Mastery Series: Cross-Section of the Intestine

1. What is the GI lumen?
2. If someone were discussing blood vessels, what would you think the lumen is?
3. What are the 4 layers of the GI tract?
4. Which layer is populated with bacteria?
5. Which layer is covered with mucus to prevent friction?
6. Which layer is covered with serous fluid to prevent friction with other coils of intestines?
7. Which layer contracts to perform peristalsis and/or segmentation?
8. Which layer is composed of areolar connective tissue?
9. Which layer is composed of simple columnar epithelium?
10. Which layer prevents microbes from entering blood vessels?
11. Describe the parts of the submucosa.
12. What are the two parts of the smooth muscle of the intestine?
13. What two kinds of movements (show with your hands) can the intestine therefore perform?
14. What is the purpose of the folds and “villi” and “microvilli” of the intestine?
15. Why would increased surface area be important?
16. If this were the duodenum, what types of enzymes would be entering it via ducts?
17. What organ connects with the duodenum to deliver these enzymes?
18. What are two common reasons someone could develop peritonitis?
19. What type of cells release histamine and may be implicated in food allergies?

Cross-Section of the Small Intestine Mastery Series Answers

1. The center of the "tube" that is our GI tract; where the food is passing through.
2. Where the blood is passing through.
3. Mucosa, submucosa, smooth muscle, peritoneum
4. mucosa
5. mucosa
6. peritoneum
7. smooth muscle
8. submucosa
9. mucosa
10. submucosa
11. areolar connective tissue contains lymphatic tissue called Peyer's Patches; mucus glands; capillaries and lymphatic vessels; mast cells that secrete histamine
12. circular and longitudinal muscle
13. shortening and narrowing
14. increase surface area
15. more efficient digestion and absorption
16. amylase, proteases, lipase
17. pancreas
18. trauma (e.g. sharp stick, gunshot, knife); infection (e.g. gases build up and perforate the bowel)
19. mast cells