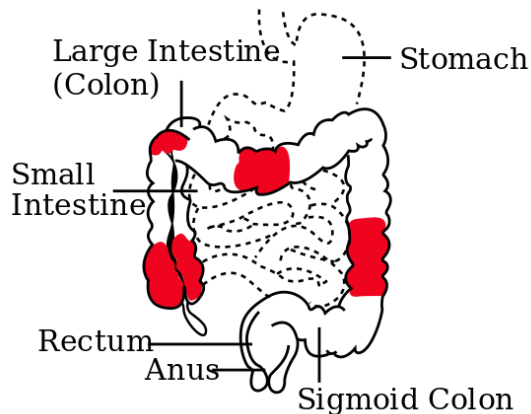


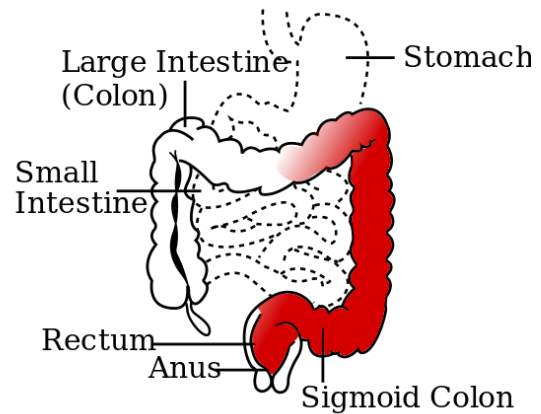
Inflammatory Bowel Disease

Inflammatory Bowel Disease

* This term is usually used to denote **ulcerative colitis** and **Crohn's disease** .However bowel inflammation can be caused also by Bilharzial colitis , amoebic colitis , ileocaecal T.B and typhoid enteritis .



Crohn's Disease



Colitis ulcerosa

	Crohn's Disease	Ulcerative Colitis
Indidence	<ul style="list-style-type: none"> ▪ Equal in male & female ▪ Commonly occur 10-30 years. 	<ul style="list-style-type: none"> ▪ More in females . ▪ Commonly occur 20-40 years.
Aetiology	<ul style="list-style-type: none"> ▪ Unknown but immunological , genetic or environmental factors are possible causes . 	
Pathology	<ul style="list-style-type: none"> ▪ It can affect any part of GIT from mouth to anus . ▪ The commonest site is terminal ileum followed by proximal colon and anal canal with rectal sparing . 	<ul style="list-style-type: none"> ▪ Usually start above dentate line and extend upward for variable distance to affect rectum only(proctitis) or left colon or whole colon (pancolitis) . ▪ Never affect ileum .
	<ul style="list-style-type: none"> ▪ It affects all layers from 	<ul style="list-style-type: none"> ▪ It affects mucosa only .

Inflammatory Bowel Disease

	<p>mucosa to serosa , surrounding structures & mesentery which contain enlarged lymph nodes .</p>	<ul style="list-style-type: none"> ▪ Mucosal affection varies from granularity to extensive ulceration
	<ul style="list-style-type: none"> ▪ It is Characterised by skip areas (normal healthy gut between the diseased areas) 	<ul style="list-style-type: none"> ▪ It is continuous disease with sharp transition between diseased & healthy area without any skip area .
	<ul style="list-style-type: none"> ▪ It is characterized by granuloma formation (collection of inflammatory cells) followed by severe fibrosis , marked thickening & narrowing of the affected segment . ▪ In longstanding cases ,multiple fissures occur with mucosal oedema → cobble stone appearance. 	<ul style="list-style-type: none"> ▪ The condition begins with multiple crypt abscesses surrounded by inflammation . ▪ These abscesses fuse to form superficial ulcers . ▪ Pseudopolyps usually present between the ulcers . ▪ Minimal fibrosis without thickening of the wall .
Complications	<ul style="list-style-type: none"> ▪ Intestinal : 1) Stricture → I.O 2) Abscess and fistula to bowel loops , bladder , vagina or skin . 3) Anal fissure , abscess 	<ul style="list-style-type: none"> ▪ Intestinal : 1) Toxic megacolon (5%) due to atony of colon may be fatal . 2) Haemorrhage , shock & anaemia .

Inflammatory Bowel Disease

	<p>and fistula .</p> <p>4) Malabsorption .</p> <p>5) G.B stones due to lack of absorption of bile salts.</p>	<p>3) Colon cancer especially in pancolitis for more than 10 years , often multicentric .</p>		
	<p>▪ Extra-intestinal :Uveitis , arthritis , cholangitis , liver cirrhosis , skin lesions , pyoderma gangrenosum and erythema nodosum.</p>			
<p>Clinical picture</p>	<p>▪ There remissions & exacerbations .</p> <table border="1" data-bbox="416 734 1417 2009"> <tr> <td data-bbox="416 734 919 2009"> <p>▪ Gradual onset .</p> <p>▪ It starts by diarrhoea.</p> <p>▪ In ileitis only there is no passage of mucus , pus or bleeding per rectum and no tenesmus.</p> <p>▪ Colicky pain & tenderness in the right iliac fossa simulating acute appendicitis .</p> <p>▪ In long standing cases: Indurated tender mass in the right iliac fossa or I.O may occurs.</p> <p>▪ General manifestations are similar to ulcerative colitis.</p> <p>▪ Crohn's colitis gives similar manifestation as</p> </td> <td data-bbox="919 734 1417 2009"> <p>▪ Acute onset .</p> <p>▪ It starts by severe watery diarrhoea(up to 30 times/day) with passage of mucus , pus and bleeding per rectum are the cardinal feature .</p> <p>▪ Tenesmus is severe .</p> <p>▪ Colicky pain & tenderness in the left iliac fossa .</p> <p>▪ General :Fever , headach anorexia , malaise(FAHM) nausea , vomiting , anaemia ,weakness , dehydration , loss of weight , lymphadenopathy , clubbing of fingers ,</p> </td> </tr> </table>		<p>▪ Gradual onset .</p> <p>▪ It starts by diarrhoea.</p> <p>▪ In ileitis only there is no passage of mucus , pus or bleeding per rectum and no tenesmus.</p> <p>▪ Colicky pain & tenderness in the right iliac fossa simulating acute appendicitis .</p> <p>▪ In long standing cases: Indurated tender mass in the right iliac fossa or I.O may occurs.</p> <p>▪ General manifestations are similar to ulcerative colitis.</p> <p>▪ Crohn's colitis gives similar manifestation as</p>	<p>▪ Acute onset .</p> <p>▪ It starts by severe watery diarrhoea(up to 30 times/day) with passage of mucus , pus and bleeding per rectum are the cardinal feature .</p> <p>▪ Tenesmus is severe .</p> <p>▪ Colicky pain & tenderness in the left iliac fossa .</p> <p>▪ General :Fever , headach anorexia , malaise(FAHM) nausea , vomiting , anaemia ,weakness , dehydration , loss of weight , lymphadenopathy , clubbing of fingers ,</p>
<p>▪ Gradual onset .</p> <p>▪ It starts by diarrhoea.</p> <p>▪ In ileitis only there is no passage of mucus , pus or bleeding per rectum and no tenesmus.</p> <p>▪ Colicky pain & tenderness in the right iliac fossa simulating acute appendicitis .</p> <p>▪ In long standing cases: Indurated tender mass in the right iliac fossa or I.O may occurs.</p> <p>▪ General manifestations are similar to ulcerative colitis.</p> <p>▪ Crohn's colitis gives similar manifestation as</p>	<p>▪ Acute onset .</p> <p>▪ It starts by severe watery diarrhoea(up to 30 times/day) with passage of mucus , pus and bleeding per rectum are the cardinal feature .</p> <p>▪ Tenesmus is severe .</p> <p>▪ Colicky pain & tenderness in the left iliac fossa .</p> <p>▪ General :Fever , headach anorexia , malaise(FAHM) nausea , vomiting , anaemia ,weakness , dehydration , loss of weight , lymphadenopathy , clubbing of fingers ,</p>			

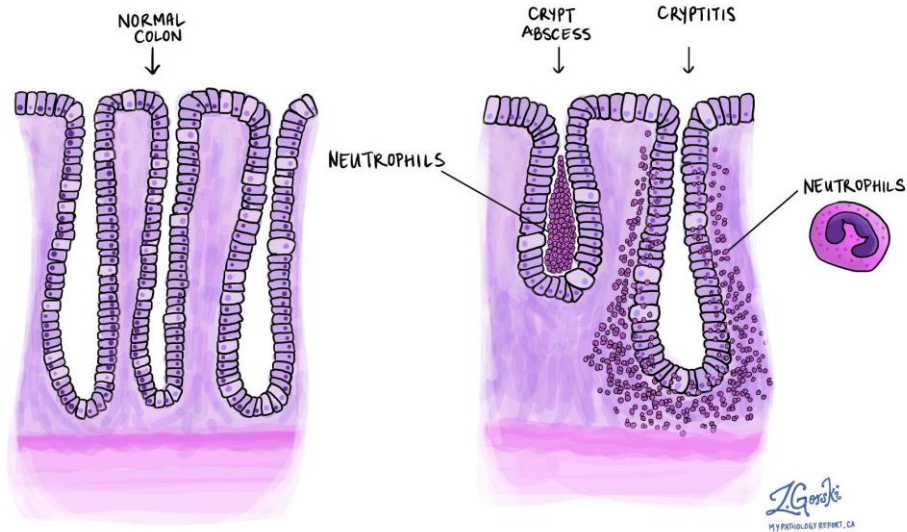
Inflammatory Bowel Disease

	<p>ulcerative colitis.</p> <ul style="list-style-type: none"> ▪ Perianal disease is common . 	<p>manifestations of extra-intestinal complications.</p> <ul style="list-style-type: none"> ▪ Hypovolaemic shock in severe bleeding per rectum . ▪ Toxic megacolon : High fever (39-39.5 °C) & severe abdominal distension . ▪ Perianal disease is rare .
D.D	<ul style="list-style-type: none"> ▪ Other causes of pain or swelling in the right iliac fossa . ▪ Other causes of diarrhoea & I.O . 	<ul style="list-style-type: none"> ▪ Other causes of bleeding per rectum . ▪ Other causes of diarrhoea .
Investigations	<ul style="list-style-type: none"> ▪ Laboratory: <ol style="list-style-type: none"> 1) Stool analysis . 2) Blood exam. : .anaemia , leucocytosis , hypoproteinaemia & hypokalaemia . 	
	<ul style="list-style-type: none"> ▪ Barium meal follow through : show areas of strictures with skip normal areas , narrowing of terminal ileum(String sign of Kantor) with proximal dilatation and fistula . ▪ Barium enema for suspected colon disease . ▪ Colonoscopy & 	<ul style="list-style-type: none"> ▪ Barium enema : <ul style="list-style-type: none"> ♣ Show mucosal changes & shortening of colon with loss of haustrations ♣ It is contraindicated in toxic megacolon . ▪ Colonoscopy (show extent of the disease , diffuse inflammation , ulcers and pseudopolyps) with biopsy are

Inflammatory Bowel Disease

	<p>ileoscopy with biopsy are diagnostic .</p> <ul style="list-style-type: none"> ▪ U/S & CT to detect extra-luminal complications . 	diagnostic .
Treatment	<p>I) Medical treatment is the main line of treatment (see medicine) .</p> <p>II) Surgical treatment :</p> <ul style="list-style-type: none"> ▪ Indications : failure of medical treatment or complications . ▪ Methods 	
	<p>1) Limited resection of affected segment (avoid resection of long segment to avoid malabsorption) .</p> <p>2) Strictureplasty for localized stricture .</p>	<p>1) Proctocolectomy (excision of whole colon and rectum) with permanent ileostomy is the classical treatment .</p> <p>2) Total Colectomy with rectal sparing and ileo-rectal anastomosis . Follow up for life to avoid rectal cancer .</p> <p>3) Proctocolectomy with distal rectal mucosectomy and ileal pouch is fashioned to act as reservoir and is anastmosed to the anal canal within the preserved rectal muscle .</p>

Inflammatory Bowel Disease

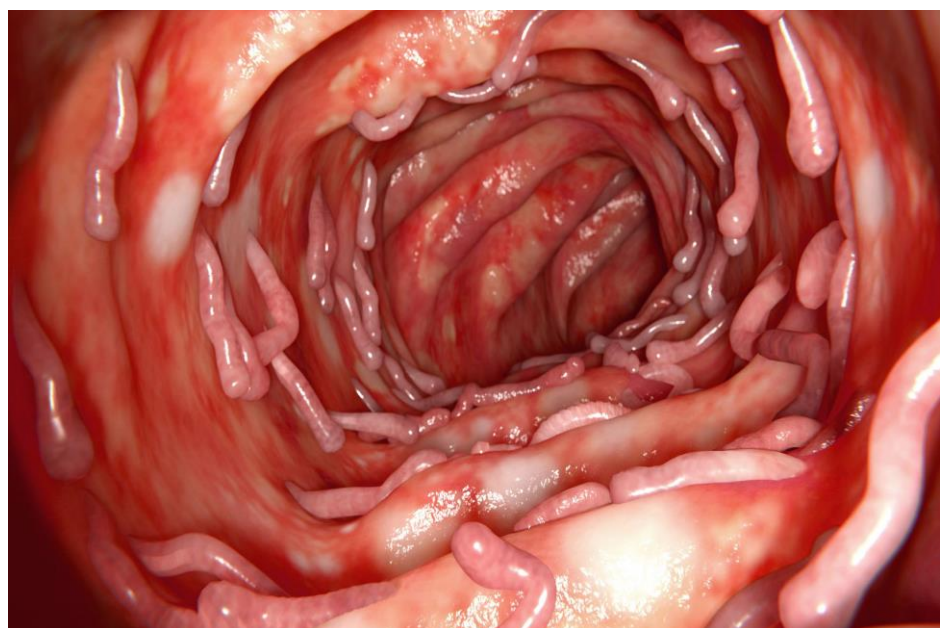


Crypt abscesses



Cobble stone appearance.

Pseudopolyps



Inflammatory Bowel Disease



Erythema nodosum



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Pyoderma gangrenosum

CROHN'S DISEASE

- Familial Tendencies
- Peaks Ages 15-40 Yrs
- ? Autoimmune Factors
- Nausea & Vomiting



- Severe Diarrhea
- Low Grade Fever
- Bloody Stools
- Weight Loss
- Severe Malabsorption

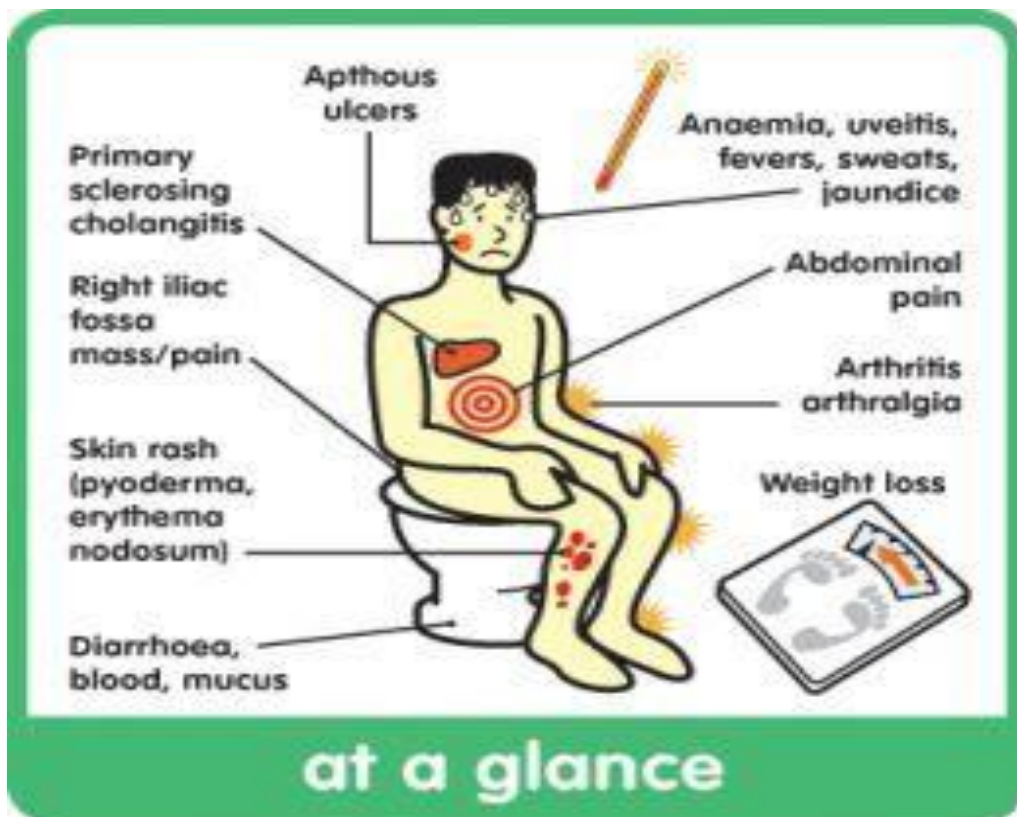
- Abdominal Pain and Distention
- Tenderness in RLQ

*** Later S & S's ***

- Dehydration
- Electrolyte Imbalance
- Anemia

*** Complications ***

- Intra-abdominal Abscesses
- Intestinal Fistulas
- Peritonitis
- Development of Fistulas



Ulcerative colitis and Crohn's disease

Inflammatory Bowel Disease

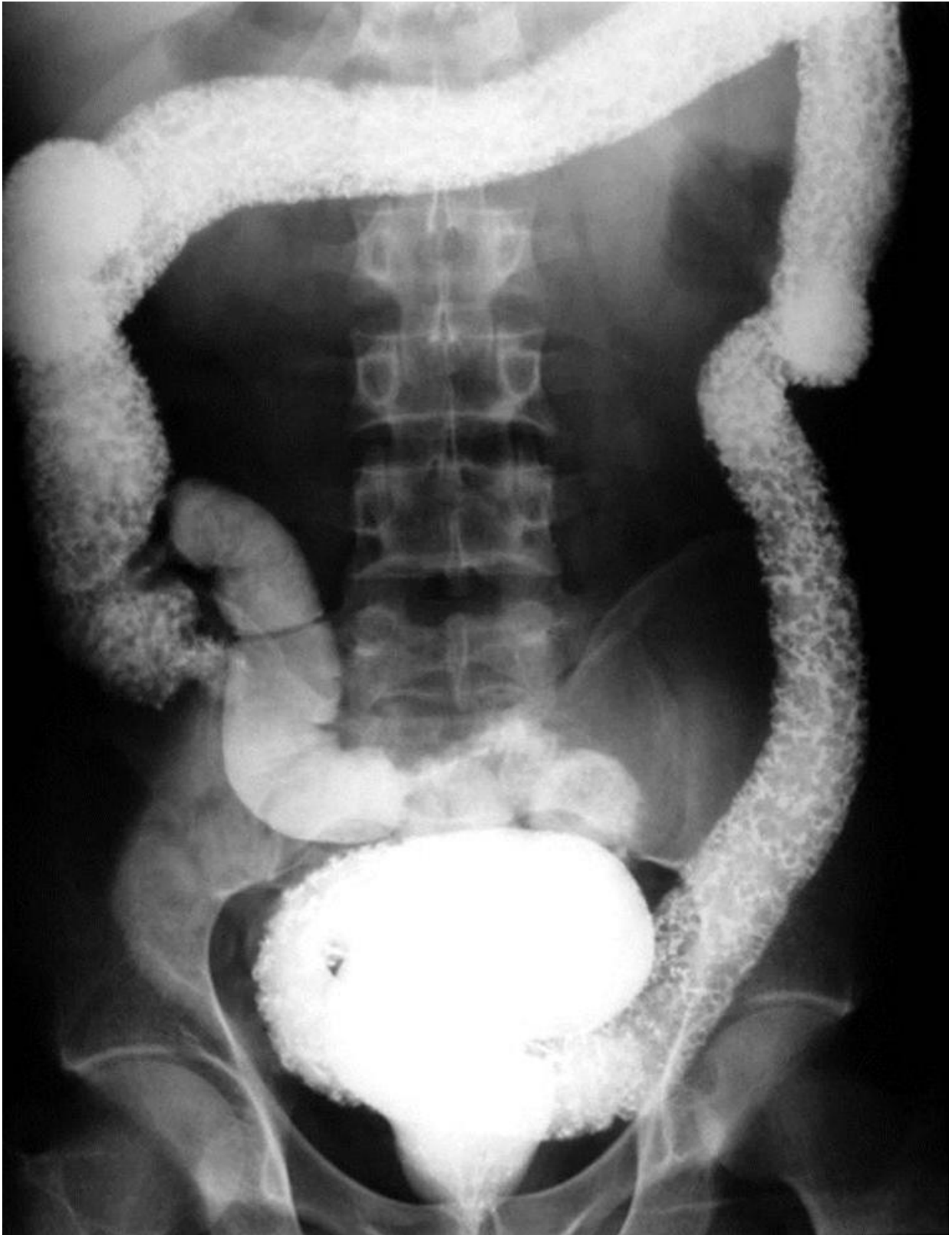


Crohn's Disease



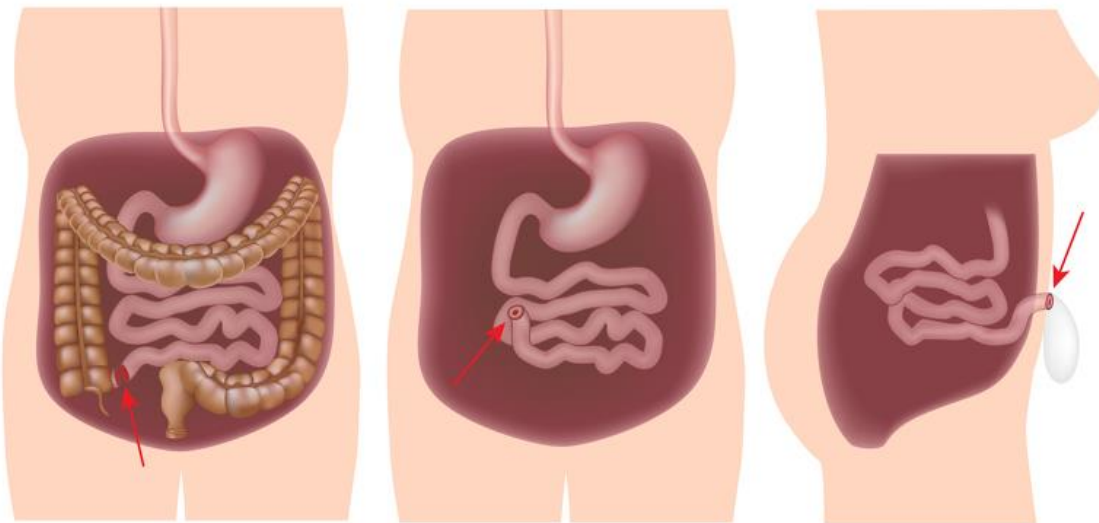
Ulcerative Colitis

Inflammatory Bowel Disease



The whole colon, without skips is affected by an irregular mucosa with loss of normal haustral markings.

Inflammatory Bowel Disease

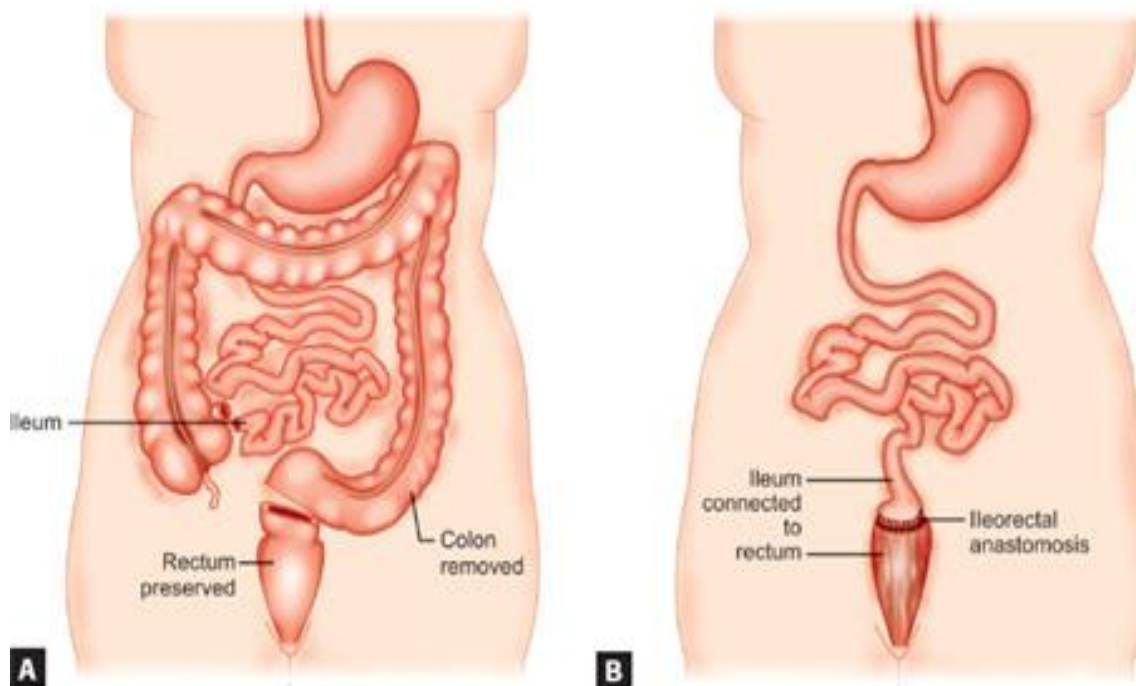


Colon and rectum removed

End of ileum brought out as an ileostomy
Front view

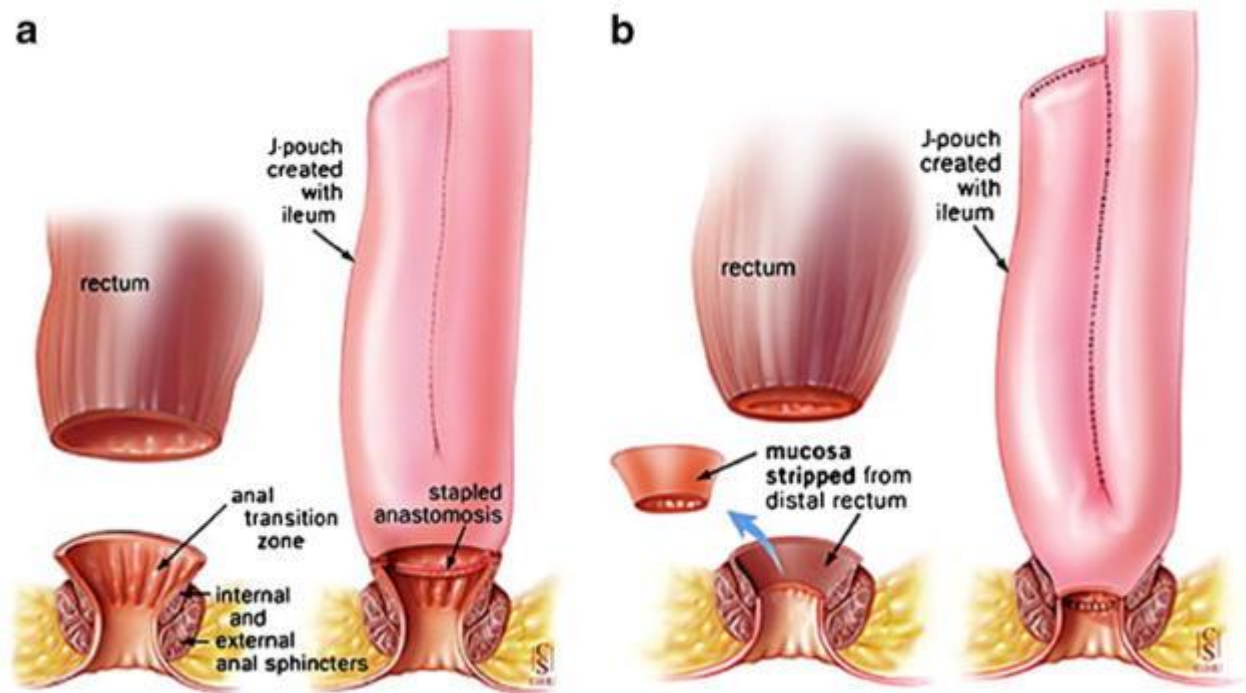
Side view

Proctocolectomy with ileostomy



Total colectomy with ileorectal anastomosis

Inflammatory Bowel Disease



Proctocolectomy with distal rectal mucosectomy and ileal pouch is anastomosed to the anal canal