

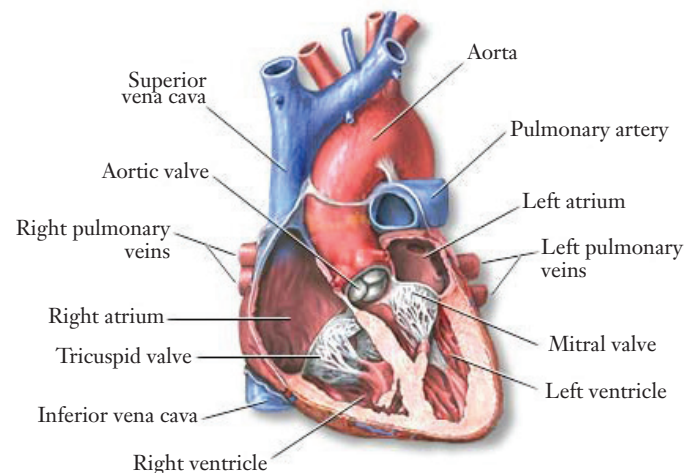
The heart is a pump and its function is to circulate blood and nutrients. It is about the size of fists clenched together and weighs approximately 1 ½ pounds. The heart is located in the chest between two lungs and behind the sternum or breastbone. The ribs and sternum protect your heart.

### The Pumping Action of the Heart

- The heart is a pump that circulates blood and nutrients through its chambers as well as throughout the body.
- The right side of the heart receives oxygen-depleted blood from the body and pumps it to the lungs to restore the oxygen level.
- From the lungs, the blood returns to the left side of the heart. It is then pumped through the aorta to the rest of the body.
- Blood returns to the right side of your heart to begin the cycle again.
- Two types of vessels carry blood: arteries and veins. Arteries carry the oxygen-rich blood and nutrients. Veins return the oxygen-depleted blood back to the heart.

### The Heart Has Four Chambers

- The heart is a muscle that contracts to squeeze or pump blood from chamber to chamber.
- The right atria and left atria are the upper chambers. They receive blood and pump it into the lower chambers.
- The right ventricle and left ventricle are the lower chambers. They are made of thicker muscle and pump blood to the lungs and the rest of the body.

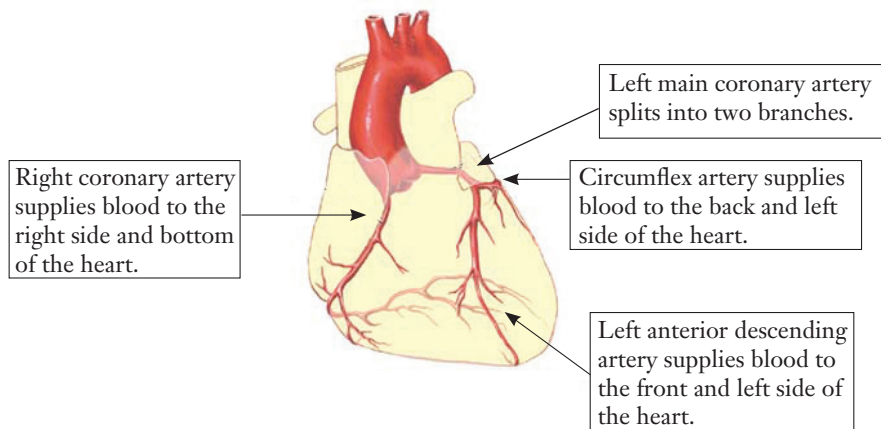


### The Heart Has Four Valves

- Valves keep blood moving in the right direction.
- Valves are a type of tissue that separate the heart's four chambers.
- When the heart squeezes, the valves open to let blood through to the next chamber.
- Between each heartbeat, the valves close to stop blood from moving backward.
- In a healthy heart, the valves keep blood moving as efficiently as possible through the heart and out to the body.

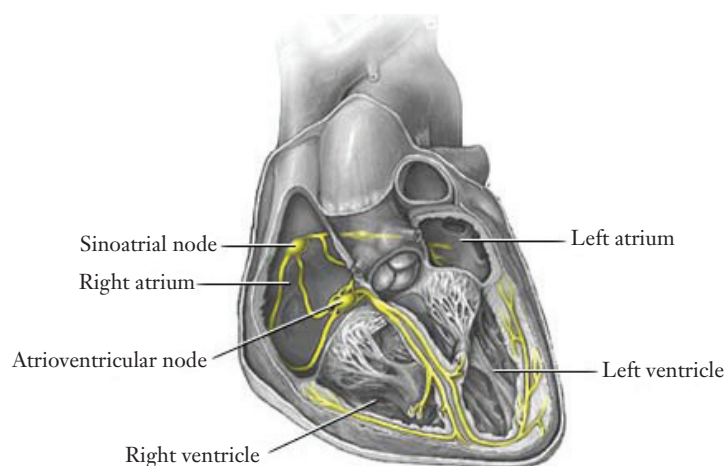
## Coronary Arteries

- Coronary arteries are blood vessels that carry oxygen-rich blood and nutrients to the heart muscle.
- They are located on the surface of the heart.
- There are several main arteries, each with their own branches.
- Each branch feeds a large portion of heart muscle.



## The Electrical System of the Heart

- During each heartbeat, the heart muscle contracts and forces blood through the blood vessels. Then it relaxes, allowing the heart to fill with blood again. The electrical system of the heart sends impulses that cause the heart muscle to contract.
- The sinus node is the heart's "natural pacemaker." It initiates an electrical impulse in the atria and sends it to the ventricles.
- Normally, the atria and ventricles contract together at a rate of 60-100 beats per minute. During exercise, stress or excitement, the sinus node sends out faster impulses causing the heart to beat faster.
- Every heartbeat can be felt in the pulse in the wrist.



**Blood Pressure**

- According to the American Heart Association guidelines, normal blood pressure is systolic # less than 120 and diastolic # less than 80.
- The upper number (systolic pressure) represents the pressure on the artery walls during a heartbeat or contraction.
- The lower number (diastolic pressure) represents the pressure on the artery walls when the heart is relaxing between contractions.