

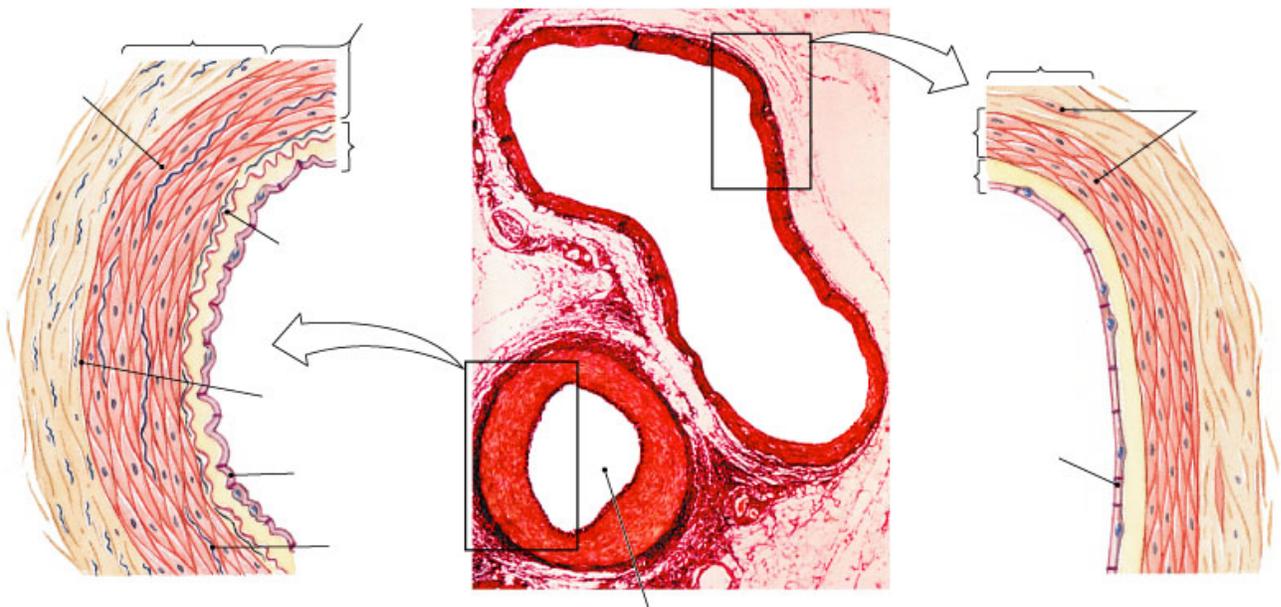
Chapter 19 - Blood Vessels

1. Define the following: Arteries, Capillaries, Veins. What does a blue vs. red blood vessel represent?
2. What are the three layers (tunics) found in a typical blood vessel?
3. What are the differences between an artery and a vein?
4. What are the three different types of arteries and what are their functions?
5. What are the two different types of capillaries and their functions?
6. What are the three different types of veins? What is the general function of veins?
7. How does blood pressure and blood flow change within arteries, capillaries, and veins?
8. Compare and contrast the tunic composition between arteries (elastic, muscular, arterioles), capillaries, veins (venule, medium size, large size) and what is the general function of each tunic.
9. How do elastic arteries and muscular arteries maintain relatively constant blood flow and pressure?
10. Describe the following structures and their function: precapillary sphincter, true capillaries, metarteriole, thoroughfare channel, intercellular clefts, tight junctions.
11. How does material move out of the capillaries and into the interstitial tissue?
12. What is the function of vascular anastomoses?
13. Why do some veins have valves?
14. What is the function of the blood brain barrier.
15. Describe the anatomy of the following capillaries: continuous and fenestrated.
16. Describe the anatomy and the function of sinusoids, where are they found.
17. What are the two mechanisms that allow the movement of blood through the veins?
18. What is the function of the vasa vasorum, where are they found?
19. Define the following: vasoconstriction, vasodilation.

Label the Following:

Lumen of artery
Lumen of vein
Tunica intima
Tunica media
Tunica externa
Smooth muscle

internal elastic lamina (membrane)
external elastic lamina (membrane)
endothelium
Artery
Vein



Sample Exam Questions

TRUE/FALE

1. Blood flow in capillaries is always very constant.
2. All arteries contain blood rich in oxygen.
3. The elastic arteries primary function is to determine which organs will receive blood.
4. Arteries transport blood away from the heart.
5. The tunica externa layer of blood vessels contains smooth muscle tissue.

MATCHING

- A. Vein
 - B. Artery
 - C. Capillary
 - D. Two of these
6. This vessel has a large tunica media.
 7. This vessel has a large, dominant tunica adventitia (externa).
 8. Most blood is found in these vessels.
 9. This may have valves.

MULTIPLE CHOICE

10. Most veins could be characterized by which of the following?
 - A. They have lots of elastic fibers.
 - B. They have most smooth muscle fibers arranged in a circular fashion.
 - C. The tunica adventitia (externa) is the thinnest layer.
 - D. They have large lumina compared to the thickness of their wall.
11. Most blood is found in which of the following?
 - A. Arterioles
 - B. Venules
 - C. Arteries
 - D. Veins
 - E. Capillaries