'll have to develop your own personalized approach. Whatever method you utilize, it must accomplish three things:

a. It must get you motivated to train.

b. It must get you focused specifically on the performance of each exercise.

c. And it must make you as aggressive as possible.

That's it. Once again it's not rocket science. But as usual, the simplest things seem to be the hardest for most people to do *consistently.*

I'm very confident that if you allow yourself a "transition" period before your workouts it will greatly enhance your training efforts.

The Art of Concentration, Part 2: The workout

From Hardgainer #80 – September/October 2002

In the fist part of this article I explained how to concentrate before your workout so that you can transition from your everyday responsibilities and challenges, to the necessary mental state needed for your workout. I discussed why I feel it's absolutely necessary, and how I do it. In the second part of the article I want to continue to emphasize the importance of concentrating on the task at hand, and how I do it during a workout.

It's amazing how easy it is for the mind to drift from what you're actually supposed to be working on. I want to offer myself as an example. Not to boast, but I feel that after weight training for 28 years, successfully competing at the Division 1 college level in football and baseball, then bodybuilding and powerlifting, I'm able to focus and concentrate on the task at hand as well as anyone. But, and this is a really big "but," there are still instances when, without following proper procedure on intensifying my concentration and aggression right before a set, I could get easily distracted.

There was a time in my life when I could totally, physically (which helps mentally), isolate myself from the rest of the world while I was working out. I would hide out in The Dungeon (what my brothers and I named the gym in our parents' basement), without any phone, cell phone, pager or other humans to distract me from my workout. Also, I was at a time in my life when my responsibilities didn't include a wife, children, concerns about my parents health (and other family issues), concerns about corporate financial, personnel or management issues, etc. What I'm saying is that it requires much more effort nowadays not only to get into a state of ideal concentration, but to maintain it!

Nowadays I can't just turn off the cell phone or the pager. I have to answer the phone and return critical messages for the reasons listed above. Now don't get me wrong, I won't stop right in the middle of a set to answer the phone, but as soon as the set is over I have to call back and check that everything is all right. I also want you to know that my level of concentration, and hence performance, is many times above when my responsibilities were much less.

The reason I'm offering all this personal information is to lead into the point of this article, which is to emphasize the importance of concentration *during* a workout and to show you how to do it *in spite* of all the things that can distract you.

Intensifying and *maintaining* concentration

The procedure that's used before the workout to shift your concentration from everyday responsibilities to the mental state that's necessary to have a productive workout, is exactly the same as the one to use, specifically, right before a set. And it doesn't matter whether or not you've been distracted between sets. This procedure will get you back on track if you've been distracted, and if not, will *intensify* your concentration for the upcoming set. The goals of this procedure are twofold. It must get you focused specifically on the "feel" of the upcoming exercise, and it must *intensify* your aggression. Here's how I do it.

About one minute before the set, I'll close my eyes and practice one or two reps of the exercise in my mind. I'll experience the exact "feel" of the movement. Many times I'll actually simulate these reps without the weight. For instance, before a set of dumbbell rows I'll "feel" in my mind the dumbbells in my hands, I'll feel how my lats stretch when my arms extend, I'll feel my lats initializing the contraction and then exploding to the contracted position at which point I'll feel my lats lowering the dumbbells – lowering, lowering, lowering – then stretching; and with another strong contraction the dumbbells are at the top position again.

This is *my* way of doing it. Yours may be different. I practice (and teach) feeling the prime mover of any exercise flexing and then lengthening (stretching) against the resistance. This technique helps your body to teach your proper biomechanics. Once I've completed this rehearsal, I take another moment to get aggressive. I get myself "up" to attack the weight.

Don't misinterpret what I'm saying and think I go around shouting and banging my head against a wall to get up for a set (although this works for some). That's not my way. My way is relatively quiet. But I've been told you can see what's going on in my eyes. The point is to go into the set aggressively.

I want to come back to something I said earlier concerning your workout environment. If you can, you should shut out the outside world when you train. You may be at a stage in your life where all communication can be cut off for an hour or so. I left that stage some tome ago, but I haven't let increased responsibilities decrease my concentration one iota. And as I stated earlier, my concentration and workout quality are better than ever.

In summary

I can't stress enough the importance of utilizing your mind to achieve the most out of your training. Really put the procedure described in this two-part article to the test. You may want to start out trying it the way I do it, and then let time and experience help you to develop your own way. Regardless of which of the two ways you do it – mine or yours – I'm confident that you'll start deriving benefits right away.

Do you really understand "The Message"

From Hardgainer #42 – May/June 1996

During the past twelve months or so that I've been writing for HARDGAINER, I've received hundreds of letters and phone calls with various comments and many questions. After receiving all this input, one thing has become very clear to me – you're reading the information in HARDGAINER, but many of you are failing to get the message.

"The message" I'm referring to is the true understanding of, and practice of, basic and abbreviated routines, and progressive poundages in good form. That is easy to say, but to put it into practice is a very different matter. All the authors who write for HARDGAINER follow this general philosophy even though their individual approaches may be very different from one another.

There are a handful of mistakes/problems that seem to cut across the entire spectrum of the readers that I've had contact with. I've compiled a list of these, together with what I feel should be done about them.

#1 Expecting results but not grasping the effort required

The first question I generally ask trainees who are not getting the results they should be getting out of a well-designed program is, 'How much effort are you putting in?" If they ho-hum around, or begin to tell me about how much sleep they get, or how well they eat, or how they never miss workouts, I know they aren't pushing or pulling the weights as hard as they can.

Getting bigger and stronger requires as much effort as you can generate for *every* "live" rep you perform, for *every* "live" set you perform, for *every* 'live" workout you perform, and for many, many years!

It took me six years of dedicated all-out effort training (much of it spent sick or injured because I was using stupid four to six day per week routines) before people *just started* to notice that I even lifted weights. After learning how to train properly it took me a further seven years to reach the 400-lb bench press, 500-lb squat and 600-lb deadlift marks at 5'10" and 250+ lbs.

So, for many of you, all you have to do to solve your training problems is to try a lot harder! Of course that's easier said than done, but it's still the truth.

Many of you are misusing the concept of intensity cycling. You 're losing effort in the process. You're cutting your working weights back to 80%-85% and then adding a small dose of iron to the bar each week like you're supposed to – but, you're letting down in the effort department.

From what I've been hearing, you're expecting the "little gems" (1-lb, 0.5-lb and 0.25-lb plates) to "carry you" to new levels of strength and size without any additional effort. This just won't happen. This practice is a misuse/misunderstanding of the "little gems." Many of you cruise to 90% of your previous best by utilizing the larger of the small plates, but the amount of effort you're putting out has slowly dropped, because the body didn't "need" to keep it up to move the reduced poundage. You have to guard against this by staying aggressive during the early build-up phase of a new cycle.

The addition of small doses of iron to the bar is a great way to train *if* you're putting out 100% effort. The small plates are only a tool, and any tool is only as good as the effort put into using it.

#2 Adding weight to the bar before you've earned it

Of all the correspondence I've had with readers, this ranks second only to the lack of sufficient effort. As I've said before, and as many of the other HARDGAINER authors have stated, it takes time to get stronger; and hence bigger. Many of you have been brainwashed by the images of steroid-bloated bodies, and mainstream writers, that try to convince you that you can build a great physique quickly. This is just not true! You have to follow the rules (promoted in HARDGAINER) and be patient. One of these "rules" is to add weight to the bar at a rate the body can handle. In a rush to get bigger, faster, many of you are adding weight in too large increments (5-10 lbs, when you're already maxed out), or adding increments too fast. All this does is get you plateaued faster, or injured sooner! In order to further illustrate my point, I want to use two of the most basic training approaches as examples – "single progression" and "double progression."

The single progression method is where there is a fixed rep target (e.g., 5 reps) and when you get close to, and eventually surpass your previous best weights, you add a small amount of weight to the bar – generally 0.5-2.5 lbs, depending on the exercise. When I say small increments I mean specifically, the following: Add 0.5-1lb to shoulder presses, arm work, grip work, and calf and abdominal exercise; add 1-2 lbs to various bench pressing and lat exercises; and add 2.5 lbs to the "big boys," i.e., squats and various types of deadlifts. Many of you are violating this basic principle and it's why you are not succeeding.

Now for the double progression approach. This is where a trainee uses a weight that he can only perform, for instance, 8 reps with, to failure. He then uses this weight for enough weeks till he can perform, for instance, 12 reps in good form. At this instance he should add approximately 3%-5% to the bar, which should then allow the performance of about 8 reps again, to failure. What many of you

are doing is adding that 3%-5% before you've earned it. Making 11 reps is not the goal, 12 reps is. You should use the same weight for enough workouts until you get the 12 reps in good form. Now you've earned the right to add weight to the bar. *You've built real strength instead of just building a phony ego.*

If you continue to break either one of these rules of progression, your technique will slowly deteriorate, and not only will you fail to make real progress but you will eventually get hurt.

Maybe you don't believe results will come if you follow these "rules." Let me offer two real-world examples to demonstrate what can happen if you follow the "rules."

Andy Greenspan, MD

I started with Andy a little over a year ago. He was 37 and had never weight trained before. At 5'1" he tipped the scales at 150 lbs. His bone structure is small to medium. I started his squat program with an empty 45-lb bar. I added 10 lbs per week for the first 6 weeks, 5 lbs a week for the next 10 weeks, and 2.5 lbs for the last 26 or so weeks. Andy can now squat 270 lbs to parallel for 5 perfect, 100% effort reps, wearing only a belt – no wraps or suit. He weighs 190 lbs now and I don't see a plateau in sight.

Mike Dodd

I started coaching Mike about a year and a half ago. He stood 6'4" and weighed 190 lbs. Although he had been training for several years (the six-days-a-week garbage, and eating aminos instead of food, so he wouldn't get "fat"), he looked like he never lifted before. Mike also had a "glass" back that would get hurt at the drop of a hat. (He actually severely pulled his back muscles once picking up a sponge to wash his car.) I started his sumo deadlifts at 85 lbs for 15

reps. The other day I witnessed Mike deadlift 285 lbs for 15 reps at 240+ bodyweight, and it looked easy. There is no sign of him slowing down. By Christmas 1996, I predict (at 2.5 lbs a week, with a week or two of rest mixed in) that Mike will deadlift near 400 lbs for 15 reps. I'd put money of it.

These men aren't genetic freaks. They just regularly add a small dose of iron and try as hard as hell every time they lift. They follow the "rules." I could share many more examples with you, but I think you get the point. Add a small increment per weight increase once you're training hard, stay consistent, keep putting out 100% effort, and the bar will grow, and so will you.

#3 Misunderstanding plateaus

Another area where many of you miss the boat is determining when a cycle has come to an end and when you should take time off before starting a new cycle. Many of the readers I have talked to have ended a training cycle because the weights "started to feel heavy ." Just because a weight "feels heavy" doesn't mean the cycle has come to an end. All of the weights in all of your exercises are supposed to feel "heavy" when you're using your top weights. Many of you are expecting the weight to build on the bar and somehow feel light or comfortable. This is not how it happens.

I've squatted with 650 lbs on my back, and when I come to think of it, putting 300 lbs on my back still feels "heavy ." So don't let the bar psych you out just because it feels "heavy." Get aggressive, make your reps, and accept the fact that the bar is supposed to feel "heavy ."

If you feel tired after a workout, and the following day, it does not mean that you're overtrained. You're supposed to feel tired after a hard workout, the next day, and possibly a little the day after that. *You' re supposed to be sore and tired when you're pushing hard!* It would be rare if after a hard workout you weren't tired. This does not mean it's time to back off! If you're still tired on your next scheduled workout day, then take an extra day off.

If you 're fatigued for a week or more, and you're losing strength, it may be time to back off or at least cut back on your workout volume. But to take time off just because you're tired after a workout, *no way!*

#4 Nutrition confusion

I can't believe how many times a trainee has told me he's not gaining weight despite eating "like a horse." They assure me they're consuming 4,000+ calories a day but, after I do an analysis, it's more like 2,000 calories. Count your calories for a day. Find out how much you're truly eating. Then slowly increase your intake by first adding additional "feedings" if you 're currently only eating three times per day. You need to get to 5 or 6 feedings every day. Then start adding a little more milk to each feeding. If you're having major problems gaining weight, build up to 1-2 gallons of milk a day. Make sure you're mixing in some fruits and vegetables every day, along with lean meats and plenty of potatoes, rice and

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pasta. Keep the junk food to a minimum. That's it! If this seems too simple to work, let me give you a real-world example.

I started coaching Danny Skinner via telephone/fax three months ago. After cleaning up his training program – he had been using a good HARDGAINER training program but was making some major mistakes in application – we discussed his diet. He assured me he ate "like a horse," drank "a lot" of milk (only 2 gallons per week), but couldn't gain weight. In a nutshell, I explained about progressive eating (like above) and I stayed on him to make sure he was doing it. Well, Danny has gained over 20 lbs in the last three months and increased his strength quite a bit. Keep it simple, but progressive. It

works.

#5 Letting go of the past

Many of you are hanging on to favorite exercises that continue to damage your body or, at the least, provide minimal results relative to the potential damage they could cause. These include machine hack squats, squatting with your heels elevated, flyes at various angles, preacher curls, to name a few. Here's a simple rule of thumb: If an exercise causes consistent discomfort in a joint, no matter how technically perfect you perform the exercise, it needs to be dropped from your program, permanently. The exercise that I have seen to be the number one culprit of problems is the bent-arm fly. In my many years of experience it causes shoulder problems for most people. (But like anything else, a few people seem to be able to get away with it.) No matter how "good" it feels on your pec muscles, if it tears up your shoulder joint, you need to drop the exercise, period.

Many readers use sensible training programs but still train a favorite or lagging lift or body part three times a week. I hear this most often with arm work. *This will not work!* Quit holding onto this practice.

Let me give you a personal challenge. Measure your arms flexed, cold. Now, I dare you to do standing barbell curls, and close-grip bench presses (or dips if you can do them without shoulder pain) one day per week for the next four months. Take 2 or 3 weeks to build up to a weight that requires a maximum effort to make a fixed rep goal for 3 "live" sets (e.g., 90 lbs for 3 sets of 6 reps on the barbell curl) and then add 1 lb a week for the remaining three months or so. Using the example I gave, you should be able to curl at least 102 lbs for 6 reps. Now measure your arms again. The results you'll achieve in this period will be better than when you were hitting your arms three times per week. The reason why I know this is true is because I've seen it work over and over for the past ten years that I've been coaching weight trainees. Now prove it to yourself.

Read, Grasp, Apply, Persist, Achieve

You should recognize this as the philosophy of HARDGAINER for using the information that is presented to you. Many of you are only "doing" the first word. Add the next three and you will justly earn the last one. Now go and get to it!

New-Year Checklist

From Hardgainer #89 – April-June 2004

Let's start 2004 off right, with a commitment to making it your best-ever training year. To help you accomplish this, here's a checklist. If you really use it, it'll get the job done.

1. Your workout program

Get out last year's training journal, and go through it with me. We're going to use it as we go through the checklist. We need to find the areas where you didn't do what you know you were supposed to, and we're going to find the things that you know you shouldn't be doing, but you kept doing them anyway, and probably ended up getting sick, hurt, or overtrained.

Structure your workouts properly

How many days per week were you working out? If you were able to train more than three times per week, then one of two things was happening. You weren't training as hard as you could be, or you were taking steroids. After being in the game as long as I have and after working with so very many trainees, I have very few who strength train three times per week. I've found that you can make much more progress strength training two times per week. And isn't that what it's all about, making progress?

If you just love training and can't fathom being in the gym only twice per week. I suggest you spend another two days performing aerobic work (which will not stress you systemically). This gives you four workouts per week.

Take a good look at your journal. Did you try and hang on to a three-times-per-week program? If so, take a good look at the third one each week. Was it consistently sub-par verses the other two? Did you make any notes on how you were feeling? Do you remember having to pound two or three cups of coffee to get that third workout going? Were you constantly nursing a sore elbow, back, or shoulder? Did it really get you the results you thought it should?

Let's get a good workout structure for the coming year. Here's a generic workout program, for training twice a week. Train each workout one time a week.

Workout A

1. Crunch: 1 x 5-20
2. Squat: 2 x 5-15
3. Stiff-legged deadlift: 1 x 10-15
4. Bench press: 2 x 5-15
5. Dumbbell row: 2 x 5-15
6. Calf raise: 1 x 5-20
7. Static barbell hold: 1 x 60-90 seconds

Warm-up sets are additional.

Workout B

1. Side bend: 1 x 5-15
2. Bent-legged deadlift: 2 x 5-15
3. Military press: 2 x 5-15
4. Barbell curl: 2 x 5-15
5. Close-grip bench press: 1-2 x 5-15
6. Wrist curl: 1 x 15-20
7. Reverse wrist curl: 1 x 15-20

Warm-up sets are additional.

I kept the rep range broad because the goal reps that you choose to work at need to be based on your goals and training experience. I generally recommend new trainees start out utilizing higher reps in order to help develop motor skills (technique), and to keep the overall force on the connective structures relatively low (compared to sets of five reps and below).

To learn more about how to structure a workout program in detail, see my article in issue #52, entitled "How to design your own training program."

Choose productive and safe exercises

There are many exercises you could substitute for the ones I've listed. But, they have to be productive and safe. I can't tell you how many trainees I've worked with, or have consulted with, that hang onto

“old favorites” even when they cause injuries, or that they think are going to produce results better than a safer exercise. Oftentimes, though, a good exercise is not productive or safe simply because it's not performed in the correct way.

Here are the main productive and safe exercises, if performed correctly:

Legs

Squat, bent-legged deadlift, stiff-legged deadlifts, leg press, leg curl, glute-ham raises

Chest

Bench press with barbell or dumbbells, dip, weighted push-up

Upper back
One-arm dumbbell row, chest-supported machine row, chin-up with supinated, pronated, or parallel grips, pulldown with various grips
Lower back
All deadlifts, back extensions, arched-back good morning
Abdominals
Weighted feet-supported crunch and bent- legged sit-up, hanging leg raise, side bend
Shoulders
All overhead pressing, barbell or dumbbells
Arms
Standing curl with barbell or dumbbells, close-grip bench press, dip, bench dip, pushdown
Forearms
Static grip work, gripper machines or hand grippers, wrist curl, reverse wrist curl, finger extension in rice
Calves
Standing calf raises on a machine, or with barbell or dumbbells

Make sure your technique is good

First make sure you know what good technique is. Get Stuart's technique book and study it. I've written several articles for HARDGAINER covering this topic. Once you know what good technique is, you need a method that holds you accountable. The best is video tape. If you don't own a video camera, borrow one, or rent one. Video a workout every couple of months. and analyze it. Take the time to break the tape down. View a specific repetition of a specific exercise over and over again. You may want to get out of the chair you're sitting in, and practice what needs to be changed.

For example, did all your squats really make it to parallel, or did the last two or three get cut a little short so that you could make your reps? Perhaps you've been adding weight too fast. Or. maybe you just weren't concentrating hard enough on getting to parallel. Are you leaning back to make your last couple of reps on curls? Are your elbows moving backward to initiate the movement, and then forward to complete it? If so, you're missing out on really stimulating your biceps.

Have your workout journal with you so that you can write changes down. Make a list at the front of your journal of what you need to work on for each exercise. Then, transfer that note to the top of the workout page for the particular day that you're performing that exercise, so you can remind yourself what you need to focus on. Make it a priority this year to get it right. Really earn the next pound or two on the bar. Don't fool yourself. Use video to hold yourself accountable.

Commit to working hard

Even among the pages of HARDGAINER there are many different training programs to choose from. Yet, each of these different interpretations of sensible training has examples of successful results. And even some programs that are not so sensible produce some, but not optimal, results for some trainees that aren't on steroids.

Outside-of-gym factors held constant, the explanation is old-fashioned hard work (resulting in progression) performed for a long time. That's it! What has become known as high-intensity training will work for some trainees, because they like it, and will work at it for a long time. Single progression will work for some trainees, because they like it and will work hard at it for a long time. Periodization will work for the same reasons. Same for double progression. Now, here's the flip side: Some trainees won't make progress on anything because they either don't want to work hard enough (or aren't

conditioned to work hard enough), or won't stay at it long enough.

Let me give you my definition of what is hard work. If you're not just starting out, or starting over on a weight-training program, then the last rep you perform on any live or work set should be the last one that you can perform while maintaining good technique. This is the ideal, but it's not realistic that you'll be at this spot every workout.

Every four months or so, take the last live set of each exercise you perform, and go to muscular failure. Find out if you have any reps left in you. Many trainees that I've started out on a singleprogression-based program get into such a training groove that each workout becomes automatic – they continually add the scheduled pound or two to the bar, and keep making their goal reps. This is great, and what makes the single progression approach work so well; but, it can work against you. It can lull you to sleep, by keeping you in autopilot. By testing yourself, you may find, in some exercises, that you have extra reps. If so, adjust your rate of progression for the next workout by, for example, adding three pounds instead of the usual one, and this will then challenge your body at the right level. As trainees become more experienced at using single progression, I instruct them to “take the extra rep" in every workout, if they know they can make it. But, it takes a while to develop the instinct to know when that is.

If you train to failure, make sure you don't fool yourself. I've had trainees who I've seen purposefully slow up the last rep or two of a set so that lactic acid will accumulate faster so that the set will

terminate prematurely. They do this because they don't want to put out the extra effort or tolerate the pain associated with the last three or four reps that they were really capable of performing.

Base your training on getting stronger

Take a look at your training journal again. Was there any time throughout 2003 that you tried some "bomb and blitz train for the pump" program? Or, was it a program based on "positions of flexion"? Or, maybe you tried to "shock" your muscles into new growth by using "instinctive" training where you change your exercises very often, depending on how you feel. This year, make a commitment not to get sucked into trying anything that's not based on progression. In order to gain as much muscle tissue as your body will allow, you must get progressively stronger. Getting bigger has nothing to do with “the pump,” ”positions of flexion,” or “shocking” the muscles. It has nothing to do with anything outside of simply getting stronger – period!

2. Nutrition

This is where most trainees really drop the ball. It never ceases to amaze me how little trainees who want to get “as big as possible,” eat. They think the training will do it all by itself. Wrong! You must know what's going on in your diet. And then, do what's necessary to get the results you want.

Do you really know how many calories you get per day? Or, are you just guessing? What about protein? Is it where it should be? Or, are you guessing again?

These things matter, a lot. If you want to get big, then work on getting up to 5,000 calories per day, every day. Then, you'll start getting bigger and stronger (as long as your training stimulates gains). Take a few days and write down everything you eat, and when. Then, get a calorie and macronutrient counter, and figure out what's really going on. Slowly increase your caloric intake, if your goal is to gain maximum muscle mass, so that you're gaining a minimum of two pounds per month.

If you really want to make this a great training year, and change your body, you'll do what's necessary. If you won't, then you really don't want it in the first place.

If or when you find out that you're not eating enough, don't try and cram down five or six 1,000-calorie feeds. All that will do is make you sick. To increase your caloric intake, focus first on "feeding" every three hours. Just get in all your meals. Once you've mastered this, start increasing the size of each feed. Consume good quality protein at every meal. Prepare, prepare, prepare! In order to make this work, you must have the proper food available, so make sure you have it, and then prepare it, in advance. For more detail, see my article "How to eat to get big," in issue #54.

3. Do aerobic work!

Look at your training journal. Were you consistent with aerobic work! If not, why not! Are you lazy, or don't you believe in the benefits of aerobics! If you want to get as big and strong as possible, you must recover from your strength training from workout to workout. Aerobics contribute greatly to this. They also aid with recovery between sets, because the aerobics will get you in and then keep you in good cardiorespiratory condition. During the rest interval between sets, you'll recover more completely before you hit the next set, allowing you to lift more weight for more reps over time.

Aerobics, combined with stretching, is one of the best ways to prevent injury, which in turn will allow you to train consistently. Consistency in training is one of the most essential ingredients for reaching your strength and size potential. Aerobics will also aid you in controlling bodyfat gain while on a high-calorie eating program, and will go a long way in keeping your heart and lungs in good shape.

Aerobics will help you lose bodyfat if your goal is to reduce your bodyweight. No more excuses. Do your aerobic work this year!

4. Stretch!

Did you stretch? Did you do it with some effort, or was it some heartless pantomime? Do you realize that, following consistent stretching over time, some of those little aches and pains (and possibly the ones that aren't so little) would go away? Stretching is simple, and doesn't require a lot of time. You don't need to spend more than eight to ten minutes before and after your workouts (both weight training and aerobic sessions) to reap tremendous benefits. You must take your stretching seriously. Concentrate on the muscles that you're stretching, and this will help you to focus on the muscles that you're trying to work when you get to the lifting.

If you haven't been stretching, or haven't been doing it properly, write it down, and make it a priority.

5. Motivation & discipline

You've got to have a clear picture of what you want to accomplish this year. The goals must be clear, realistic, and *in front* of your face (and hence your mind) as much as possible. If you skip this part. your achievements at the end of the year will be compromised.

Decide what you want to accomplish, and *write it down*. Make multiple copies of your list of goals. so that you can put them up in various places around the house, in your car, and at work, so that they are constant reminders of what you want to accomplish, and what action you're going to take to get the job done. If your goals are “out of sight,” they will be “out of mind,” too.

Make your goals precise. To simply write down that you want to get bigger and stronger, won't do diddly. If you currently weigh 150 pounds, then write down “weigh 180,” for example. Then, get specific and write down actual girth goals for each muscle group, for example, “Legs: 25 inches,” “Arms: 16 inches,” and so on. Write down what you should realistically be able to achieve. And write down your strength goals in all the exercises you'll be performing. Make a list, for example, “Squat: 350 for five,” and “Bench: 250 for one.” Do this for all exercises, not just the big ones.

Paint a specific picture of what it is that you're working toward. Don't look at this as a chore. It should be fun. Dream a little, but keep the dream realistic. If you want to take this further, write down your goals out to three years and five years.

There are probably things you've done right in the past, to make some progress, but there are things that you haven't done that are holding you back. Unless you identify these areas, and keep them in front of your face, 2004 will be no different than 2003. This is where you need to be honest with yourself. If you keep a detailed training journal, it can help point you the way. Go back through the checklist presented in this article, and create your own checklist of actions you need to take that will make this year your best training year ever. Make multiple copies of the checklist, and put them up everywhere.

You need a copy right beside your bed so that you can see it first thing in the morning, and before you retire at night. You need a copy placed on your mirror in the bathroom, so you can see it when you're brushing your teeth or shaving. You need one in your car. And you should have one at work. *Then* you'll be able to keep yourself on track.

I know you're thinking that you don't know anyone who has done this, and besides, you can remember the checklist anyway. How many trainees do you personally know that are experiencing great success? Second, if remembering what you need to do is adequate, then how come you're not satisfied with how your training is going?

Let me give you some examples of how to put together your action checklist. First, at the top, write down your specific goals. The action list will follow. Let's say that during 2003 you did an inconsistent job with getting ample protein every day. So, write on your checklist “Eat protein everyday!” This will not work unless it's in front of your face everyday, throughout the day. That's why you need to put this goal sheet up in places that you'll see throughout the day.

Perhaps last year you did a good job of packing on bodyweight. You gained 30 pounds, but too much was fat, and you get winded walking the flight of stairs to your office. You didn't put in the aerobic work you should have. You'd do well for a week or two, then “blow it off again” for a couple of weeks. With consistent aerobic training you'd have gained much less bodyfat, and you wouldn't get winded climbing a set of stairs. Write it down: “Do your aerobic work, lard ass!” Notice how I worded that. Don't just write down “Do aerobic work.” It has no punch. Be outrageous. Make sure your goal sinks in.

When you get into the summer, and have had five or six months of great training, update the goals. You may simply want to add “Training great, keep at it!” Or, maybe you're still not eating consistently enough, so add “Prepare more food, stick man!”

I've given you several examples so I hope you've got the gist of how to do this. Once again, *write it all down.*

Outside of the specifics that I've covered, there are four main areas that I especially want you to work on:

1. Determine specifically what you're going to achieve.
2. Stay focused on your goals.
3. Find the areas in your training, as well as your conditioning and recovery processes, that need work.
4. Find ways to hold yourself accountable.

Accomplish all this, and I'm confident your training will be the best it's ever been. Train hard, and train smart. Good luck.

The Hardgainer Tag

A good thing gone bad.

I believe this has become the plague of 21st century weight training. I'll get back to that later.

I want to state that this is not a personal attack on anyone. This is simply my professional opinion based on 20 years as a professional strength coach. The motivation to write this article was specifically stimulated by the information that I am constantly receiving from around the world.

The Hardgainer moniker and the training information that went with it did a lot of good for the strength training world - at first. It got trainees away from the pump and blitz, overtraining volume and frequency training methodologies presented by the mainstream muscle media which is proliferated by nonsense training advice from the steroid-using bodybuilding fraternity. This “fraternity” by the way, makes up but a fraction of the people involved in strength training and bodybuilding. And the steroid users have NO IDEA of how to really train. That is to train without using drugs, in other words “real training.”

This “Hardgainer” training advice, from various sources, pointed out the pitfalls, fallacies and downright lies that were being propagated by the mainstream muscle media. This misinformation was getting trainees nowhere, or at least helping them fall short of what they could accomplish. This was accompanied by years of wasted training, millions of dollars wasted on useless supplements, frustration, and many, many injuries. The sensible Hardgainer training information also got trainees on the right track of training to get stronger to get bigger - instead of the “pump and blitz (glitz), oil your body, stare into a mirror, and surround yourself with big breasted females”, training advice. This stupidity suggested that trainees train up to six days per week twice per day ,just plain stupid amounts of volume and frequency. I could go on and on about this but I”m sure you get the point.

So, a world of Hardgainers was born, trainees who trained for real; without drugs, training two to three times per week, on abbreviated programs relative to the nonsense mentioned above which would overtrain a gorilla. They focused on getting stronger on big exercises that produced real world results versus going for “the pump”by doing five sets of benches, five sets of incline benches, five sets of flies, and five sets of cable cross-overs with little sissy weights that my six year old daughter could throw around. The point is, to be a Hardgainer as I just defined it above, was a good thing, it was a great thing.

The Plague

But now, it has taken a turn for the worse. Actually, it took the turn several years ago. What was a whole culture of trainees who learned to train in a real, drug free fashion, has become a group of trainees who have gotten brainwashed into thinking that being a “Hardgainer” means that they have some kind of disease, or that they are some kind of genetically inferior species. What this has produced are way too many trainees who are basically afraid to train, or better stated they are virtually paranoid of overtraining or worse yet getting hurt. Now, believe me, I believe in training in as safe a manner as possible. If I didn't, I wouldn't be in business as long as I have been. You should try to minimize risk as much as possible but there is always a risk. So, these modern-day Hardgainers are now training in a ridiculous fashion once a week, once every two weeks, and some even once a month! AND, they won't do any exercise for more than one work set. They also avoid productive exercises that they have been taught “won't work” because of their genetics or that they might get hurt. Keep in mind that I'm speaking from experience here,this is what I've been hearing from trainees around the world. What is most disheartening to me is that they were taught and now believe that they should set their sights low; that they can't achieve much, due to poor genetics whether they actually have so-called poor genetics or not! Accept it and be happy with it is what they've been told. Yeah, that'll fire someone up to train. Go out and bust your ass for a whole lot of years and maybe you'll achieve mediocrity. Pumps me up (sarcasm intended).

So, they limit themselves before they even start. This is sickening and it makes me mad. It makes me mad because I've personally trained real “true Hardgainers” and they have produced results that are anything but mediocre. And then there are the many trainees that I have personally worked with who considered themselves true Hardgainers who were anything but and they have produced outstanding results.

What has developed are two categories of Hardgainers; the very few that are true Hardgainers and the other very, very large group who think they are but aren't. Let me hit both.

The True Hardgainer

So, what is a true Hardgainer anyway? Well, here's what I think it is; a severely small-boned adult whose muscle is mostly composed of Type I and Type II-A muscle fibres throughout the entire body. The Type I fibres don't have the greatest potential for growth, but the Type II-A have good growth potential; and they can be converted to take on the attributes of the Type II-B which have the greatest potential for growth. That's it that is my definition. Doesn't sound like some kind of diseased individual to me? And so, what if you are a true Hardgainer? Are you destined for, at best, mediocrity? In my professional opinion the answer is a resounding NO! Let me ask you; just because you have a small bone structure and small muscle bellies why does that limit muscular growth? It may occur more slowly, but does it really limit growth? You may answer; well I just wasn't born with a proliferation of muscle cells that have the ability to get bigger and stronger. My answer; How do you know? And so, what if you are? Have you tried for ten years training properly (not the once every millennium program)? Eating properly? Do you believe the arm-chair theoreticians and their theories about muscle growth? No one is even sure how a muscle grows! They are just theories not scientific fact!

Well, your next question would logically be; how big and strong can I get? My initial response is; Letâ€™s find out and I'm confident it's much bigger and stronger than many so-called authorities would have you believe. But I assure you that if you buy into the mindset that as a Hardgainer, if you train real hard for ten years maybe just maybe you'll achieve a 15 inch arm- all you'll do is train incorrectly and eat poorly for ten years and maybe all you'll achieve is a 15 inch arm. You just won't have the motivation to do what needs to be done. And don't ever underestimate the power of being motivated. All you will have done is limited yourself mentally, killed any real burning incentive that you had to train, and you'll never produce the 16½ to 17 inch arm, the double-bodyweight squat, or bench press with one-and-half times bodyweight, that you should have had. I'm telling you, that you should dream big, train smart, eat right, and find out where you actually end up instead of trying to figure it out ahead of time and shooting yourself in the foot before you even start.

The non-Hardgainer Who Thinks He Is

As I stated above most trainees are not true Hardgainers. Let me take that further- almost all the trainees around the world are genetically regular ie, they are neither true Hardgainers nor genetic superiors. As a matter of fact, most trainees are a little bit of both. Boy that statement really throws a wrench in labelling someone! Everyone has a “bodypart(s)” of their body that grow muscle more easily than other parts of their body. You may have a proliferation of muscle bellies in your back and not nearly as many in your pecs; this is my case, but you wouldn't guess it now if you saw me. Also, everyone has a lift or lifts that they get very strong on more easily than other lifts. And if you want to try to figure this thing out via how big your bones are, forget it! You may have small boned wrists and big boned knees. You are a combination of what is known as somatypes. So, almost every trainee is part Hardgainer or part genetic freak! So, what the heck should we label you? How about “Regular”.

Here is a great real-world example of what I'm talking about. I had a gentleman come into train with me from out of the country. Before he came in, he assured me that he was a true Hardgainer. From all the reading he had done he believed that he wasn't destined for any further improvements in strength or development. He was busy telling me every genetic reason under the sun why he couldn't succeed. He was going on about his wrist size, to the length of bones, to the physical characteristics of his parents and grandparents, to an in-depth analysis of somatyping. I could have sworn that we were going to get into the structure of his DNA next. Well, when I laid eyes on this guy I about went in my pants. He was 5ft10' and 240 pounds; too much fat but plenty of muscle! My first thought was this guy has been severely brainwashed. A Hardgainer my butt!

Way too many regular trainees are killing potential results because they consider themselves Hardgainers. They are on such a limited training program, along with poor eating and recovery habits which will produce, at best, very little in the way of results.

The Real Reasons why you're Not Getting Results

There are two reasons:

1. You are a true Hardgainer (remember this breed is very rare) and due to your belief system “I'm not genetically suited to achieve much” you're either not motivated to do the things that are necessary to achieve significant results, or due to what you've been taught as proper training for a Hardgainer you're not on a

productive program that has you doing the things that are necessary to achieve significant results.

2. You've been training incorrectly, and eating incorrectly, so you have received little in the way of results, and this, of course, makes you a Hardgainer; which is not accurate, so you now under-train and under-eat and continue to be under-dedicated. What a viscous cycle.

What to Do

Start by not labeling yourself anymore. Just consider yourself a regular trainee with great potential. Then seek out real training advice for non-steroid using trainees. To go into specific training advice is beyond the scope of this chapter. Read the chapters Designing Your Training Program and How to Eat to Get Big (from my book: REAL STRENGTH REAL MUSCLE) to learn how to do things right. Don't just read these articles, study them. Once you know what to do, then make a commitment to do everything right; train properly and consistently, eat properly to gain muscle, get in shape (cardio wise), and work on your flexibility.

In Summary

If you have a muscle and if the rest of your bodies processes are okay; you can breathe okay, heart works okay, can eat and digest food okay, etc., then that muscle can get much bigger and stronger. Yes, its that simple and don't let anyone tell you any different. By all means don't let anyone steal your dreams. You've been hammered with: “be realistic in your expectations as a Hardgainer don't expect too much for you'll be let down and just end up going nowhere”.

Well, I've got one for you; BE UNREALISTIC then, versus what you've been taught as a Hardgainer, DREAM BIG but BE SMART along the way. No one has accomplished anything remotely great by thinking small. And I'm not living in fantasy land by giving this advice and I'm not asking you to join me there. As a matter of fact, I'm knee deep in reality land working daily in the trenches as I have been for 20 years now and feel that I have a pretty good handle on what can and can't be done. You can do much, much more than you think you can.

Dream Big and give yourself the motivation to accomplish **Big things.**

Making you think

How badly do you want to get big and strong? Real bad- right? Then did you prepare enough food on Sunday (sandwiches, rice, oatmeal, protein drink etc.) to last you to at least Thursday? Honestly, answer the question; did you? What about aerobic work; did you hit it a couple of times last week to help recover from your workouts and to get your heat and lungs in shape to help you recover faster between sets? Have you been stretching to prevent injury?

I cant tell you how many trainees that I have worked with think they are really doing the best that they can- but in reality they fall way short of true dedication. And when they aren't getting the results that they feel they have earned by busting butt in the gym, they almost always blame the “program” (the solar system, the dog, their biorhythms, or almost anything else outside of what I mentioned above). Now, I'm not in any way suggesting that you need to live an unbalanced life where all you do is devote every waking hour to training and eating. You've got to work, some of you have to study, you have to take care of your significant other, some have to take care of your children, and you need to have a social life and spiritual life (and believe it or not maybe even a hobby outside of weight training!). But there is still PLENTY of time to train, do aerobic work, stretch and prepare food. And this last one is really a biggie. Its where most trainees falter. You need to make a decision. Do you really want it or not? Well if you're not willing to do what needs to be done, don't complain about not getting the results that you desire.

You know, when you combine proper nutrition with proper training the results can be staggering. One of our new trainees, a high school football player put on 21 pounds in 10 week while in season. He trained just two times per week for a half hour each session- after football practise when he was already tired. And no, this wasn't a 110 pounder who put on the 21. It was a 6'4”, 221lbs defensive end. The big secrets are; stimulating training that allows time for recovery and a CALORIC OVERLOAD- some big secret. After 20 years of strength coaching this is the primary areas where hard training trainees fail. You cant build a building without the proper bricks, steel, lumbar, mortar etc., no matter how many construction workers are running around. I hope you get my point here. Don't waste all the effort you put into a workout by not giving the body ALL the material it needs to take advantage of the stimulation that you created. This leads me to something else most trainees don't think about: when the growth, or change in strength, actually takes place. And its not when you're training.

I want you to start looking at the days between training differently. I want you to start viewing these days for what they turely are- they are THE opportunity for change; for strength and size gains to take place. The day that you train only gives you the CHANCE for change- but the actually change takes places in-between workouts! As simple as this is to understand, most trainees don't focus on the very significant importance of this. Hey, we all get fired up to lift, but who really gets fired up and focused on eating and stretching and resting and performing aerobic work on the days between? Not many. What a shame, because once again, this IS your ONLY opportunity for change! And all those things that I just mentioned WILL help you to get bigger and stronger. You'd be shocked at the gains that you could make workout to workout if you really grasped what I just wrote.

Okay, lets talk about “stimulating” workouts for a minute. Did you train really hard today? Did you focus on this before, and during your workout today? Or did you do a bunch of “mindless” sets that didn't amount to a hill of beans?

Get fired up when you train! This is your chance to stimulate change-make the most of it. Get focused on putting out maximum effort. Express yourself” Be an animal. Now you don't need to scream your head off just to draw attention to yourself, or fool yourself into believing that you're putting out effort, to be an animal. Everyone is different. Im relatively quiet although I make some interesting “guttural” sounds and talk to myself at times. My younger brother who is very accomplished, very big and strong trainee by anyone's standards is very, lets say “animated”. The point is to get yourself ready for battle, and you MUST prepare yourself before your workout to do this. You need to read my articles the White Moment and the Art of concentration to really get a better understanding of what I'm writing about. Its interesting how many well0intentioned and properly informed trainees seem to know about everything about WHAT to do, but don't work at HOW they need to be doing it. And “HOW” they need to be doing it is with tremendous aggression- Period!

Go to work on truly taking advantage of your days between workouts. Along with this really start focusing your efforts in the gym to getting yourself in the right “frame of mind”. I promise that if you do this, yoll be stunned by how much your workouts improve, and the results the generate.

Train hard, train smart, and dream big.

Parting words

“It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat.” Teddy Roosevelt

“Dream big and have faith in what I've shared with you; it'll give you hope- and hope is a great thing, maybe the best thing. I believe in you”

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