Treatment2Go

Exploring Hand Therapy
Manual

Lateral Epicondylitis
Tips, Tricks, & Trivia

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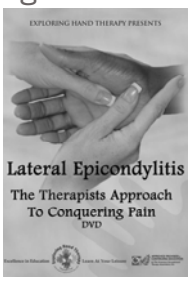
LATERAL EPICONDYLITIS

Conservative Approach
Tips, Tricks and Trivia

Lateral Epicondylits: The Therapists Approach to Conquering Pain



Lateral Epicondylitis

- This course is not a course on pathology although we will skim pathological causes. This course is designed to assist the therapist in providing a thorough home program or clinic program filled with tips, tricks and trivia.
- For a detailed course on Lateral epicondylits please visit handtherapy.com and view the snippet of

Tennis elbow

- Coined "lawn tennis elbow" in 1883
- Overuse of the wrist and finger extensor muscles
- Overuse of the forearm rotational muscles as well

- **THE MOST COMMON Upper Extremity Tendonitis and most lingering**

Cause

- Overuse or repetitive motions will cause micro- trauma to the involved tendons/muscles
  - Single incident onset can and does occur
- Starts out as an inflammatory condition
- May progress to a tendinosis condition non -inflammatory
  - Breakdown and wear and tear of the tendons
  - Does not respond to anit-inflammatory medication

Age most commonly occurs

But can occur at any age

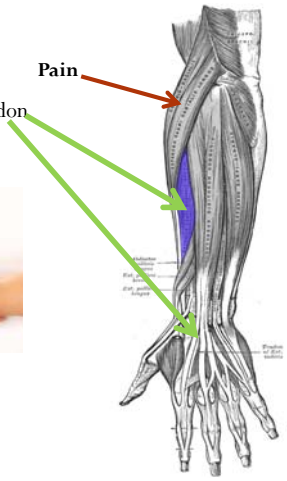
Activites

- Racquet sports
- Golf
- Baseball
- Weight lifting
- Fly and cast fishing
- Swimming
- Track field

- Meat cutting
- Carpentry
- Plumbing
- Assembly line
- Computer/keyboard
- Computer mouse use
- Typing
- Writing
- Handshaking
- Taking blood pressure

Acute phase

- Inflammation of the tendon
  - ECRB



REFERRED PAIN

- May present with myofascial trigger points
- Myofascial pain that targets the muscles and fascia

Sustained Grasping

PAIN

SYMPTOMS

- Pain is the primary symptom
- Around the outer part of the lateral elbow

Usually c/o BURNING pain

Extended Pronated ARM

REACHING

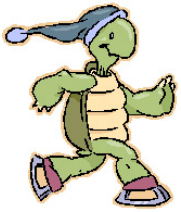
AVOID

- TWISING
- REACHING
- LIFTING
- PUSHING
- PULLING

Pain

STARTS slow or mild

Gradually pain become more prominent over weeks or months



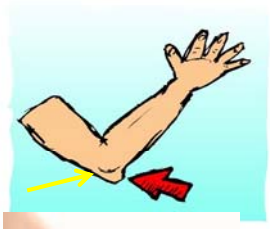
Things to consider

Improper equipment like incorrect grip size or strings too tight

weak muscles or imbalanced muscles

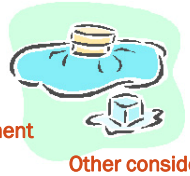
Starts with a whisper ends in a SCREAM

Evaluation



Resisted wrist extension & MF

TREATMENTS



Primary forms of treatment

- REST
- ICE
- STRETCHING

Duration typically 3 to 6 months

Other considerations

- BRACING
- EXERCISES
- EDUCATION
- INJECTIONS
- MEDICATIONS
- Surgery

Sometimes but not usually

Spurs or to r/o fx

MRI

Show tendon changes or tears

TOO MANY treatment options

- That alone tells us that there is not one good approach
- Most accepted is to FIRST control the pain

REST

- Activity modification
- Limit painful motions
- May require complete rest of the arm


Modify activity by using two hands And balance the load and bend elbows

- Don't want to totally "rest" because it can cause muscle atrophy
- Rock and a hard place

Other options to control pain

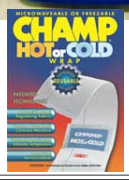
Compression

Bracing to help control pain

Wear with caution
5 to 10 days to help decrease pain

Elbow brace/AIRCAST
May help pain
↓
Use initially and through stretching stages and then tapper off

ICE



Inflammatory stage
Several times a day for 10 to 20 minutes

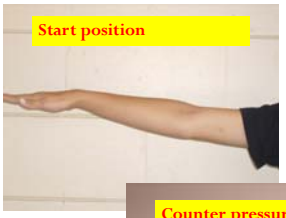
As pain decreases ice may be used post exercises or demanding tasks

Alternating heat and ice

Ice controls swelling and relieves pain
Heat increases blood flow and relieves tightness and pain

Goal: achieve ergonomically correct muscle length

Stretching – flexibility and mobility



Warning

Pain then modify stretch

As pain decreases -- increase intensity of stretch

Massage

Lots of options

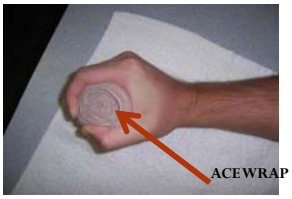
- Myofascial trigger points
- Deep tissue massage
- Cross friction massage
- Myofascail therapy massage
- Myofascial release
- Soft tissue massage
  - Patient friendly for HEP
- Swedish "gentle" massage

- Rubbing the area of pain relieving lotions as this can help decrease pain and increase blood flow

Pain then modify stretch

Isometric exercises

Static contraction
Often used in early stages
Demand on structures are less strenuous while preventing atrophy and increasing and maintaining strength

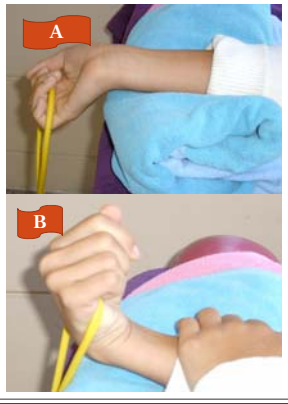


Using blood pressure cuff for visual feedback

Wrist Flex - Isometric

Wrist Ext - Isometric

Eccentric Exercises



Progressive exercises

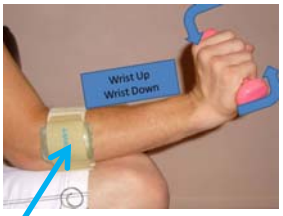
Slowly increases the demand on the affected structures without causing additional damage

Begin with no weights
Begin to tolerance

Supination/pronation

Goal: prevent damage and increase strength

Progressive Exercises more photos of stage 1 –ELBOW BENT and supported



- Begin with elbow bent and supported on knee or foam wedge
- Work up to a light weight performing 10 to 15 repetitions
- Slowly progress until tolerating 3 sets of 10 to 15 reps. With 3 pound weights

BEGIN NO WEIGHT – Progressive exercises

No Specific timeline for advancement

- Begin with elbow bent and supported on knee or foam wedge, or table
- Begin with no weight or very light weight and work up to 10 reps per set
- Slowly progress until tolerating 3 sets of 10 to 15 reps. With 3 pounds

Wrist Flexion - Dumbbell

Wrist Extension - Dumbbell

Pronation - Dumbbell

Supination - Dumbbell

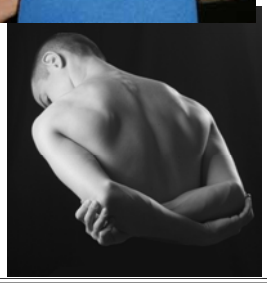
Alternative – use resistance bands

Easily accessible
Light weight
Small

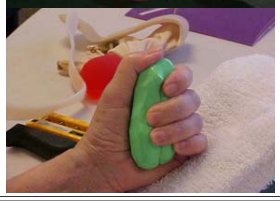
Can't regulate resistance
Guessing game

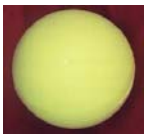
TIPS --

- Perform exercises 1X a day in early rehabilitation
- Exercises may increase pain initially, control with ice, massage, splinting, rest, activity modification
- Heat elbow before exercises
- Ice after exercises
- Wear counter force brace in early rehab



Begin strengthening finger extensors





Increasing demand on structures

More is NOT better

Elbow straight
Elbow supported

CAREFUL with heavy weight. Use 5+ pounds only with well conditioned patients

Elbow getting better

Elbow straight
Elbow not support
Elbow solid or locked

- Elbow locked out in front of body
- Start with no weight and work up to 3 to 5 pounds
- Perform 3 sets of 15 reps

Exercise Conclusion

- Flexibility and strength and endurance should be at "normal" or functional levels
- Returning to sports or high demand occupation activity is usually safe
- Muscles should be able to tolerate increased weight and demand without increasing pain

Rhomboid Rowing - Dumbbell

Don't forget the proximal muscles

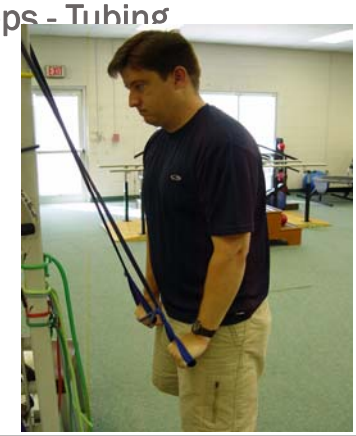
BEWARE of INFORMATION OVERLOAD

Supine Serratus Punch

Shoulder Shrugs

D2 Extension

Triceps - Tubing



D2 Flexion

ERGONOMIC consideration

www.ergonomicssimplified.com

Use the tilt feature on steer wheel to minimize the reach and bend the elbow

Proper work environment

Don't do this

Wring out wash cloth with a twist and hard grip; especially if symptoms are present

Do this

Use both hands to "milk" the cloth

Or use the faucet

Ergonomic tools

Light weight
Non –slip grips

Tool conforms

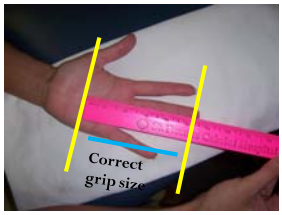
Tips when returning to racquet sports

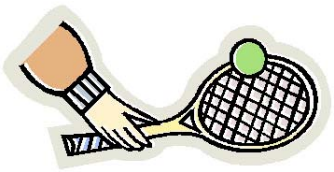
- Backhand and especially an unorthodox backhand is the primary contributor to developing lateral epicondylitis
  - the ball is hit with the front of the shoulder up and power generated from the forearm muscles
- **Serving is hard on the elbow as well as overhead smashing**
- Two handed backhand tends to be easier on the elbow and lessons to modify your stroke may be necessary.

while serving, the ball is hit with full power and speed with wrist pronation and wrist snap which increases the stress on the already taught extensor tendons

The Racquet

- **Grip size, racquet weight and string tension are the main areas to address when returning to sports**
  - **stay at the lower end of the manufacturer's recommendation for tension**
  - The racquet should be restrung at a lower tension,
- Try an oversize and composite racquet because they are much easier on the arm and lighter weight
- Most of the time these adjustmer will solve the problem



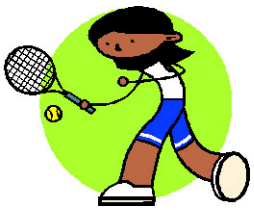


When can I return to normal activities

- Recovery rates differ between person to person
- The primary determining factor of returning to previous level of activity is how soon the elbow recovers
- DON'T get hung up on how long the symptoms have been present focus on recovery
- As stated if your patient achieves the final step of the exercises with locked straight elbow with 3 to 5 pound weight most likely the muscles are ready for previous level of activity.

Return to competitive sports

- Begin forearm stroke only for 15 to 20 minutes
- Work up to 30 minutes
- Add backhand to work out and extend up to 40 minutes
- All strokes should be attempted and practice for 50 minutes
- Serve
- Full play
- Competitive play



THANK YOU

- ***References***
- Brotzman S.B., Handbook of Orthopaedic rehabilitation, St. Louis, Mosby 1996
- DeLee, C., Drez, D., Miller, M., Orthopaedic Sports Medicine: Principles and Practice, 2nd ed., Saunders, 2003
- Morey, B., The Elbow and its Disorders, 2nd editon, WB Saunders, 2000
- Martinez-Silverstrini, J. et el, Chronic lateral epicondylitis: comparative effectiveness of a home exercise program including stretching alone versus stretching supplemented with eccentric or concentric strengthening, JHT 2005.07.007 Oct-Dec
- Trudel, D., et el, Rehabilitatin ofr patients with lateral epicondylitis; a systematic review, JHT 2004.02.01, April - June
- Wilson, A., Effective Management of Musculoskeletal Inury, Harcourt Publishers 2002