

Name:

Pre-Lab 10: Physiology of the Circulatory System

1. Explain the difference between a pulmonary circuit and a systemic circuit of the circulatory system.
2. What does a sphygmomanometer specifically measure?
3. When you put a cuff with a pressure gauge around the upper arm and inflate it, why is it that you cannot hear a pulse with a stethoscope placed below the cuff?
4. What does the systolic pressure measure, and what do you do to the sphygmomanometer and stethoscope to measure this?
5. When does the diastolic pressure measure, and what do you do to the sphygmomanometer and stethoscope to measure this?

6. An individual has the blood pressure of 120/70 mm of Mercury. Which of these numbers is the systolic number and which is the diastolic?
7. If your blood vessels are "constricted," would this cause an increase or decrease in blood pressure?
8. Explain why having a high sodium ($\text{Na}^+ \text{Cl}^-$) diet could cause high blood pressure. Why does a smoking cigarettes cause high blood pressure?
9. Does heartbeat in humans vary with external temperature of the environment? Why or why not?
10. Daphnia is a type of water flea. Do you expect the external temperature of the daphnia's environment to vary its heart rate? Why or why not?