

INFLAMMATORY BOWEL DISEASES

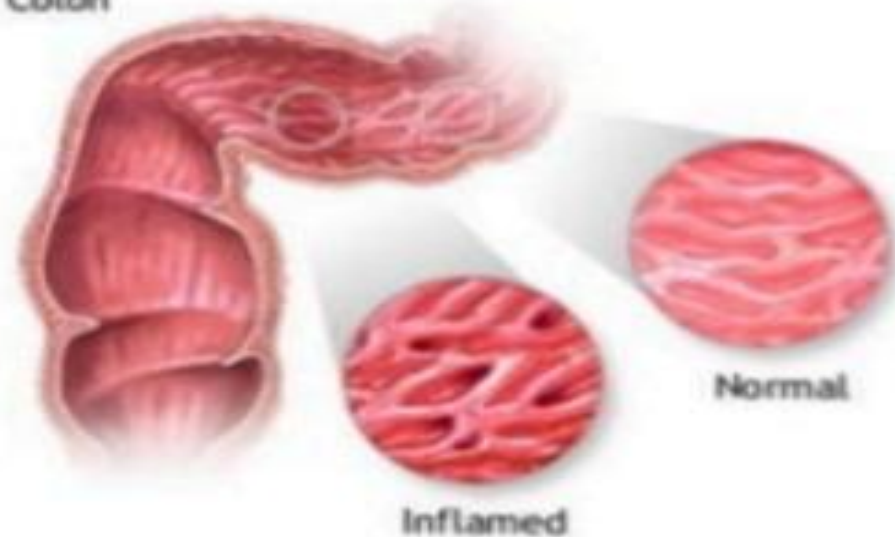
Presentation BY- Dr. KANCHAN MORE.
(Dept . Of Surgery)

Introduction

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- Inflammatory bowel disease (IBD) represents a group of intestinal disorders that cause prolonged inflammation of the digestive tract.
- It is a spectrum of chronic idiopathic inflammatory condition.

Colon



Cecum
portion
of large
intestine

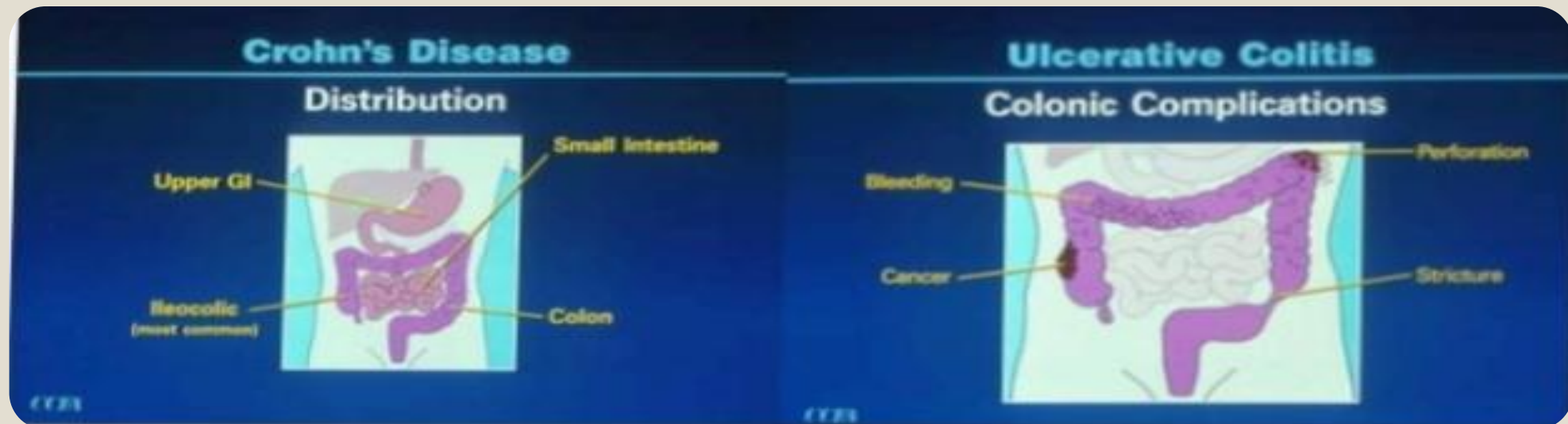


Inflammatory
bowel
disease (IBD)

Ileum
portion
of small
intestine

Classification-

- **ULCERATIVE COLITIS** - Ulcerative colitis is a disease That causes mucosal inflammation And sore (ulcers) In the lining of the large intestine (Colon).
- **CROHN'S DISEASE** – Crohn's disease Is a chronic , relapsing And Remitting inflammatory disease Of the gastrointestinal tract , affecting any side from mouth to anus



Inflammatory Bowel Disease

Healthy



Crohn's disease



Ulcerative colitis



Healthy Colon



Ulcerative Colitis



Crohn's Disease

Epidemiology -

- ❑ In the United States, it is currently estimated that about 1 –1.3 million people suffer from IBD.
- ❑ Ulcerative colitis is slightly more common in males, while Crohn's disease is more frequent in women.
- ❑ Diet, oral contraceptives, perinatal and childhood infections, or atypical mycobacterial infections have been suggested, but not proven, to play a role in developing IBD.

Prevalence (number of existing cases per 100,000 population)

Crohn's disease

26 to 199 cases per 100,000 persons²

201 per 100,000 adults¹

Ulcerative colitis

37 to 246 cases per 100,000 persons²

238 per 100,000 adults¹

Aetiology -

ULCERATIVE COLITIS AND CROHN'S DISEASE

1. **Infective** – *Viruses (Measles) , bacterial (Mycobacteria)*

2. **Nutritional**

3. **Psychosomatic** – *stress, Emotional and Physical trauma*

4. **immunological**

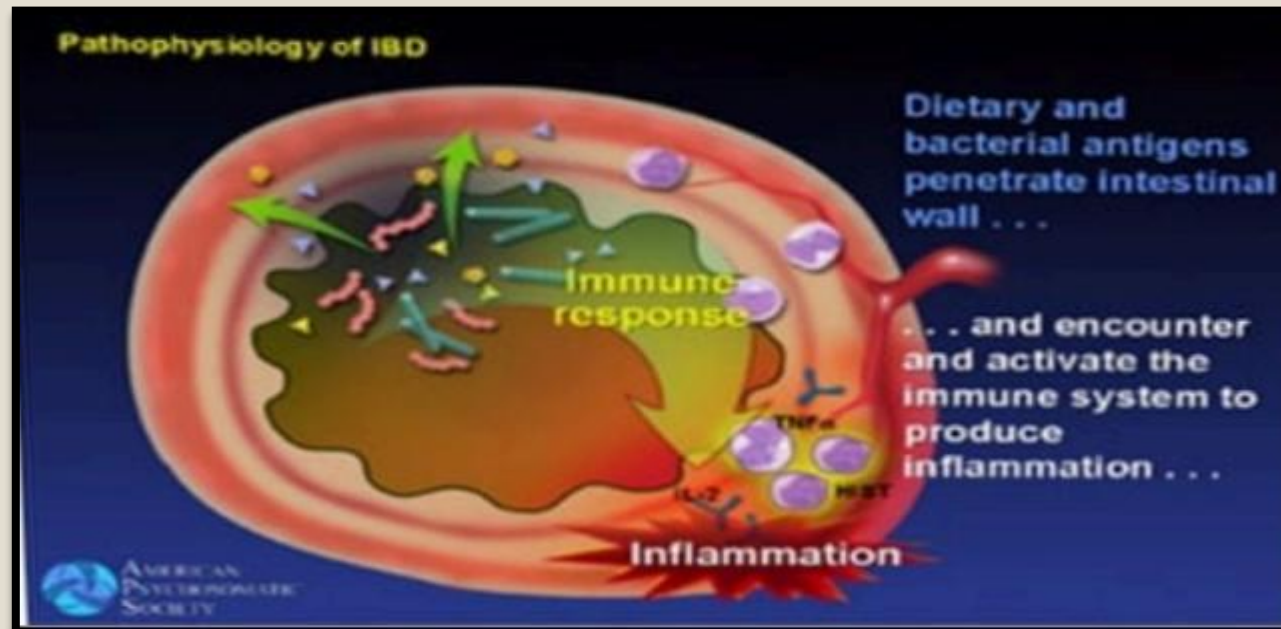
5. **Genetic Factor**

6. **Environmental Factor** – *Diet ,smoking*

PATHOPHYSIOLOGY-

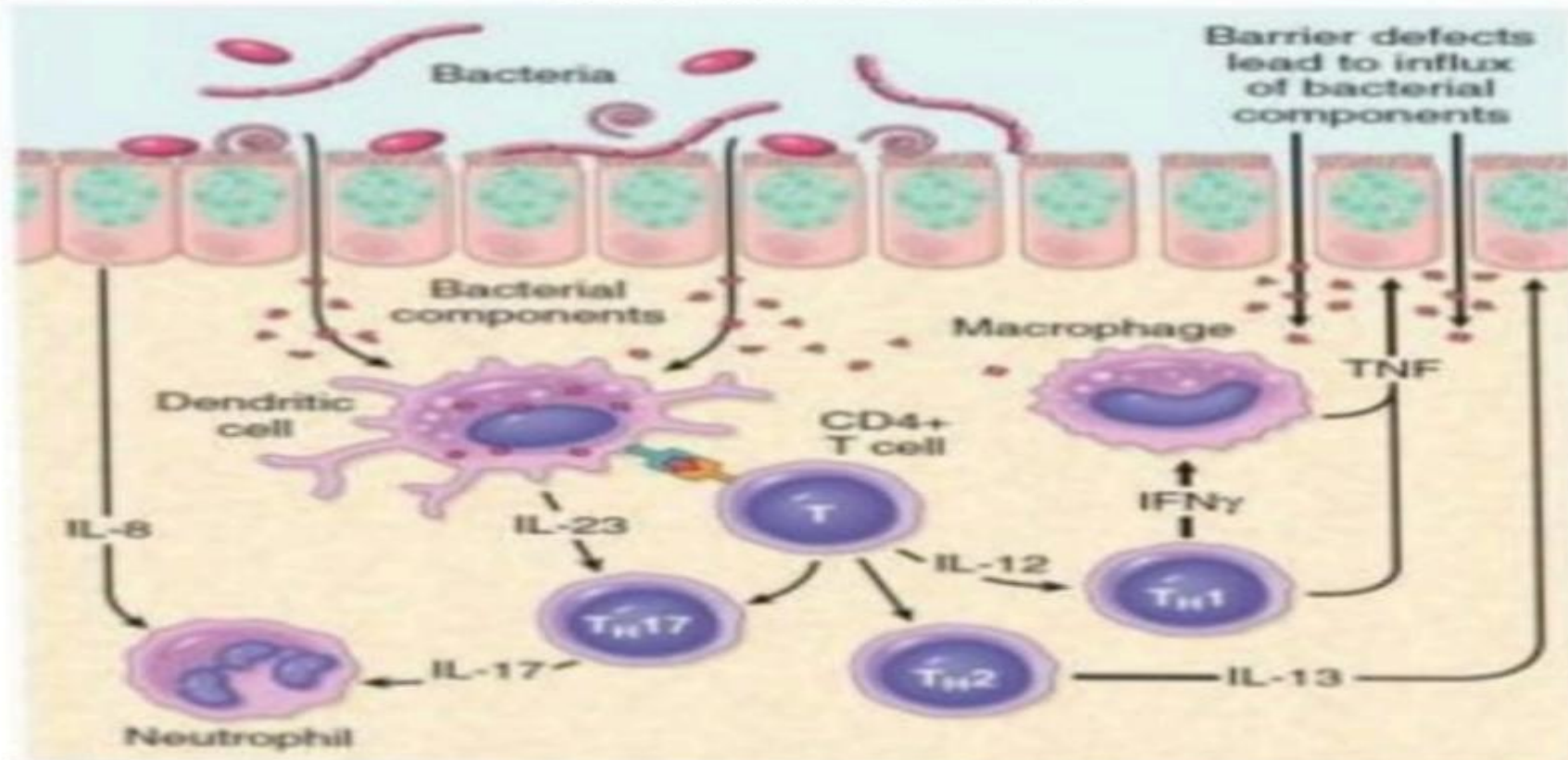
Altered Mucosal Immune Response

- Dietary and bacterial Antigens Penetrate into the intestinal wall And activates the immune system.
- This Causes increase production Of pro inflammatory mediator Which lead to inflammation of mucosal membrane.



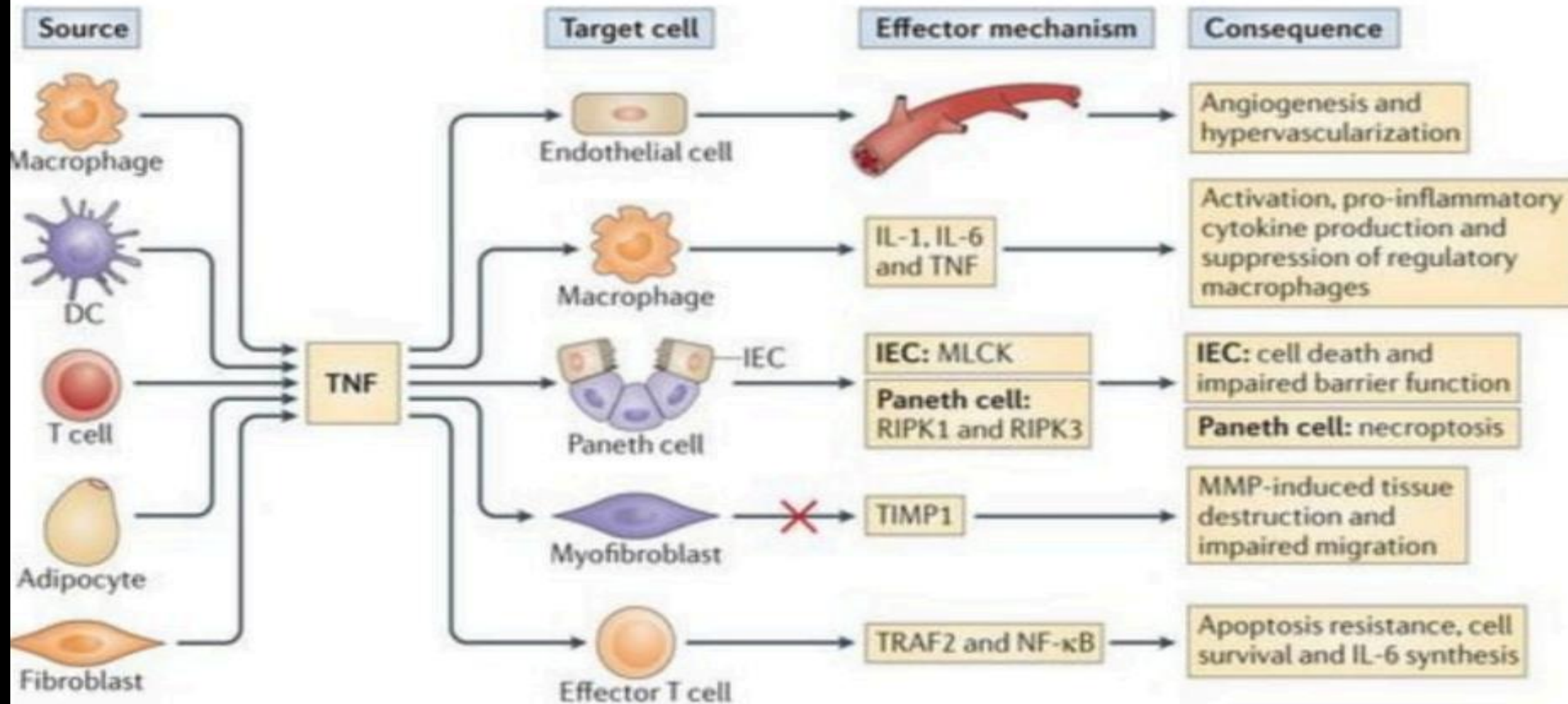
PATHOPHYSIOLOGY-

EPITHELIAL DEFECTS



Cont.

- Variety of epithelial defects have been described in Crohn's disease and Ulcerative Colitis.
- Defects in epithelial cells will lead to influx of bacterial components such as dendritic cells and macrophages which activates CD+4 cells.
- Activated CD+4 cells activate other inflammatory cells like B-cells and variable T-cells or recruit more inflammatory cells by stimulation of homing receptor on leucocytes and vascular epithelium.
- Inflammation in IBD is maintained by an influx of leukocytes from the vascular system into sites of active disease. This influx is promoted by expression of adhesion molecules (such as α 4-integrins) on the surface of endothelial cells in the microvasculature in the area of inflammation.



CLINICAL MANIFESTATION-

- **Clinical symptom are in both cases –**
 1. **Diarrhoea**
 2. **Abdominal pain ,Cramping and blotting due to boil obstruction**
 3. **Hematochezia blood in stool**
 4. **Low fever**
 5. **decrease appetite**
 6. **weight loss**
 7. **Anorexia**
 8. **fatigue**
 9. **arthritis**

CLINICAL FEATURES OF IBD

Typical Symptoms

- Abdominal pain
- Diarrhea
- Fever
- Fatigue
- Rectal bleeding
- Weight loss
- Anorexia
- Nausea

Common Physical Examination Findings

- Abdominal tenderness
- Palpable mass
- Perianal disease
- Extra-intestinal manifestations:
 - Mouth
 - Skin
 - Eyes
 - Joints
 - Liver

Common Laboratory & Radiographic Findings

- Anemia
- Leukocytosis
- Elevated ESR/CRP**
- Guaiac-positive stool
- Small bowel disease
- Fistulas
- Strictures

CRP = C-reactive protein
ESR = erythrocyte sedimentation rate
Podolsky DK. *N Engl J Med*. 2002

DIAGNOSIS-

- **Physical Examination**
- **Endoscopy**
- **Biopsy**
- **Radiology**
- **Blood Test**

PHYSICAL EXAMINATION-

- **The main features to look for are: oral aphtosis, abdominal tenderness and masses, anal tags, fissure and fistulae, nutritional deficiency.**
- **An important feature in children growth retardation.**

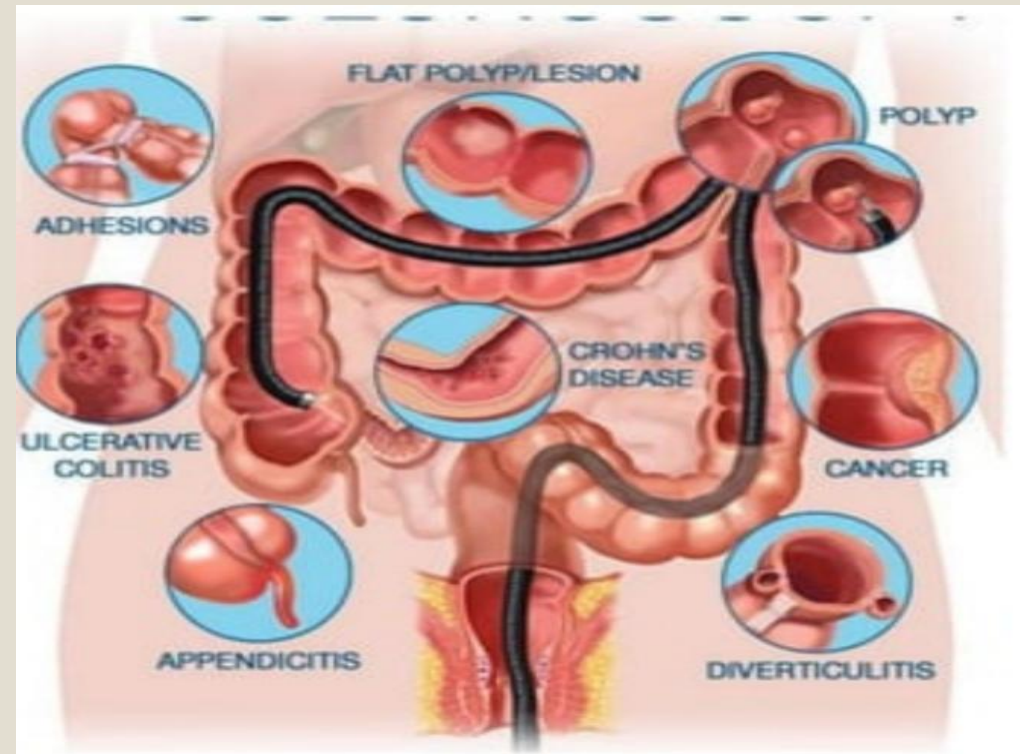


ENDOSCOPY/COLONOSCOPY/SIGMOIDOSCOPY-

- Colonoscopy helps to determine the pattern and severity of colonic and terminal ileum inflammation and allows biopsies to be obtained.

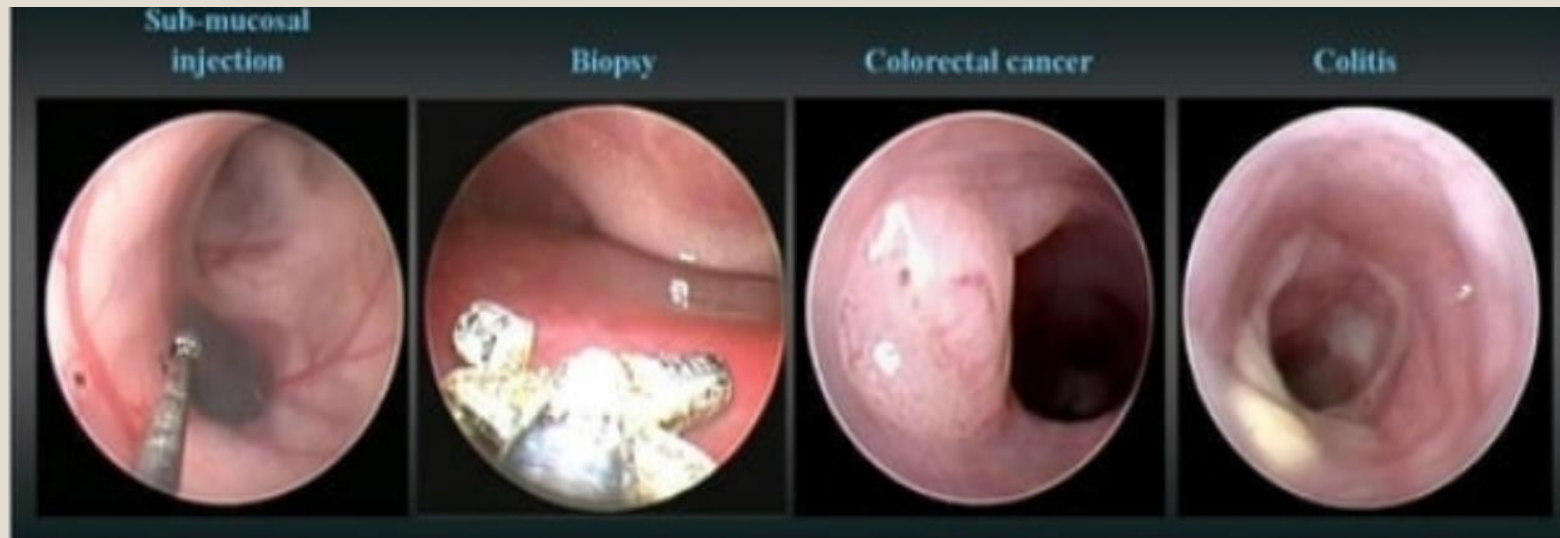
- a Endoscopic features are aphthous ulcers, deeper ulceration, post inflammatory polyps

(which indicate previous severe inflammation), but always accompanied by intervening normal mucosa, which is an important differential feature between CD and UC.



BIOPSY-

oRectal and colonic biopsies should be examined to find the nature of the inflammation (ulcerative colitis versus CD), collagenous colitis or microscopic inflammation if macroscopic appearance is normal, and infection. Sub-mucosa ngection
Biopsy Colorectal cancer Colitis



Radiology

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Barium enema

- Barium inserted into rectum
- Fluoroscopy used to image bowel
- Rarely used due to colonoscopy
- Useful for identifying colonic strictures or colonic fistulae

Barium Small bowel follow-through X-ray

- Barium sulfate suspension drink
- Fluoroscopic images of bowel taken over time
- Useful for looking for inflammation and narrowing of small bowel

Blood Test

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- Anemia may be present due to blood loss (iron deficiency), chronic inflammation or B12 malabsorption (macrocytic).
- Hypoalbuminemia suggests severe disease with denutrition. The best markers of inflammation severity are elevation of the C-reactive protein and platelet count.
- Anti-saccharomyces cerevisiae antibodies (ASCA) are positive in 50-60% of CD patients while anti-neutrophil polynuclear antibodies (ANCA) are positive in 50-60% of UC patients.

Crohn's disease

Ulcerative colitis

	Crohn's disease	Ulcerative colitis
Terminal ileum involvement	Commonly	Seldom
Colon involvement	Usually	Always
Rectum involvement	Seldom	Usually
Involvement around the anus	Common	Seldom
Bile duct involvement	No increase in rate of primary sclerosing cholangitis	Higher rate
Distribution of Disease	Patchy areas of inflammation (Skip lesions)	Continuous area of inflammation
Endoscopy	Deep geographic and serpiginous (snake-like) ulcers	Continuous ulcer
Depth of inflammation	May be transmural, deep into tissues	Shallow, mucosal
Fistulae	Common	Seldom
Stenosis	Common	Seldom
Autoimmune disease	Widely regarded as an autoimmune disease	No consensus
Cytokine response	Associated with T_H17	Vaguely associated with T_H2
Granulomas on biopsy	May have non-necrotizing non-peri-intestinal crypt granulomas	Non-peri-intestinal crypt granulomas not seen
Surgical cure	Often returns following removal of affected part	Usually cured by removal of colon
Smoking	Higher risk for smokers	Lower risk for smokers

Goals of Treatment

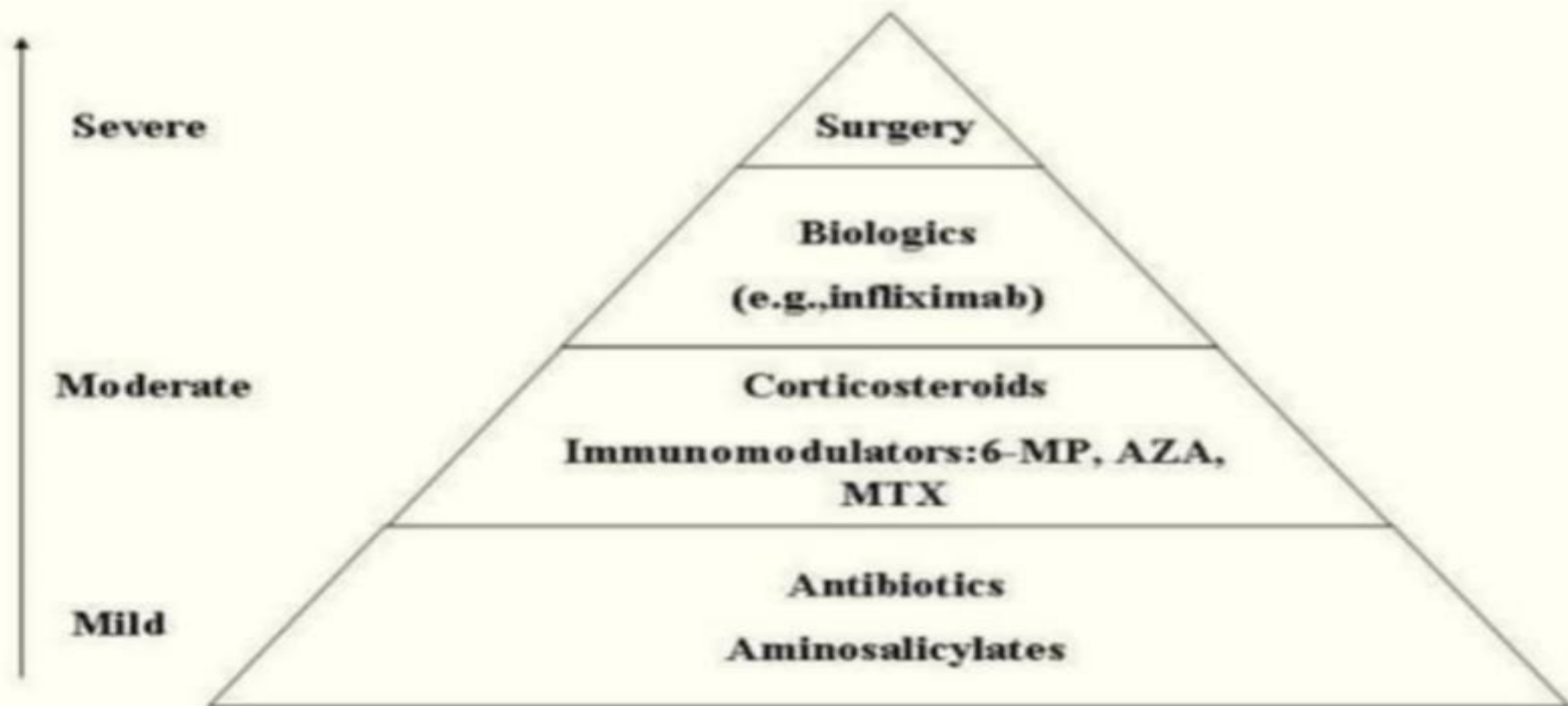
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- ❑ Maintain or improve quality of life.
- ❑ Terminate the acute attack and induce clinical remission.
- ❑ Prevent symptoms during chronic symptomatic periods.
- ❑ Prevent or reduce complication.
- ❑ Use the most cost-effective drug treatment.
- ❑ Avoid surgery if possible.
- ❑ Replacement of vitamin A, D, K if necessary in case of malabsorption.

Non-Pharmacological Treatment

- ❑ To avoid smoking cessation
- ❑ To reduce alcohol consumption
- ❑ To avoid the use of NSAIDs
- ❑ To avoid spicy and fried/oily food
- ❑ To take fiber rich diet as tolerated that include tender cooked vegetables, canned or cooked fruits, and starches like cooked cereals and whole wheat noodles and tortillas.
- ❑ To incorporate more omega-3 fatty acids in the diet. These fats may have an anti-inflammatory effect. They are found most probably in fish.

Inflammatory Bowel Disease: Treatment



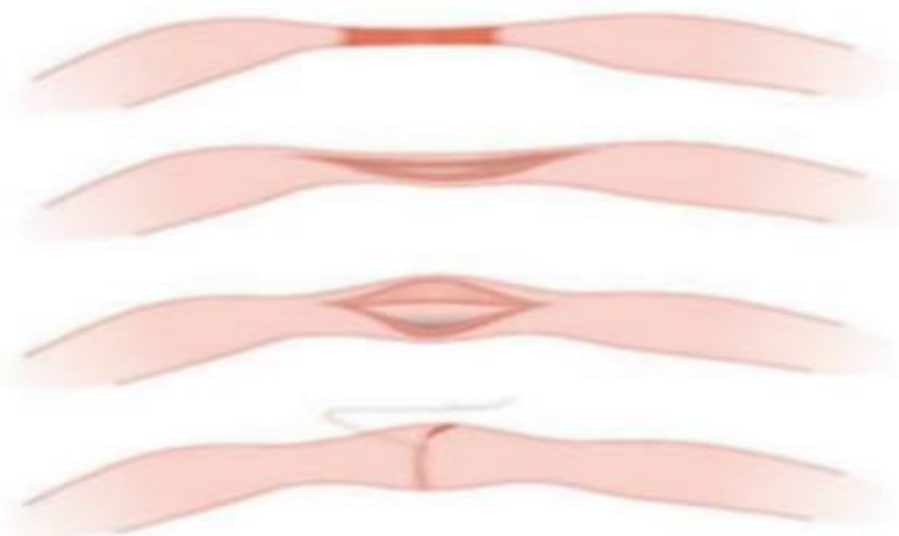
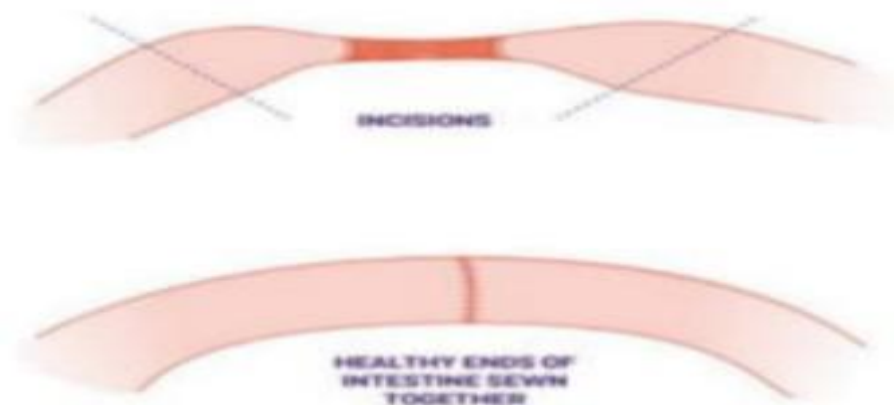
Surgery for Ulcerative Colitis

- **Proctocolectomy** (removing the colon and rectum) **with ileostomy**: If UC is severe, surgery may be required to remove the entire colon and rectum, plus bring the ileum (end of the small intestine) through a stoma (opening) in the abdominal wall to allow drainage of intestinal waste out of the body. The second part of the procedure is called ileostomy. After the procedure, an external bag must be worn over the opening to collect waste.
- **Restorative proctocolectomy**, also known as ileoanal pouch anal anastomosis (IPAA): It involves removing the colon and rectum, but the patient can continue to pass stool through the anus — in place of an ileostomy, the ileum is fashioned into a pouch and pulled down and connected to the anus.

Surgery for Crohn's Disease

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- ❑ **Strictureplasty:** If an area of the bowel narrows, this widens the area without removing any portion of the small intestine.
- ❑ **Resection** (removing portions of the intestines): This involves removing affected areas of the intestine, and then joining together the two ends of healthy intestine in a procedure called anastomosis.



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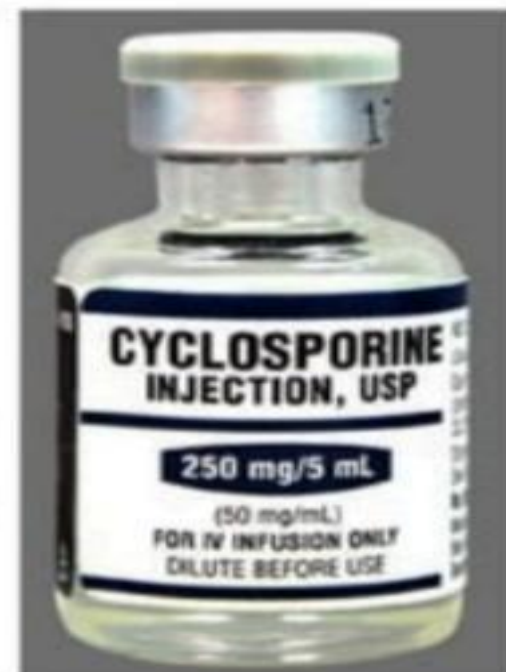
- **Surgery for abscesses and fistulas:** Sometimes abscesses (pus-filled mass) need to be removed surgically. And surgery may be required if a fistula (abnormal tract) is causing symptoms that don't respond to medication.
- **Colectomy** (removing the colon) or proctocolectomy (removing the colon and rectum): If only the colon is affected, a colectomy may be needed. But if the colon and rectum are affected, a proctocolectomy may be needed, along with ileostomy — bringing the ileum (end of the small intestine) through a stoma (opening) in the abdominal wall to allow drainage of intestinal waste out of the body. After the procedure, an external bag must be worn over the opening to collect waste.

Pharmacological Treatment

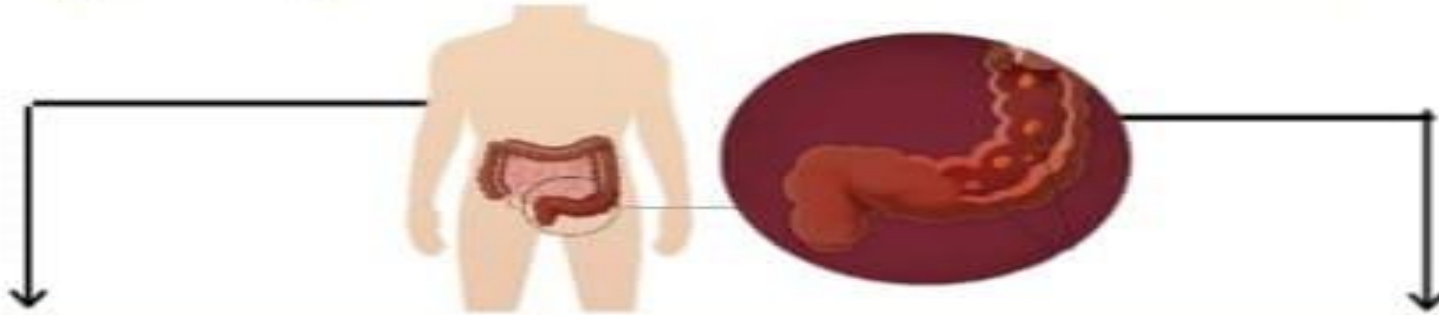
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The major types of drug therapy used in IBD include

- ❑ **Aminosalicylates**
- ❑ **Corticosteroids**
- ❑ **Immunosuppressive agents**
- ❑ **TNF – Tumor Necrosis Factor Inhibitor**
- ❑ **Antimicrobials**



Homeopathy Medicine For Ulcerative colitis



• **Aconitum Napellus**

Aconitum napellus is useful for treating fever and restlessness. A few other symptoms that can be managed using this remedy are: Presence of mucus and blood in vomit Great thirst, especially for cold water; everything tastes bitter except water Pain in the abdomen Watery diarrhoea in children.



• **Carbo Vegetabilis**

This remedy is helpful in the management of the
A feeling of heaviness and fullness in the stomach
Nausea, especially in the morning
Frequent diarrhoea Abdominal pain.



- **Ipecac-root**

Ipecac-root is an effective remedy for persistent nausea and vomiting. It is also useful in managing the Dysentery with slimy and grass-green stool

Presence of mucus, bile and blood along with food in vomit

Intermittent fever, especially due to some underlying gastrointestinal disease.



- **Kalium Bichromicum**

Kalium bichromicum is useful for treating symptoms of the gastric tract and migrating pains. It can also be used to treat symptoms such as Ulceration and inflammation of the intestines and stomach.

- **Mercurius Corrosivus**

Mercurius corrosivus is primarily recommended to those who have a continuous and frequent urge to empty their bowel. Other symptoms that can be managed using this remedy are: Bloody and slimy stools Presence Green coloured vomit A sensation of bruising along with pain in the abdomen Fever and chills.



Homeopathy medicines for Crohn's disease



• China

Vomiting of undigested food, of sour mucus, bile or blood. Tympanitic abdomen, with excessive flatulence and belching, which gives no relief and consequently great distension of entire abdomen and borborygmus. Each food particle turns into gas. Worse from eating fruits, fish, wine etc. Abdomen feel sore and tender, aggravation by slight touch and relieved by hard pressure and doubling up.



• Carbo veg

Weak digestion, simple food disagree causing excessive flatulence, abdomen is full to bursting point especially on the upper part, aggravation from least food and relief from eructation and on passing flatus.



- **Lycopodium**

There is excessive accumulation of gas and flatulence especially in the lower abdomen with loud grumbling and croaking, rolling of flatus as though fermentations were going on, but not relieved by passing flatus and eructation.



- **Nat. phos**

Ailments with excess of acidity, Sour eructations and taste. Sour vomiting. Yellow creamy coating at the back of the roof of the mouth and tongue. Flatulence with sour rising.

- **Nux vomica**

Suitable to persons of high living, acidity by taking coffee, tobacco, alcohol, quinine, By taking highly spiced food, irregular diet, overeating, sexual excess, by long continued mental exertion, having sedentary habits, who want to do exercise, from loss of sleep.



THANK you...