

#20vearsofWIN

Subject: Science Term 1 – Week 3 Topic: Human digestive system

Let us have a detailed look at the digestive system of the human body, along with its parts and functions:

Mouth

Food starts its journey from the mouth or the oral cavity. There are many other organs that contribute to the digestion process, including teeth, salivary glands, and tongue. Teeth are designed for grinding food particles into small pieces and are moistened with saliva before the tongue pushes the food into the pharynx.

Esophagus

This is a muscular tube that connects the pharynx, which is a part of an upper section of the gastrointestinal tract. It supplies swallowed food along with its length.

Stomach

It serves as a muscular bag which is situated towards the left side of the abdominal cavity, beneath the diaphragm. This vital organ acts as a storage for the food and provides enough time to digest meals. The stomach also produces digestive enzymes and hydrochloric acid that maintains the process of digestion.

- **Digestive enzymes**: They are the group of enzymes which functions by breaking down larger substances into their smaller and simpler substances.
- **Hydrochloric acid**: It is the digestive fluid formed by the stomach during the process of digestion. It functions by destroying harmful microorganisms present in the food particles.

Small Intestine

The <u>small intestine</u> is a thin, long tube of about 10 feet long and a part of the lower gastrointestinal tract. It is present just behind the stomach and acquires a maximum area of the abdominal cavity. The complete small intestine is coiled and the inner surface consists of folds and ridges.

Large Intestine

This is a thick, long tube measuring around 5 feet in length. It is present just beneath the stomach and wraps over the superior and lateral edges of the small intestine. It absorbs water and consists of bacteria (symbiotic) that support the breakdown of wastes to fetch small nutrients.

Rectum

Waste products are passed into the end of the large intestine called the rectum and eliminated out of the body as a solid matter called stool. It is stored in the rectum as semi-solid faeces which later exits from the body through the anal canal through the process of defecation.

Accessory Organs

Pancreas

It is a large gland present just behind the stomach. It is short with its anterior connected to the duodenum and posterior pointing towards the left part of the abdominal cavity. The pancreas releases digestive enzymes to complete the process of chemical digestion.

Liver

The liver is a roughly triangular, reddish-brown accessory organ of the digestive system located to the right of the stomach. It produces <u>bile</u>, which helps in the digestion of fat in the small intestine. The bile is stored and recycled in the gallbladder. It is a small, pear-shaped organ which is located just next to the liver.

1) Which of the following gives the correct order for food as it passes through the organs of the digestive system?

- a. Mouth, esophagus, stomach, gall bladder, pancreas, large intestines, small intestines
- b. Esophagus, epiglottis, stomach, liver, small intestines, large intestines, anus
- c. Mouth esophagus, stomach, small intestines, large intestines, anus
- d. Mouth, liver, gall bladder, stomach, large intestines, small intestines, anus.

2) The main function of the stomach is to:

- a. Store food
- b. Produce hydrochloric acid
- c. Break down food
- d. All of the above

| (3) Which part of the digestive system is responsible for absorbing water: a. Small intestines b. Large intestines c. Kidneys d. Stomach | (4) Which part of the digestive system contains Hydrochloric acid and is coated with mucus for its protection: a. Rectum b. Small intestines c. Stomach d. Oesophagus |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (5) Which part of the following is the section of the digestive system where most enzymes are added? a. Large intestines b. Mouth c. Stomach d. Small intestines | (6) Bile is made in? a. Liver b. Stomach c. Gall bladder d. Small intestines |
| (7) Bile is made in the liver and released into the small intestine. Its job is to break down _? a. Nutrients b. Fats c. Proteins d. Water | (8) The oesophagus connects the mouth to the? a. Mouth b. Small intestines c. Liver d. Stomach |
| (9) Which of the following are NOT a part of the digestive system? a. Qesophagus b. Kidneys c. Anus d. Liver | (10) Where is solid waste (poop) stored? a. Anus b. Rectum c. Large intestines d. Stomach |
| (11) Villi are found in what part of the digestive system? a. Mouth b. Stomach c. Large intestines d. Small intestines | (12) Diarrhea is when the do not absorb water? a. Rectum b. Anus c. Stomach d. Large intestines |

| Answers: | |
|--------------|--|
| 1. C | |
| 2. D | |
| 3. B | |
| 4. C | |
| 5. D | |
| 6. A | |
| 7. B 8. D | |
| 9. B | |
| 10.B | |
| 11.D | |
| 12.D | |
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