

Organs of the digestive system Part 2 + Enzymes

Read Chapter 20.3-4

Fill in the blanks

1. Bile helps to (chemically or mechanically) _____ breakdown (protein, starch, or fat) _____
2. Bile is produced from _____.
3. During digestion, the _____ cells of the pancreas produce digestive enzymes and bicarbonate ions that are released into the _____ via the _____ duct.
4. The pancreas makes bicarbonate to regulate the _____ of the chyme entering the small intestine.
5. In the small intestine, the MOST nutrients are absorbed in the _____.
6. The _____ is where vitamin B12 + intrinsic factor are absorbed.
7. The intestinal mucosal epithelium has a very large surface area for absorption due to the presence of _____ and _____.
8. The small intestine is composed of _____ epithelial cells.
9. Each villus contains capillaries and a _____.
10. The large intestine is primarily involved in housing our resident _____, absorbing _____ and _____, and storing _____.
11. Microflora organisms in the large intestine aid digestion by producing vitamins such as _____ and _____.
12. Microflora will ferment/ breakdown substances we do not digest, such as _____.
13. Microflora help to release _____ from plant foods, and can also break down toxic substances that can cause cancer, called _____
14. Aside from a small amount of water, feces is primarily composed of:
 - a. _____
 - b. _____
 - c. _____
15. Name one food that is a probiotic. _____

16. Match the following macromolecules with the correct building block: **amino acids, fatty acids, nucleotides, monosaccharides.**

- a. Triglycerides _____
- b. Starch _____
- c. Protein _____
- d. Nucleic acids _____

17. Sucrose (table sugar) is composed of _____ and _____.

18. The process of breaking macromolecules into its individual subunits is called _____

19. _____ are the proteins that catalyze chemical reactions.

20. Match the following descriptions with the correct enzyme. **Amylase, lipase, pepsin, trypsin, chymotrypsin, ribonuclease, sucrase, lactase, peptidases**

- a. Made by the pancreas and breaks down starch _____
- b. Made by the small intestine and breaks down peptides _____
- c. Made by the salivary glands and breaks down fat _____
- d. Made by the pancreas and breaks down protein _____ and _____
- e. Made by the stomach and breaks down protein _____
- f. Made by the pancreas and breaks down RNA _____
- g. Made by small intestine and breaks down lactose _____
- h. Made by small intestine and breaks down table sugar _____

21. Which of the following begin chemical digestion in the stomach?

- a. Sugar
- b. Starch
- c. Protein
- d. Fat

22. The stomach contains hydrochloric acid and this is important for killing pathogens that are consumed, and it is also important for converting _____ into pepsin.

23. _____ take the longest amount of time to digest.