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The Digestive System

How we get nutrition and how we eliminate waste is usually taken for granted until there is a problem with the system. The digestive system begins at the mouth and ends at the anus. Here is an overview of the parts that make up the digestive system and how each works within this complex system.

Mouth

- ingests food/fluid
- breaks food down by chewing
- begins digestion by adding saliva

Esophagus

- this tube carries food/fluid to stomach

Stomach

- breaks down and mixes up food
- holds food until the bowel is ready for it (up to two hours)
- can hold one liter of food and fluid (we feel full with 1/2 liter)

Gastrocolic Reflex

- initiates peristaltic waves of digested food onward to rectum 3-6 times a day via the pyloric sphincter

Small Intestines (Bowel)

- has the duodenum, where most digestion takes place because of added secretions from the pancreas, gallbladder, liver, jejunum, then ileum
- takes 4-6 hours for food to go through this section

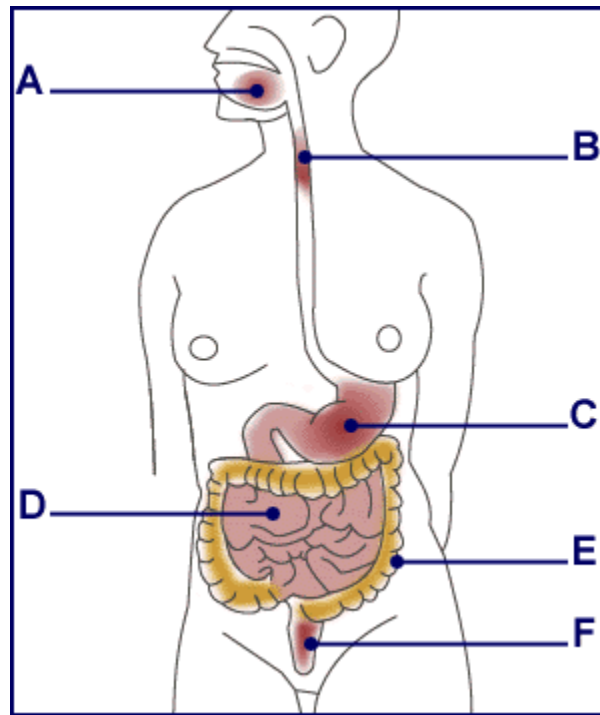
Colon (Large Intestine)

- receives 1000-1500 ml of digested food, which is now a thick liquid, per day
- Has three parts: ascending colon, transverse colon and the descending colon
- Transit time through the colon from the ascending colon, transverse colon, and descending colon to the sigmoid (storage) is 24-72 hours depending on what has been eaten; fatty meals take longer
- passes along hardened feces to the rectum

Rectum

- Once stool enters into the rectum we become aware that we need to have a bowel movement.

How Food Passes Through the Digestive System



- A. Mouth: Food is chewed in the mouth. This takes up to one minute.
- B. Esophagus: Food is swallowed, taking three seconds to pass through the esophagus.
- C. Stomach: Digestion starts in the stomach, where food stays for 1-3 hours.
- D. Small Intestine: Liquidized food takes about 2-6 hours to travel through the small intestine. By now it is fully digested.
- E. Large Intestine: By the end of its stay in the large intestine (12-48 hours), most of the water content has been absorbed.
- F. Rectum: Stools and gas are stored in the rectum until they are expelled through the anus.