

b. Gastric Digestion

The stomach is an important muscular organ guarded at its entrance and exit by sphincter muscles. It is not an empty cavity. It contracts around the food and goes through an orderly sequence of contractions and relaxations. These movements seem to further break up food and add to it the gastric secretions. When the digestive process has proceeded to a certain stage, the acid chyme causes pyloric sphincter to open and let out a small quantity of contents into the intestines.

c. Gastric Secretions

Character: Acid reaction (Hydrochloric acid)  
Amount: Three pints daily  
Secretions: (a) Psychic (b) Secretagogues  
Enzymes: (a) Pepsin (b) Rennin

d. Intestinal Digestion

Movements of Intestines: Peristalsis is slower and gentler than in the esophagus. Rhythmic motion moves food along in stages.

Secretions: Bile, pancreatic juice; intestinal juice.

The secretions of the intestines are alkaline in reaction. This enables them to neutralize acids coming from the stomach, those due to bacterial fermentation of sugars, and those formed by fat digestion.

Bile: A secretion of liver and temporarily stored in gall bladder.  
Action:

- (a) Stimulate splitting of fats by pancreatic juice.
- (b) Enters into new formation of soaps with fatty acids.
- (c) Promotes peristalsis.
- (d) Helps to control bacteria.

Pancreatic juice: Amount, 1 pint daily. Action, on all three forms of foodstuffs. Enzymes: Amylopsin; Trypsin; and Steapsin (or amylase, protease, lipase).

Intestinal juice: Completes preparation of both proteins and carbohydrates for absorption.

Enzymes: (a) Invertase  
Maltase ) bring about final changes in sugars.  
Lactase )

(b) Erepsin ) completes splitting of some proteins into amino acids.