

Heart Quiz

- 1. What substance prevents friction when the heart contracts?**
 - a. blood in the heart
 - b. fluid outside the pericardium
 - c. fluid in the pericardial cavity
 - d. surfactant within in the myocardium

- 2. Which of the following represents the correct pathway of blood moving from the superior vena cava to the lungs?**
 - a. right atrium, tricuspid valve, right ventricle, pulmonary semilunar valve
 - b. pulmonary semilunar valve, right atrium, tricuspid valve, right ventricle
 - c. right atrium, bicuspid valve, right ventricle, pulmonary semilunar valve
 - d. right atrium, pulmonary semilunar valve, right ventricle, tricuspid valve

- 3. Which of the following does not supply the heart with nutrient- and oxygen-rich blood?**
 - a. cardiac arteries
 - b. coronary arteries
 - c. inferior vena cava
 - d. cardiac veins

- 4. When the ventricles relax**
 - a. ventricular pressure drops
 - b. the semilunar valves are forced open
 - c. the foramen ovale opens
 - d. blood flows back into the atria from the ventricles

- 5. During exercise, increased muscle contraction helps return more blood to the heart. This would lead to**
 - a. increased stroke volume
 - b. increased heart rate
 - c. decreased heart rate
 - d. decreased stroke volume

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- 6. In a normal heart, the sinoatrial node**
- a. is connected to the AV node by way of Purkinje fibers
 - b. receives electrical impulses from the atrioventricular valve
 - c. contains autorhythmic fibers that repeatedly generate action potentials
 - d. transmits impulses directly to the ventricular myocardium
- 7. Which of the following occurs during that portion of the EKG designated as the P wave?**
- a. high pressure in the aorta and pulmonary trunk open the A-V valves
 - b. ventricular myocardium repolarizes
 - c. high pressure in the ventricles opens the A-V valves
 - d. atrial myocardium depolarizes
- 8. Release of norepinephrine from nerve fibers causes**
- a. decreased heart rate but increased force of contraction
 - b. increased heart rate but decreased force of contraction
 - c. increased heart rate and force of contraction
 - d. decreased heart rate and force of contraction
- 9. The heart wall**
- a. has an inner layer called the epicardium, which is fused with the fibrous layer of the pericardium
 - b. consists largely of a middle layer of muscular tissue called the myocardium which performs the pumping action of the heart
 - c. includes the endocardium, or outermost layer, which is continuous with the serous pericardium
 - d. is composed of five layers of voluntary muscle arranged in diagonal, swirling bands
- 10. Cardiac muscle tissue is characterized by all of these EXCEPT:**
- a. numerous large mitochondria
 - b. long, multinucleated, cylindrical cells
 - c. striations
 - d. intercalated discs
- 11. Tachycardia refers to**
- a. slow heart rate
 - b. low blood pressure
 - c. rapid heart rate
 - d. high blood pressure

12. The first heart sound is associated with

- a. pulmonary semilunar and tricuspid valves closing during ventricular diastole
- b. both semilunar valves closing during ventricular diastole
- c. aortic semilunar and bicuspid valves closing during ventricular systole
- d. both atrioventricular valves closing during ventricular systole

13. Blood enters the systemic circuit of blood flow by passing through the

- a. pulmonary valve
- b. aortic valve
- c. tricuspid valve
- d. semilunar valve

14. The Frank-Starling law of the heart states that

- a. the volume of blood that enters the heart during diastole directly affects the force of contraction at systole
- b. each period of systole must be followed by an equal period of diastole
- c. the presence of positive inotropic substances increases myocardial contractility
- d. a reduction in the body temperature results in lowered heart rate

Solutions

1. c
2. a
3. b
4. a
5. a
6. c
7. d
8. c
9. b
10. b
11. c
12. d
13. b
14. a