

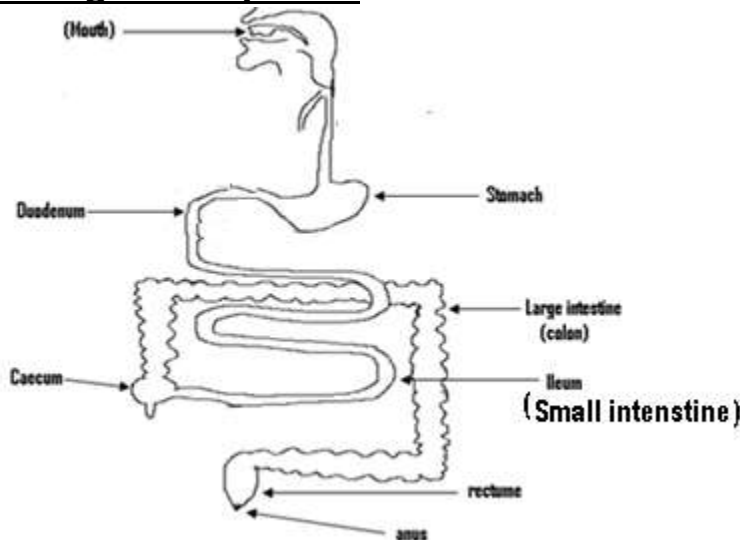
Chapter Thirteen

Digestion:

Introduction:

- If we eat food, the food must be absorbed by the body or be moved or taken into the body.
- Before the food can be taken into the body, it must first be broken down into simple substances.
- The body can then easily absorb these simple substances.
- The protein in the food is converted into a simple substance called amino acid, and the starch (carbohydrate) within the food is converted or changed into another simple substance called simple sugar.
- The fat is converted into a simple substance called fatty acid or glycerol.
- Digestion is the breaking down of the food we eat into simple substances, so that the body can absorb them.

The digestive system:



- Digestion occurs or takes place in the digestive system.
- This is made up of the mouth, the oesophagus, the stomach, the duodenum, the small intestines, the large intestine, and the anus.

Mouth:

- Digestion begins in the mouth, where the food is first chewed and mixed with saliva.
- The saliva contains a substance called ptyalin.

- If there is any cooked starch in the food, the ptyalin will first break it down into maltose.
- The digestion or the breaking down of the starch within the food we eat , therefore begins in the mouth.
- From the mouth, the food then enters the stomach.

Stomach:

- Within the stomach can be found a substance called pepsin.
- If there is any protein in the food, the pepsin will convert or change it into peptone.
- The digestion of the protein found within the food we eat therefore begins in the stomach.
- The stomach also contains an acid.
- This acid will kill the germs found within the food.
- From the stomach the food moves into duodenum.

Duodenum:

- In the duodenum, any protein which can still be found in the food is converted into peptone.
- Any starch whether it has been cooked or not cooked, which can still be found in the food is converted or changed into maltose.
- Any fat within the food is changed into fatty acid and glycerol.
- Fatty acid and glycerol are the end products of the digestion of fat.
- This means that they cannot be broken down into any other simple substances.
- For this reason, the digestion of fat ends in the duodenum.
- From the duodenum, the food enters the ileum.

Ileum:

- Before the food enters the ileum, all the protein within it had been converted into peptone.
- In the ileum the peptone is converted into amino acid.
- The amino acid is the end product of protein digestion.
- For this reason, the digestion of protein ends up in the ileum.
- Before the food also enters the ileum, the carbohydrate that it contains had been changed into maltose.
- In the ileum the maltose is changed into simple sugar.
- Simple sugar is the end product of carbohydrate digestion.
- The ileum forms part of the small intestine.
- In the small intestine, the amino acid, simple sugar and fatty acid are absorbed into the blood or the blood stream.
- These substances are then carried by the blood into the liver, where they are stored or kept.
- When any of these substances is needed by the body, the liver releases it into the body, or gives it to the body.

- The part of the food which the body does not need comes out as faeces or toilet through the anus.

Reasons why food is important to us:

- Food is very important for a number of reasons, and some of these reasons are:
 - (i) The food we eat enables us or makes us to live.
 - (ii) It also provides us with energy.

Food substances:

- This is the name given to the ingredients or the items which are found within the food we eat.
- These items or ingredients are:
 - (1) Carbohydrate. (4) Fat.
 - (2) Water. (5) Minerals.
 - (3) Protein. (6) Vitamins.
- There are therefore six food substances.

Balanced diet:

- This is a diet or food, which contains all the six food substances in the correct amount.
- If we want to be healthy and not become sick, then we must eat balanced diet.

Protein:

- We get protein when we eat fish, meat and beans.
- Protein is important because it enables or makes us to grow.
- If we do not get enough protein from the food we eat, then we shall not grow well.
- We shall also get a disease called kwashiorkor.

Carbohydrate:

- We get carbohydrate when we eat cassava, rice, maize and yam.
- Carbohydrate is important because it gives us energy.
- If the food we eat does not contain enough carbohydrate, then we shall grow thin.

Fat:

- We get fat when we eat beef, ground nut and pork.
- Fat is important because it provides us with heat and energy.

Vitamins:

- We get vitamins when we eat vegetables.