

Heart Dissection

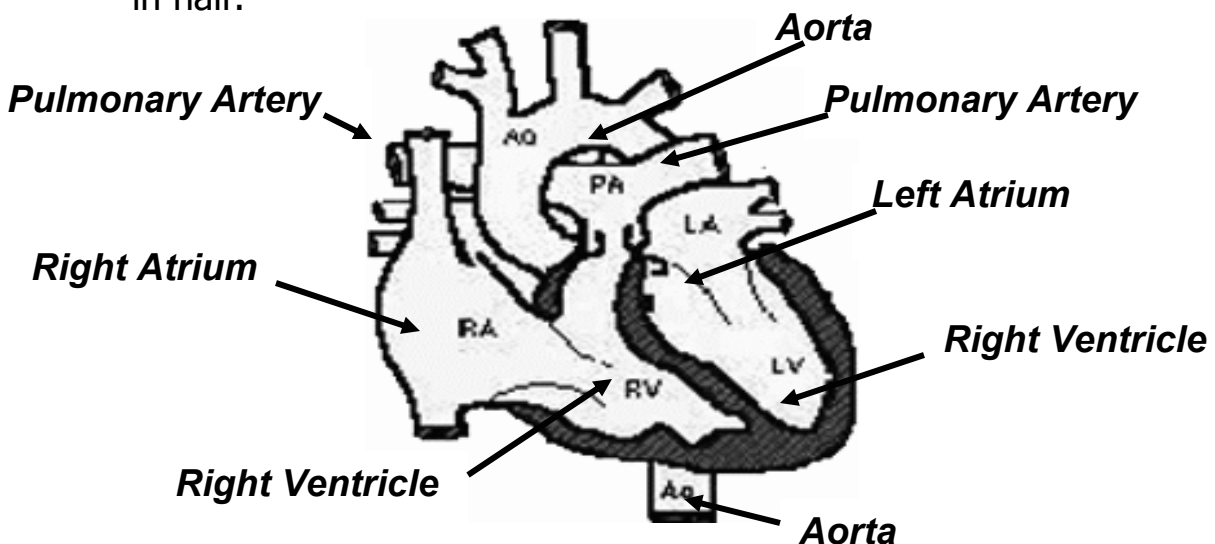


Use care with sharp cutting tools and needles.
 Tie back long hair when dissecting.
 Wash your hands well when you finish the dissection.
 Use the Clorox wipes to clean the tools, trays, and desk.

The **heart** is a muscular pump that keeps blood moving in a continuous, one-way flow around the body. Like man-made pumps. The heart pump contains **valves** and can change the amount of the fluid-holding cavities within it. In this lab you will study and compare the different areas of the heart, and investigate the relationship between the structure and function of each part.

What to do:

1. Locate the right atrium with your thumb by squeezing the heart and feeling for the thin-walled chamber.
2. Make a shallow cut, not more than 5mm deep, from the right atrium, down the right ventricle, to the apex of the heart.
3. Continue this shallow cut around the apex and up the left ventricle so that you have a line dividing the ventricles into two equal halves. Cut along the shallow cut to divide the ventricles in half.



Exploring the heart:

1. Check to see if the walls are the same thickness in both **ventricles**.
2. In the living body, one ventricle contains oxygenated blood and the other ventricle contains deoxygenated blood. On the outside, the **atria** resemble small, ear-like flaps on the top of the heart.
3. Make an incision in the wall of the left atrium. Gently push the handle of the probe into this incision and feel the **bicuspid valve**, which divides the left atrium from the left ventricle.
4. The bicuspid valve has two thin, sail-like, transparent structures that are held by strong, white, cord-like **chordae tendinea**. Carefully push the handle of your probe through the valve into the left ventricle. Explore the structure and operation of this valve.
5. Use the handle of your probe inside the left atrium to find all four **pulmonary veins**.
6. Find where the **aorta** leaves the left ventricle and carefully push the handle of your probe into it. Note the location where the probe exits the heart. Remove the probe, then gently push the handle in the opposite direction, from the exit of the aorta toward the left ventricle. At a point close to the left ventricle, the probe will be stopped by a valve called the **aortic semilunar valve**. Leave the probe in place and make an incision to find the valve.
7. Make an incision in the wall of the right atrium. Gently push the handle of the probe into this incision and locate the **tricuspid valve**, which separates the right atrium from the right ventricle.
8. The tricuspid valve is similar to the bicuspid valve except it has three sail-like flaps instead of two.
9. Use the handle of your probe inside the right atrium to find the **superior vena cava** and the **inferior vena cava**.
10. Carefully push the handle of your probe into the pulmonary artery and notice the location where the probe exits the heart. Remove the probe, then gently push the handle in the reverse direction, from the exit of the pulmonary artery toward the right ventricle. At a point close to the right ventricle, the probe will be stopped by a valve called the **pulmonary semilunar valve**. Leave the probe in place and make an incision to find the valve.