What is Heart Anatomy?

Worksheet

The heart has four chambers - right atrium, right ventricle, left atrium, left ventricle - separated by four valves (tricuspid, pulmonary, mitral, aortic) that keep blood flowing in one direction.

Questions

1. Which valve lies between the left atrium and left ventricle?

A) Tricuspid
B) Pulmonary
C) Mitral
D) Aortic

2. Which chamber receives oxygenated blood from the lungs?

A) Right atrium
B) Right ventricle
C) Left atrium
D) Left ventricle

3. Why does the left ventricle have a thicker wall than the right ventricle?

A) It pumps less blood
B) It must generate more pressure for the systemic circuit
C) It has fewer valves
D) It pumps only to the lungs

4. Which structure prevents blood from flowing back from the pulmonary artery into the right ventricle?

A) Mitral valve
B) Tricuspid valve
C) Pulmonary valve
D) Aortic valve

5. Trace one drop of blood from the vena cava to the aorta, naming each structure it passes.

6. Why is the left ventricle's wall much thicker than the right ventricle's?

7. A valve fails to close fully (regurgitation). What immediate problem does this cause?

8. Define: How many chambers does the heart have?

9. Define: What is the tricuspid valve's location and function?

10. Define: What is the thickest heart wall and why?

Answer Key

1. C) Mitral - The mitral (bicuspid) valve separates the left atrium and left ventricle.

2. C) Left atrium - The left atrium receives oxygenated blood via the pulmonary veins.

3. B) It must generate more pressure for the systemic circuit - The systemic circuit requires much higher pressure than the short pulmonary circuit.

4. C) Pulmonary valve - The pulmonary (semilunar) valve closes after ventricular contraction to prevent backflow.

5. Vena cava right atrium Tricuspid valve right ventricle Pulmonary valve pulmonary artery lungs Pulmonary veins left atrium Mitral valve left ventricle Aortic valve aorta

6. The right ventricle only pumps blood a short distance to the nearby lungs The left ventricle must generate enough pressure to push blood through the entire systemic circuit More muscle mass (myocardium) is needed to generate that higher pressure

7. Blood leaks backward into the chamber it just left The heart must pump the same blood again to move it forward This reduces pumping efficiency and can lead to chamber enlargement over time

8. Four: right atrium, right ventricle, left atrium, left ventricle.

9. Between the right atrium and right ventricle; it prevents backflow of blood into the atrium during ventricular contraction.

10. The left ventricle wall - it must generate high pressure to pump blood through the entire body (systemic circuit).