



**SNS COLLEGE OF ALLIED HEALTH SCIENCES**  
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**DEPARTMENT OF CARDIO PULMONARY PERFUSION CARE**  
**TECHNOLOGY**

**COURSE NAME : GASTROENTEROLOGY**

**3<sup>RD</sup> YEAR**

**TOPIC : DIARRHEA**

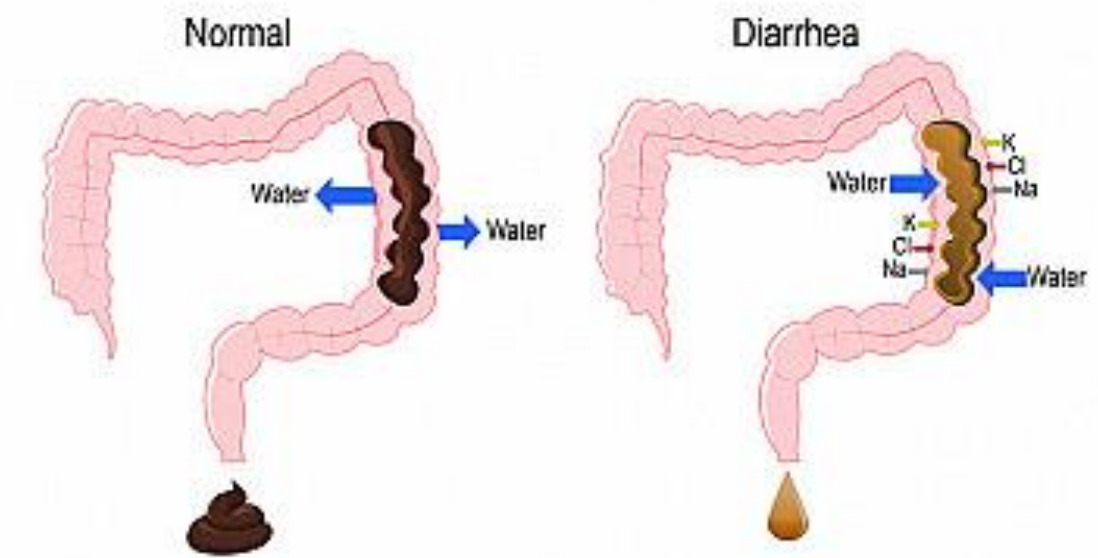


# INTRODUCTION



- Diarrhea is defined as **passage of unusually loose or watery stools usually at least three times in a 24 hour period.**
- For adults stool weight  $>200$  g/d can generally be considered diarrheal.
- Passage of even one large watery stool in young child is diarrhea.
- Frequent passage of normal stool is no diarrhea.
- Diarrhoea that occurs for  $< 4$  weeks duration is acute
- Diarrhoea is defined as chronic if it lasts  $> 4$  weeks

## Diarrhea



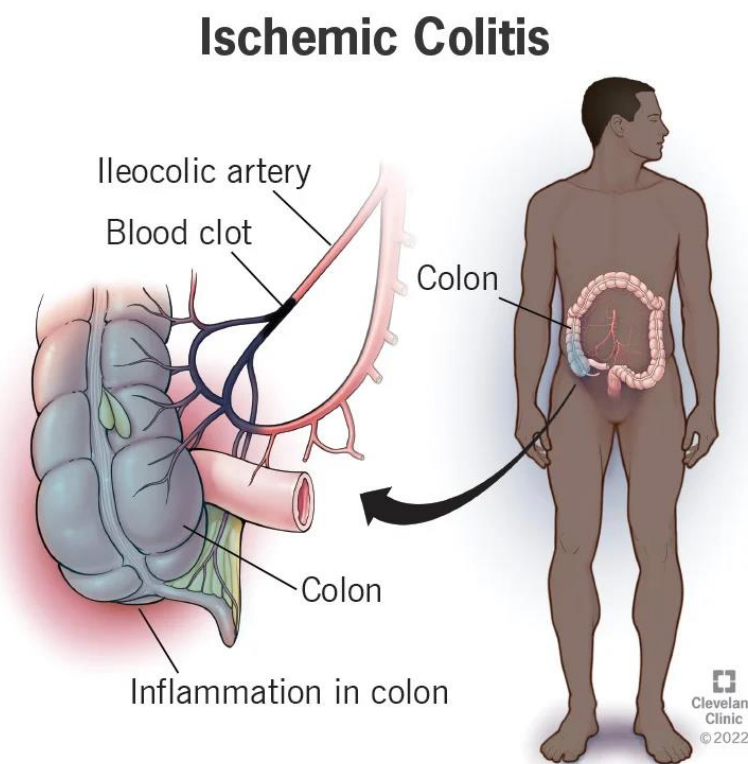
# Majors causes of acute Diarrhoea

## • INFECTIOUS

- Viral : Rotavirus, Adenovirus, Norwalk, Corona, Calcivirus
- Bacterial :
  - Preformed toxins : Bacillus cereus, Staphylococcus aureus, Clostridium perfringes
  - Non-invasive (non bloody diarrhoea) : Enterotoxin producing : Escherichia coli, Vibrio cholerae
  - Invasive bacteria (bloody stools) : Salmonella, Shigella, Campylobacter, E.coli, Clostridium difficile
  - Parasitic : Entamoeba histolytica, Giardia, Cryptosporidium, Microsporidium, Cyclospora

## • NONINFECTIOUS

- Dietary : Nonabsorbable sugars
- Medications
- Fecal impaction
- Ischemic colitis





# TRANSMISSION



- Most of the diarrheal agents are transmitted by the fecal-oral route
- Cholera: water-borne disease; transmitted through water contaminated with feces.
- Some viruses (such as rotavirus) can be transmitted through air
- Nosocomial transmission is possible
- Shigellosis (blood dysentery) is mainly transmitted person-to-person
- Shigellosis is a water-washed disease; transmitted more when there is scarcity of water





# Symptoms Accompany Diarrhoea



## 1. Dehydration

Diarrhea can cause dehydration. Loss of electrolytes through dehydration affects the amount of water in the body, muscle activity, and other important functions.

Signs of dehydration in adults include:

- thirst
- less frequent urination than usual
- dark-colored urine
- dry skin
- Fatigue
- Dizziness
- light-headedness



# Symptoms Accompany Diarrhoea



- 2. Functional bowel disorders:** Diarrhoea can be a symptom of irritable bowel syndrome.
- 3. Intestinal diseases:** Inflammatory bowel disease, ulcerative colitis, Crohn's disease, and celiac disease often lead to diarrhoea.
- 4. Food intolerances and sensitivities:** Some people have difficulty digesting certain ingredients, such as lactose, the sugar found in milk and milk products. Some people may have diarrhoea if they eat certain types of sugar substitutes in excessive quantities.
- 5. Reaction to medicines:** Antibiotics, cancer drugs, and antacids containing magnesium can all cause diarrhoea.



# LABORATORY DIAGNOSIS



- Stool microscopy
- Dark field microscopy of stool for cholera
- Stool cultures
- ELISA for rotavirus
- Immunoassays, bioassays or DNA probe tests to identify E. coli strains
- Endoscopy – in acute diarrhoea patients with bloody diarrhoea where infection needs to be differentiated by from IBD, in diarrhoea in immunocompromised patients where stool cultures have limited sensitivity and definitive diagnosis can only be made by endoscopy with biopsy



# Treatment



- Supportive care with oral rehydration solution
- Antidiarrheal agents
- Antibiotics





THANK YOU