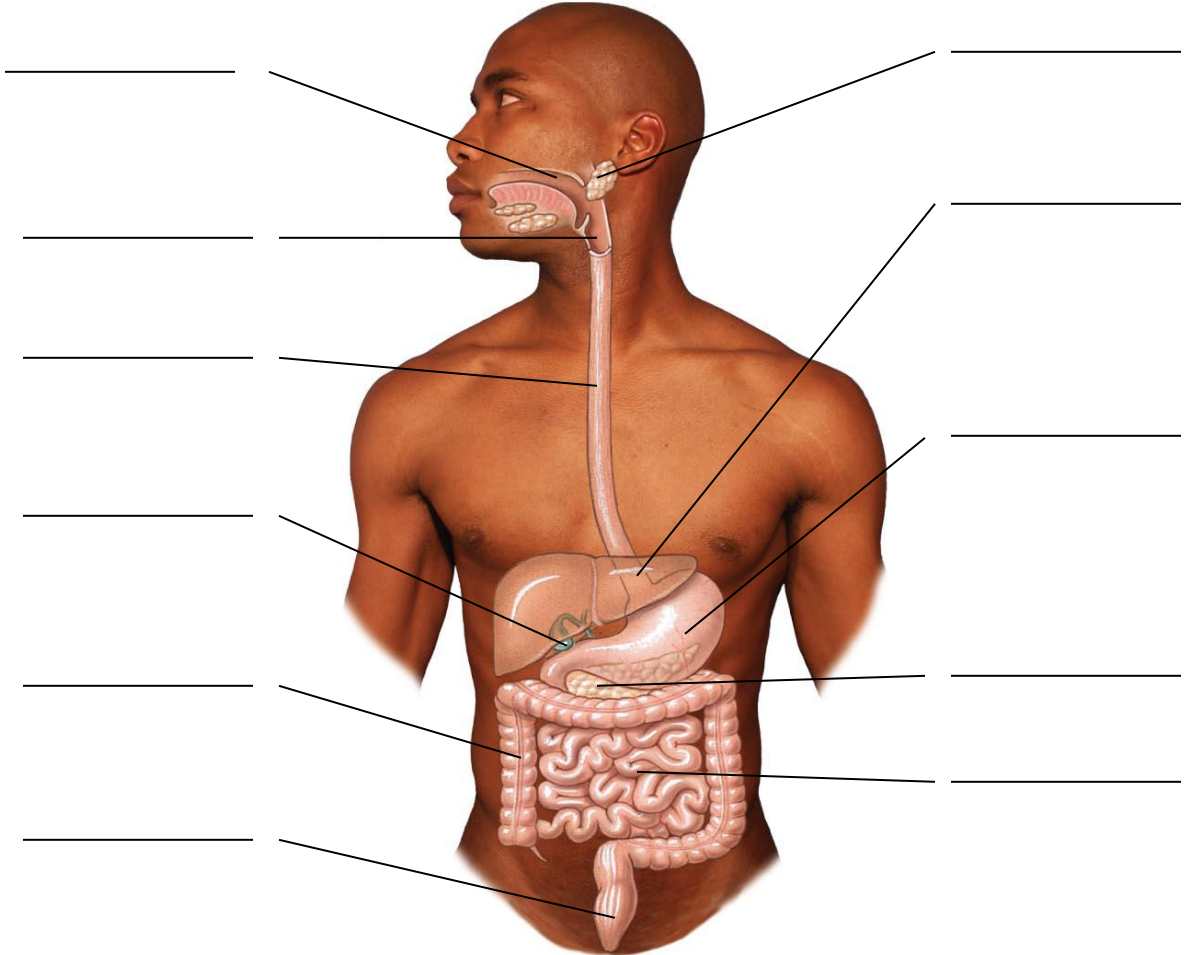


The worksheet below is adapted from

- A. Fundamentals of Anatomy and Physiology (9th Ed) by Martin et al
- B. Human Anatomy and Physiology Lab Manual (9th Ed) by Marieb and Mitchell

The Gastrointestinal System

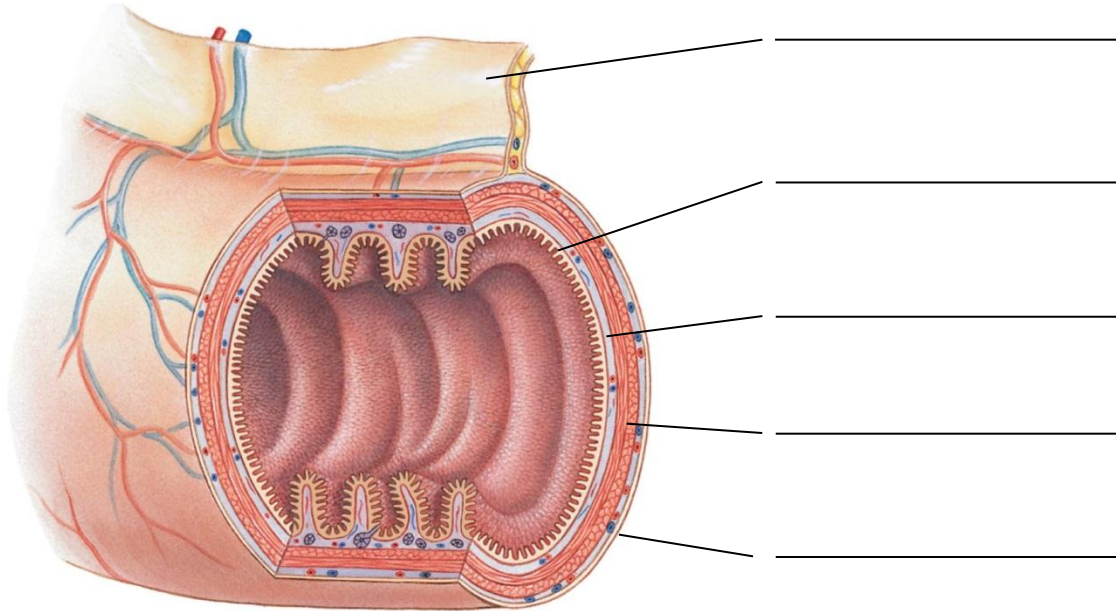
1. Name the structures in the diagram below. Briefly describe the function of each.



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2. What is the role of the peritoneal fluid that fills the space between the visceral and parietal peritoneum:

3. Name the structures in the following diagram:



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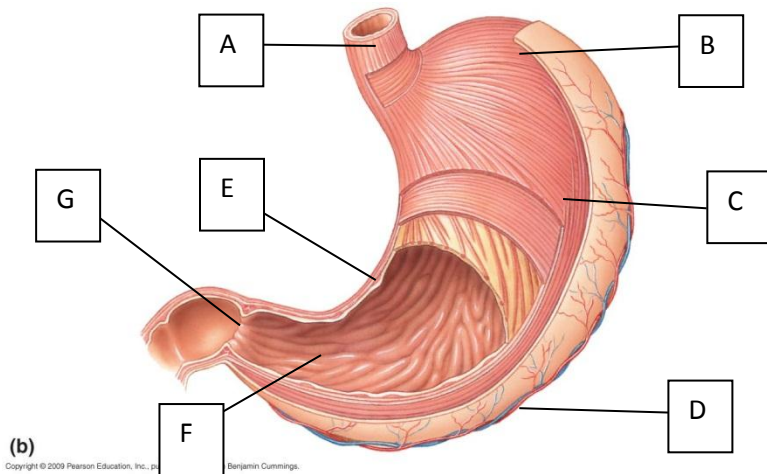
4. What are the mesenteries? What is their function?

5. Briefly describe the structure/function the muscularis externa:

6. Describe peristalsis

7. Saliva is produced by 3 pairs of salivary glands found in the oral cavity called the parotid, sublingual and submandibular salivary glands. List 4 functions of saliva:

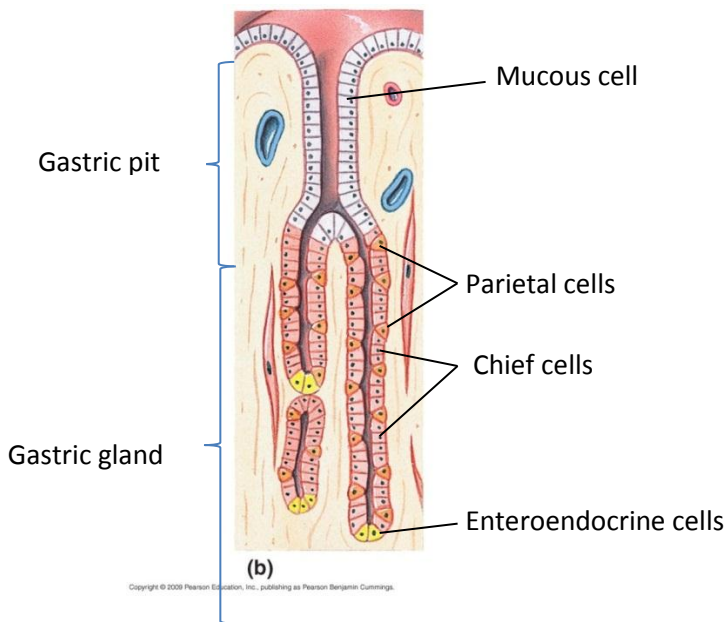
8. Match the letters with the terms:



Structure of the stomach

1. Pyloric sphincter
2. Pylorus
3. Fundus
4. Esophagus
5. Lesser curvature
6. Greater curvature
7. Body

Diagram of a cross-section of a gastric gland found in the stomach wall



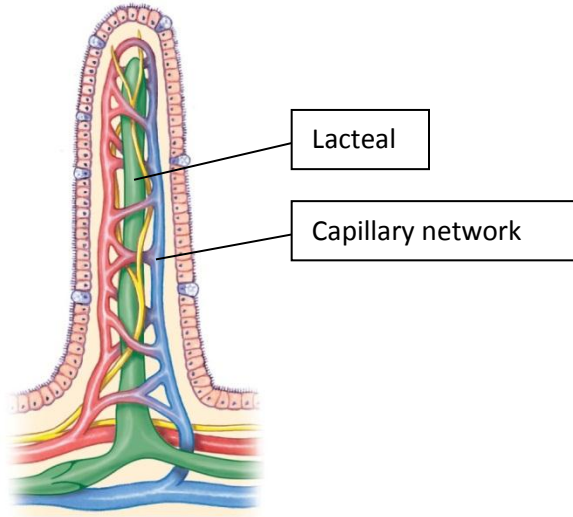
9. Parietal cells found in the gastric glands of the stomach secrete HCl keeping the pH of the stomach around 1.5-2. This highly acidic environment has 4 important functions. What are they?

10. What protects the cells of the stomach wall from the high acidity?

11. Gastrin is a hormone produced by enteroendocrine cells found in the gastric glands within the pylorus. What role does it play?

12. Name the location where most nutrient absorption takes place:
13. What is the role of the intestinal villi located in the small intestines?

14. Below is a cross-sectional diagram of a villus found in the wall of the small intestines to illustrate the lacteal and capillary network:



(c)

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a. What is the role of the capillary network?

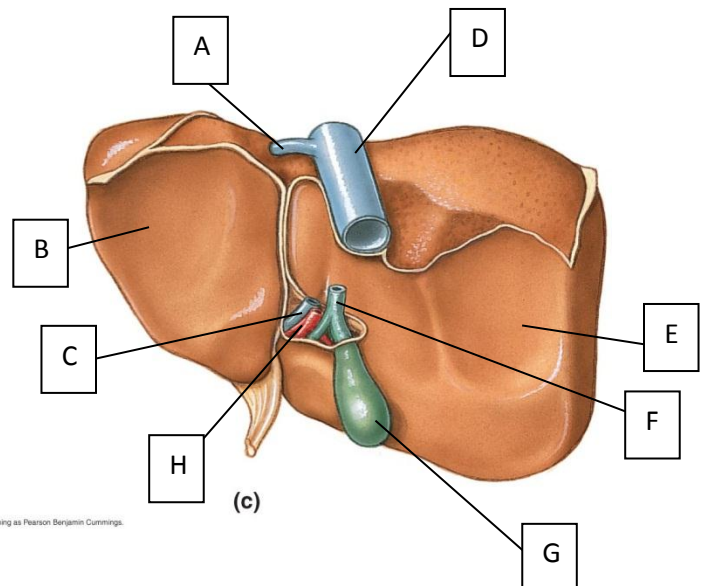
b. What is the role of the lacteal?

15. The pancreas produces pancreatic juice that is released into the duodenum and contains 4 classes of enzymes, what are they?

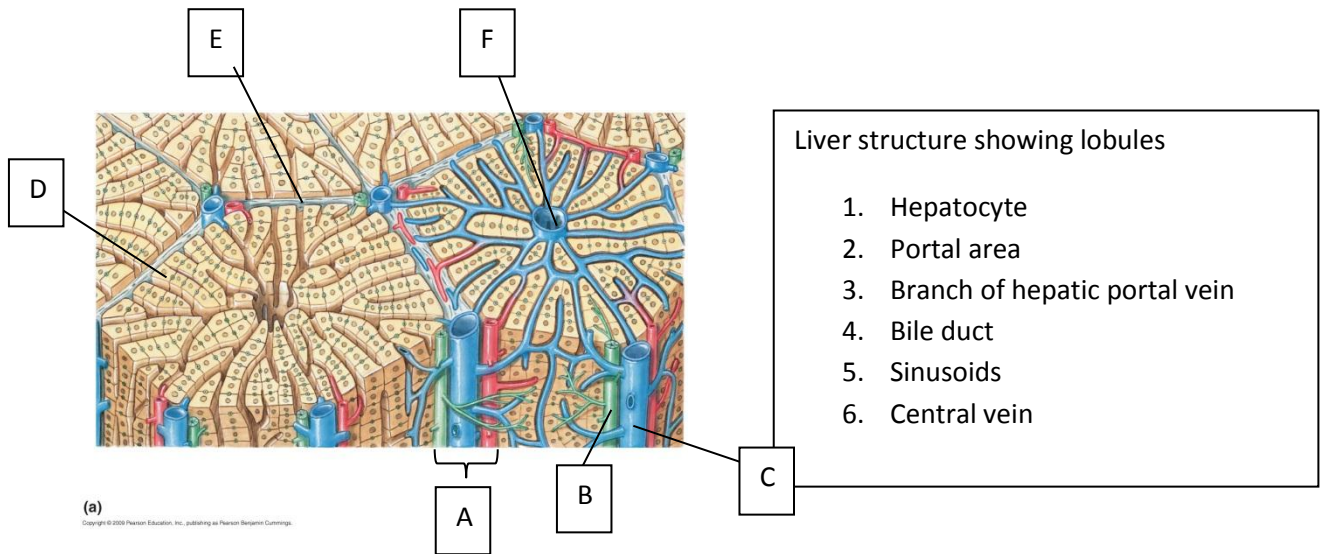
16. Anatomy of the liver, match the terms in the diagrams below:

Posterior surface of Liver:

1. Right lobe
2. Left lobe
3. Inferior vena cava
4. Left hepatic vein
5. Common bile duct
6. Hepatic portal vein
7. Hepatic artery proper
8. Gallbladder



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Blood flow through the liver:

Blood enters the liver from the hepatic artery proper and from the hepatic portal vein (which begins with capillaries of the esophagus, stomach, small intestines and most of the large intestines. After flowing through small branches of these vessels it then enters the sinusoids. From there blood flows into the central veins, these merge to form the hepatic veins which empty into the inferior vena cava

17. Physiology of the liver. The liver carries out many functions, but they generally fall into 3 categories, what are they?

18. Where is bile stored?

19. What is the main role of the large intestines?