

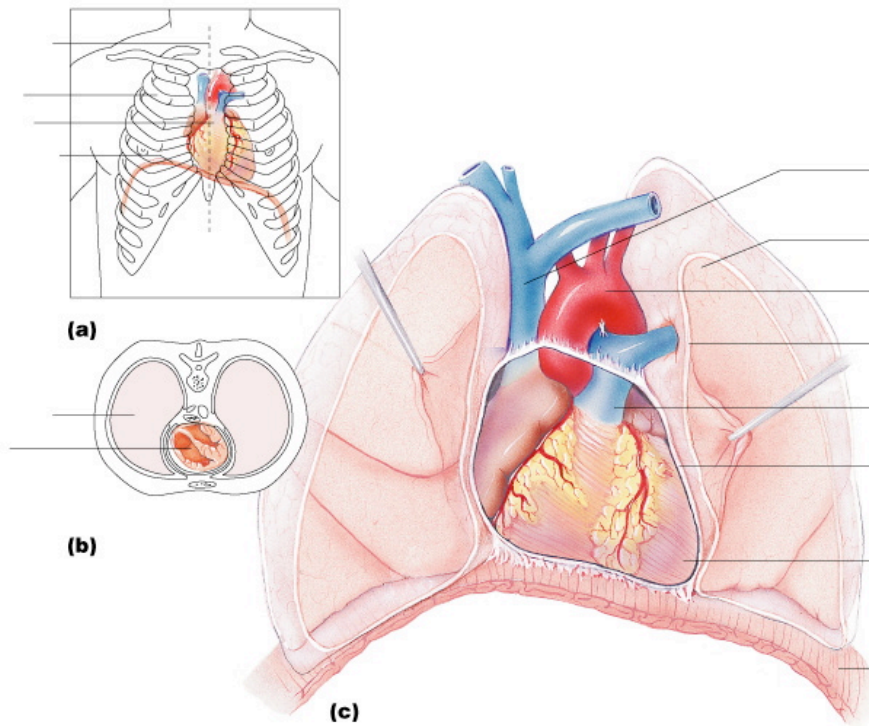
## The Cardiovascular System-HEART

The cardiovascular system consists of the \_\_\_\_\_ and \_\_\_\_\_. It is a \_\_\_\_\_ system. The heart is the \_\_\_\_\_ and the vessels allow the blood to \_\_\_\_\_ throughout the body. The function is to deliver \_\_\_\_\_ and other \_\_\_\_\_ to the body and remove \_\_\_\_\_ and other wastes.

Describe the heart.

The apex of the heart points towards the \_\_\_\_\_ hip and rests on the \_\_\_\_\_.

The larger portion called the \_\_\_\_\_ points towards the \_\_\_\_\_ shoulder and lies beneath the \_\_\_\_\_ rib. The heart is enclosed in a double sac called the \_\_\_\_\_. A slippery fluid called \_\_\_\_\_ allows the heart to beat in a nearly \_\_\_\_\_ environment.



Three layers of the heart

Epicardium

- 

- 

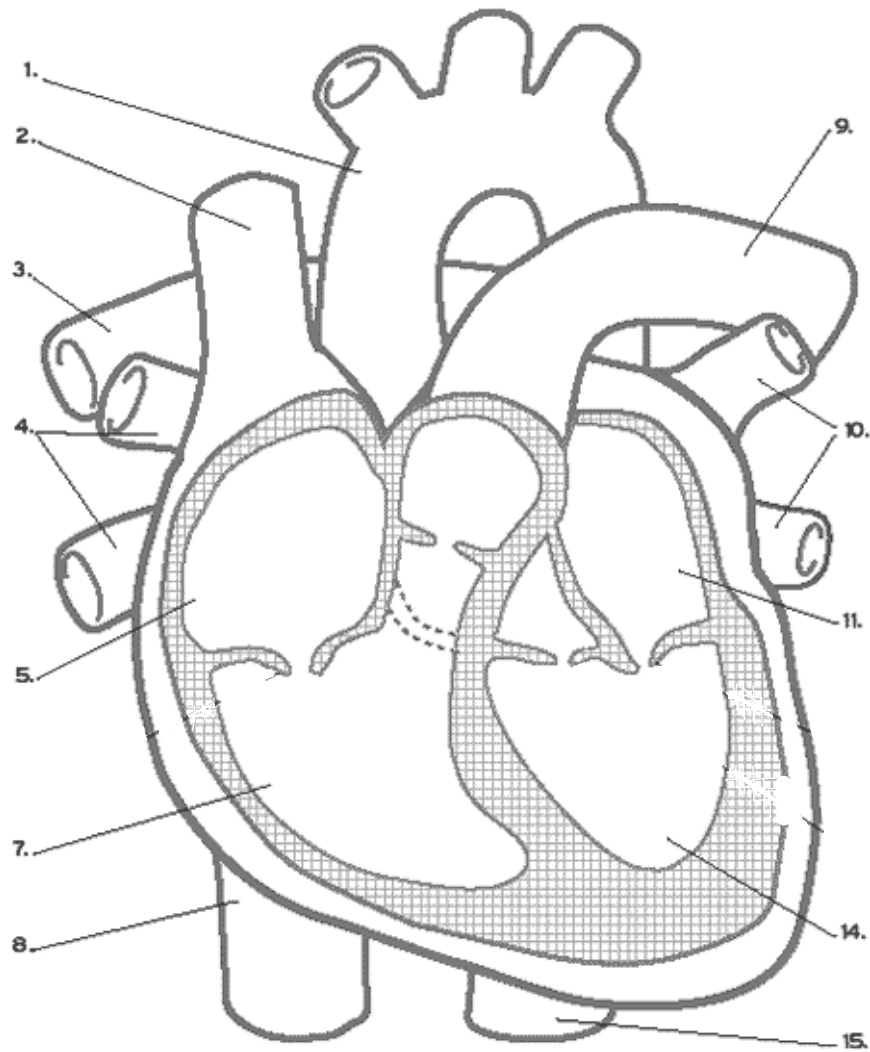
Myocardium

- 

- 

Endocardium

- 



\*\*You will need to know the names of the valves-coming up

## FLOW WITHIN THE HEART

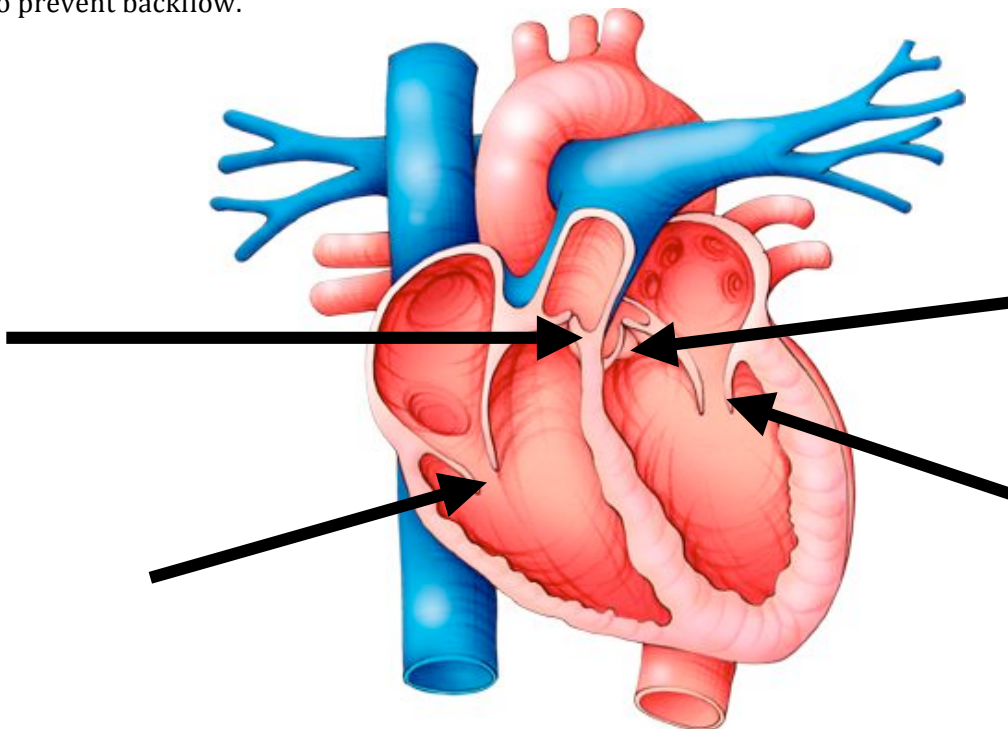
The right and left sides act as separate \_\_\_\_\_. The heart contains \_\_\_\_\_ chambers. The receiving chambers are called the \_\_\_\_\_. They are supplied with blood returning from the body via the \_\_\_\_\_. There is one on the left and one on the right. The discharge chambers are called the \_\_\_\_\_. They receive the blood from the \_\_\_\_\_ and pump it out to the lungs or body via \_\_\_\_\_.

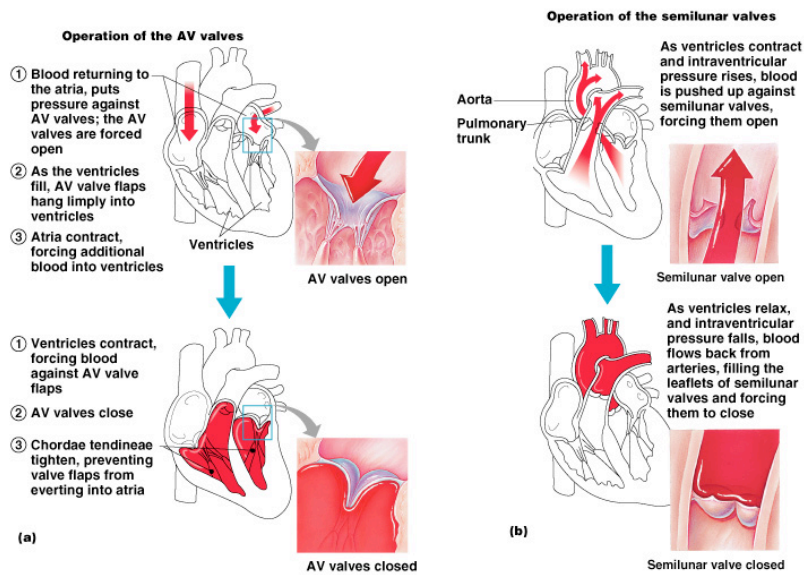
## VALVES

Blood flows in only \_\_\_\_\_ direction. There are \_\_\_\_\_ valves in the heart.

- \_\_\_\_\_ (AV)- these are located between the atria and the ventricles.
  - \_\_\_\_\_ on the left
  - \_\_\_\_\_ on the right
- \_\_\_\_\_-these are located between the ventricles and the artery.
  - \_\_\_\_\_-between the right ventricle and the pulmonary artery
  - \_\_\_\_\_- between the left ventricle and the aorta.

The valves open as \_\_\_\_\_ flows through. They are held in place by \_\_\_\_\_ a.k.a. the heart strings. They will \_\_\_\_\_ to prevent backflow.





## PULMONARY CIRCULATION

Pulmonary Circulation-The flow of blood between the \_\_\_\_\_ and the \_\_\_\_\_

Deoxygenated blood leaves the \_\_\_\_\_ ventricle and goes to the lungs via the \_\_\_\_\_ artery. The blood picks up oxygen in the \_\_\_\_\_ and returns to \_\_\_\_\_ atrium of the heart via the pulmonary \_\_\_\_\_.

Systemic Circulation-The oxygenated blood leaves the heart via the \_\_\_\_\_ and flows throughout the body. The deoxygenated blood returns to the \_\_\_\_\_ atrium of the heart via the \_\_\_\_\_ or \_\_\_\_\_ vena cava.

## VESSELS OF THE HEART

- Aorta-Leaves the \_\_\_\_\_ventricle on its way out of the heart to the body.
- Pulmonary Artery-Leaves the \_\_\_\_\_ventricle on its way to the lungs.
- Vena Cava ( \_\_\_\_\_ and \_\_\_\_\_)-Enters the \_\_\_\_\_ atrium from the body.
- Pulmonary Vein-Enters the \_\_\_\_\_atrium from the lungs.

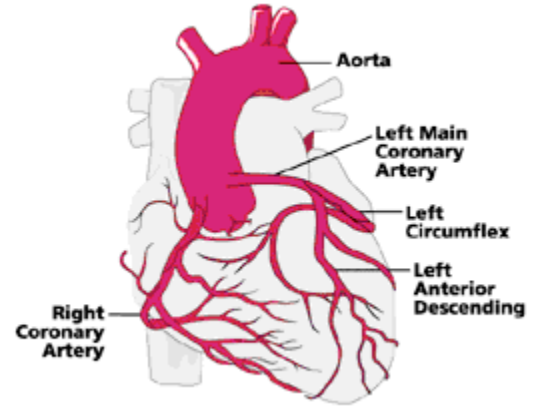
Arteries carry \_\_\_\_\_blood out of the heart to the rest of the body. What is the exception?

Veins carry \_\_\_\_\_ blood back to the heart. What is the exception?

## CORONARY CIRCULATION

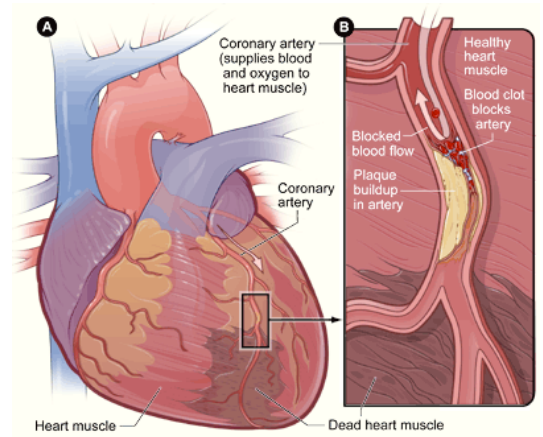
The blood in the heart chambers \_\_\_\_\_ supply the heart with blood. The heart has its own blood supply called \_\_\_\_\_. There are \_\_\_\_\_ major arteries and if they get clogged you may have a \_\_\_\_\_.

© 1997 HeartPoint



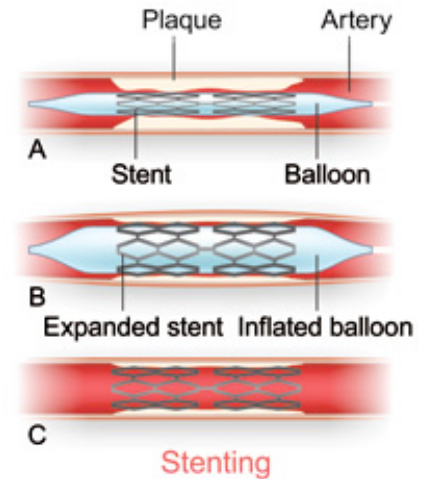
## WHAT IS A HEART ATTACK?

A heart attack occurs when blood flow to a part of your heart is \_\_\_\_\_ for a long enough time that part of the heart muscle is \_\_\_\_\_ or \_\_\_\_\_. The medical term for this is \_\_\_\_\_.



## AVOIDING SURGERY

Patients may experience the effects of a heart attack at any time of day. Some people are lucky enough to get treatment and not need surgery. A \_\_\_\_\_ may be used to open up the clogged artery.

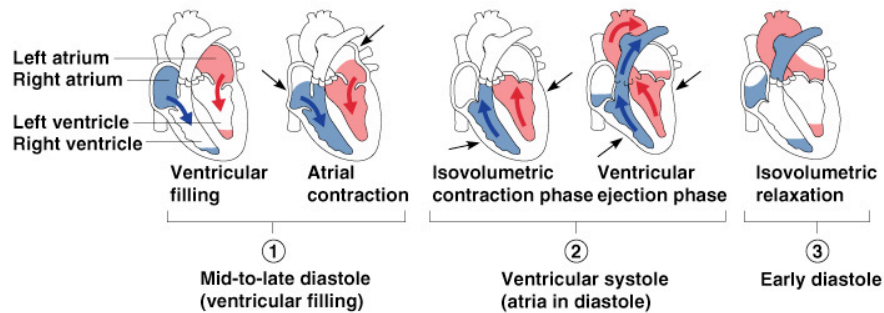
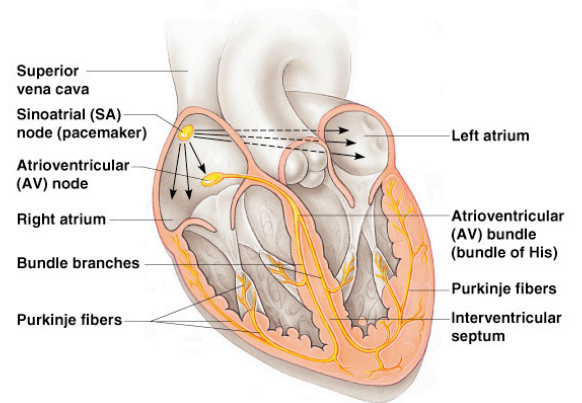


## THE HEART'S CONDUCTION SYSTEM

The heart has an intrinsic conduction system ( \_\_\_\_\_ ). The heart muscles can contract \_\_\_\_\_ a nerve impulse in a regular pattern. If the heart stops, sometimes it can be restarted with an \_\_\_\_\_ current.

The special tissues of the heart include:

- 
- 
- 
- 
- 
- 



THE CARDIAC CYCLE

The cardiac cycle are the events in \_\_\_\_ heartbeat. The heart beats an average of \_\_\_\_ beats per minute. The atria contract \_\_\_\_\_. When the atria relax, the \_\_\_\_\_ contract.

Systole=\_\_\_\_\_ Diastole=\_\_\_\_\_

Cardiac output (CO), is the amount of blood pumped by each side of the heart in \_\_\_\_ minute. Stroke volume (SV) is the volume pumped by each ventricle in one contraction.

Cardiac Output is your heart rate x stroke volume.  $HR \times SV = CO$

