

Digestive System Learning Outcomes

As a result of study the theory of the digestive system you should be able to:

1. Know what the different parts of the digestive tract are called and which sphincters regulate the movement of contents from one compartment to another.
2. Be able to name the accessory organs of the digestive system and be able to describe their location.
3. Be familiar with the microscopic structure of the digestive tract and be able to explain the functional significance of each of the components of each layer.
4. Know the names of the major blood vessels that supply/drain blood from the digestive system.
5. Be able to describe the five major systems that control the digestive system and illustrate each of these with at least one example of a function that it controls.
6. Understand the physiology responsible for peristalsis and segmentation as well as the functional significance of each.
7. Know the roles that the mouth plays in digestive system function.
8. Be familiar with the constituents of saliva and how saliva secretion is regulated.
9. Know what deglutition is, understand the steps involved and the consequences of dysphagia.
10. Be able to describe the stages involved in emesis and the functional significance of this reflex.
11. Be able to describe how the coordinated action of the three layers of smooth muscle in the stomach effectively mix foodstuff.
12. Know the physiological processes involved in the control of gastric motility.
13. Be able to name the major types of cell found in gastric glands and explain the functional significance of each.
14. Be able to explain the physiological processes involved in the control of gastric juice secretion.
15. Know what the end result of the physiological process of the stomach are, how long food spends in the stomach the types of substances that are absorbed by the stomach.
16. Know the different cell types that found the walls of the small intestine and the functional significance of these.
17. Be able to name the cells found in intestinal glands and understand their functional role in the physiology of the digestive system.
18. Know the major constituents of pancreatic juice and the functional significance of each.
19. Be able to describe the physiological processes involved in the control of pancreatic juice secretion.
20. Be able to name the major constituents of bile and the functional significance of each.
21. Understand the physiological processes involved in the control of bile secretion.
22. Be able to describe the processes responsible for the digestion of carbohydrates.
23. Understand the processes responsible for the digestion of proteins.
24. Be able to explain the steps involved in the digestion of neutral fats.
25. Be able to describe the processes responsible for the absorption of carbohydrates.
26. Understand the processes responsible for the absorption of proteins.
27. Be able to explain the steps involved in the absorption of neutral fats.
28. Be able to explain the different mechanisms by which fat soluble and water-soluble vitamins are absorbed.
29. Know how electrolytes such as sodium, potassium and calcium are absorbed.
30. Understand how osmosis is responsible for the absorption of water by the small intestine.
31. Know the difference between haustral contractions and mass movements and the functional significance of these.
32. Know what flatus is and who is responsible for its production.

33. Explain why the rate at which chyme moves along the large intestine is important.
34. Describe the physiological processes involved in defecation.
35. Understand why young children and people with spinal cord injuries suffer from incontinence of faeces.