

Diarrhea disease :

Diarrheal diseases remain a leading cause of preventable death, especially among children under five in developing countries. . Diarrhea is leading causes of illness and death among child in developing countries. 3.2 million deaths occur each year in those under five years of age, about 80% of deaths due to diarrhea occur in the first two years of life. The normal intestinal tract regulates the absorption and secretion of electrolytes and water to meet the body's physiological needs. More than 98 percent of the 10 liters per day of fluid entering the adult intestines are reabsorb .

Diarrhea is defined as the passing of more than three time liquid stool in 24 hours. also defined as an increase in the number of bowel movements per day or an increase in the looseness of stools compared with an individual's usual bowel habit. frequent stools may also be seen in some healthy babies. If the stools are not liquid, this is not diarrhea.

There Are 5 Types of Diarrhea

1- Osmotic Diarrhea

This is caused by the inability of the digestive system to absorb certain components of food such as sugars (lactose and fructose), sugar alcohols (sorbitol) and some minerals (magnesium, sulfate and phosphate). Water is drawn by these unabsorbed into the intestines, causing passing of watery stool. Normally osmotic diarrhea disappears after the foods containing these elements are removed from the diet.

2- Secretory Diarrhea

This is caused by secretion of water and salts by intestine into the stools. This happens during various kinds of infections. The infections release toxins that secrete water and salt by interfering with the intestines. Carcinoid tumors and medical conditions like celiac disease can also stimulate secretions.

3- Exudative Diarrhea

This occurs when inflammation of the lining of the colon causes the release of blood, mucus and/or other fluids. This type of diarrhea can be caused by a number of conditions such as tuberculosis some types of cancers and irritable bowel disease (IBD).

4- Paradoxical Diarrhea

This is a false indication of diarrhea. The symptoms are diarrhea-like but actually the complication is constipation called a fecal impaction. In case of paradoxical diarrhea, liquid stool flows around hard, impacted stool which still inside the rectum. Paradoxical diarrhea is very common among children, senior citizens or adults with limited mobility or mental capacity.

5- Pseudodiarrhea Diarrhea

This is an induced diarrhea such as caused by use of laxatives. Other causes include eating disorder bulimia nervosa which is caused by people trying to reduce body weight and Munchausen syndrome in which people fake illness to seek attention. It is often noted that different types of diarrhea may occur simultaneously at the same time.

The most common causes of diarrhea include the following:

- **Bacterial infections.** Several types of bacteria consumed through contaminated food or water can cause diarrhea. Common culprits include *Campylobacter*, *Salmonella*, *Shigella*, and *Escherichia coli* (*E. coli*).
- **Viral infections.** Many viruses cause diarrhea, including rotavirus, norovirus, cytomegalovirus, herpes simplex virus, and viral hepatitis. Infection with the rotavirus is the most common cause of acute diarrhea in children
- **Parasites.** Parasites can enter the body through food or water and settle in the digestive system. Parasites that cause diarrhea include *Giardia lamblia*, *Entamoeba histolytica*, and *Cryptosporidium*.

- **Functional** bowel disorders. Diarrhea can be a symptom of irritable bowel syndrome.
- **Intestinal diseases.** Inflammatory bowel disease, ulcerative colitis, Crohn's disease, and celiac disease often lead to diarrhea.
- **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 diarrhea if they eat certain types of sugar substitutes in excessive quantities.
- **Reaction to medicines.** Antibiotics, cancer drugs, and antacids containing magnesium can all cause diarrhea.

Symptoms of Diarrhea

Symptoms of diarrhea can be broken down into uncomplicated (or non-serious) diarrhea and complicated diarrhea. Complicated diarrhea may be a sign of a more serious illness.

Symptoms of uncomplicated diarrhea include:

- Abdominal bloating or cramps
- Thin or loose stools
- Watery stool
- Sense of urgency to have a bowel movement
- Nausea and vomiting

In addition to the symptoms described above, the symptoms of complicated diarrhea include:

- Blood, mucus, or undigested food in the stool
- Weight loss
- Fever

Transmission:

- Most of diarrheal agents are transmitted by the fecal-oral route.
- food and water contaminated directly or indirectly with feces or vomitus of infected persons are the principal mode of transmission .
- Ingestion of raw or inadequately cooked seafood or eating shellfish from coastal and estuarine waters can cause outbreaks of diarrhea .
- Some viruses (such as rotavirus) can be transmitted by the air.

Dangerous of diarrhea :

The main causes of death from acute diarrhea is dehydration which result from the loss of fluid and electrolytes in diarrhea stool.

Diarrhea causes rapid depletion of water and sodium - both of which are necessary for life. If the water and salts are not replaced fast, the body starts to "dry up" or get dehydrated. If more than 10% of the body's fluid is lost death occurs.

How can dehydration be prevented

Oral rehydration solutions (ORS) contains glucose and electrolytes. The glucose in the solution is important because it forces the small intestine to quickly absorb the fluid and the electrolytes. The purpose of the electrolytes in the solution is the prevention and treatment of electrolyte deficiencies.

Diarrhea can be prevented by pursuing multisectoral efforts by:

- improving access to clean water and safe sanitation
- promoting hygiene education
- exclusive breast-feeding
- improved weaning practices
- immunizing all children; especially against measles
- using latrines
- keeping food and water clean
- washing hands with soap (the baby's as well) before touching food and by sanitary disposal of stools.