e. Large Intestines

As the food passes through lower part of small intestines and beginning of large intestine water and absorbable materials are extracted from foods, at last leaving the waste products nearly solid and ready for discharge from the body. This is called the feces, and is made up of residue of diet (5%), excretions from the intestinal tract, and bacteria.

f. Absorption of Foodstuffs

The absorption of foodstuffs becomes the final and critical stage of digestion. The whole intestinal tract has some powers of absorption. The most important part is the small intestines.

(1) Mechanism of Absorption

The intestines are so arranged that the liquid or semi-liquid foodstuffs can come into intimate contact with as large a surface of intestines as possible. This is accomplished through the villi of the intestinal wall.

(2) Process of Absorption

(a) Osmosis and dialysis
(b) Action of epithelial cells

(3) Routes of Absorption

(a) Blood stream through capillaries of villi into general blood stream.
(b) Lacteals to the lymphatic system through the thoracic duct to blood stream.

(4) Form of Absorption of Foodstuffs

(a) Carbohydrates absorbed mostly as simple sugars.
(b) Fats are split into fatty acids and glycerin.
(c) Proteins are split into amino acids.

E. HYGIENE OF NUTRITION

While a knowledge of the digestive system and a familiarity with the food composition and values is important, the factors included under the term "hygiene of nutrition" are of equal importance.

The levels of nutrition are markedly influenced by the following factors:

1. Environment. The environment in which food is taken may help or hinder its digestion.

   (a) Character of service - cleanliness, etc.
   (b) Preparation of food - appearance, taste, odor.

2. Emotional state: It has been proven that in both man and animals the emotions have a direct bearing upon the secretion of the digestive juices. (See Cannon: Bodily Changes in Pain, Fear, etc, - on Reserve Shelf).