

Name \_\_\_\_\_

Date \_\_\_\_\_ Per \_\_\_\_\_

**Open ADAM Interactive Physiology. Click on Cardiovascular System and select "Factors that Affect Blood Pressure."**

**Study Questions on Factors that Affect Blood Pressure:**

1. (Page 1.) What are the four main factors affecting blood pressure?
2. (Page 3.) Blood cells and plasma encounter resistance when they contact blood vessel walls. What is this resistance called?
3. (Page 3.) Is more or less pressure needed to keep blood moving when resistance increases?
4. (Page 3.) What are the three main sources of peripheral resistance?
5. (Page 4.) What is the relationship between the diameter of a tube and the proportion of fluid that is in contact with the wall of the tube?
6. (Page 4.) What is the relationship between the diameter of a tube and resistance to flow? What effect does this have on pressure?
7. (Page 5.) Does constriction of blood vessels raise or lower blood pressure?
8. (Page 5.) What actively regulates the diameter of blood vessels?
9. (Page 5.) What chemical is released by vasomotor fibers that acts as a powerful vasoconstrictor?
10. (Page 6.) List three blood-borne vasoconstrictors?
11. (Page 7.) Explain viscosity.

12. (Page 7.) What is the relationship between viscosity and pressure required to pump a fluid?
13. (Page 8.) Define hematocrit.
14. (Page 8.) What is the effect of hematocrit on blood viscosity?
15. (Page 8.) When does hematocrit increase?
16. (Page 9.) What is the relationship between the total vessel length, resistance, and blood pressure?
17. (Page 10.) Why is expansion and recoil of the elastic arteries important?
18. (Page 10.) Why does blood pressure often increase in individuals with arteriosclerosis?
19. (Page 11.) What is the relationship between blood volume and blood pressure?
20. (Page 13.) What is the relationship between blood pressure and cardiac output?
21. (Page 13.) What is the relationship between heart rate, stroke volume and cardiac output?
22. (Page 13.) What happens to heart rate, cardiac output, and blood pressure with both parasympathetic and sympathetic stimulation?
23. (Page 14.) What is the relationship between venous return and stroke volume?