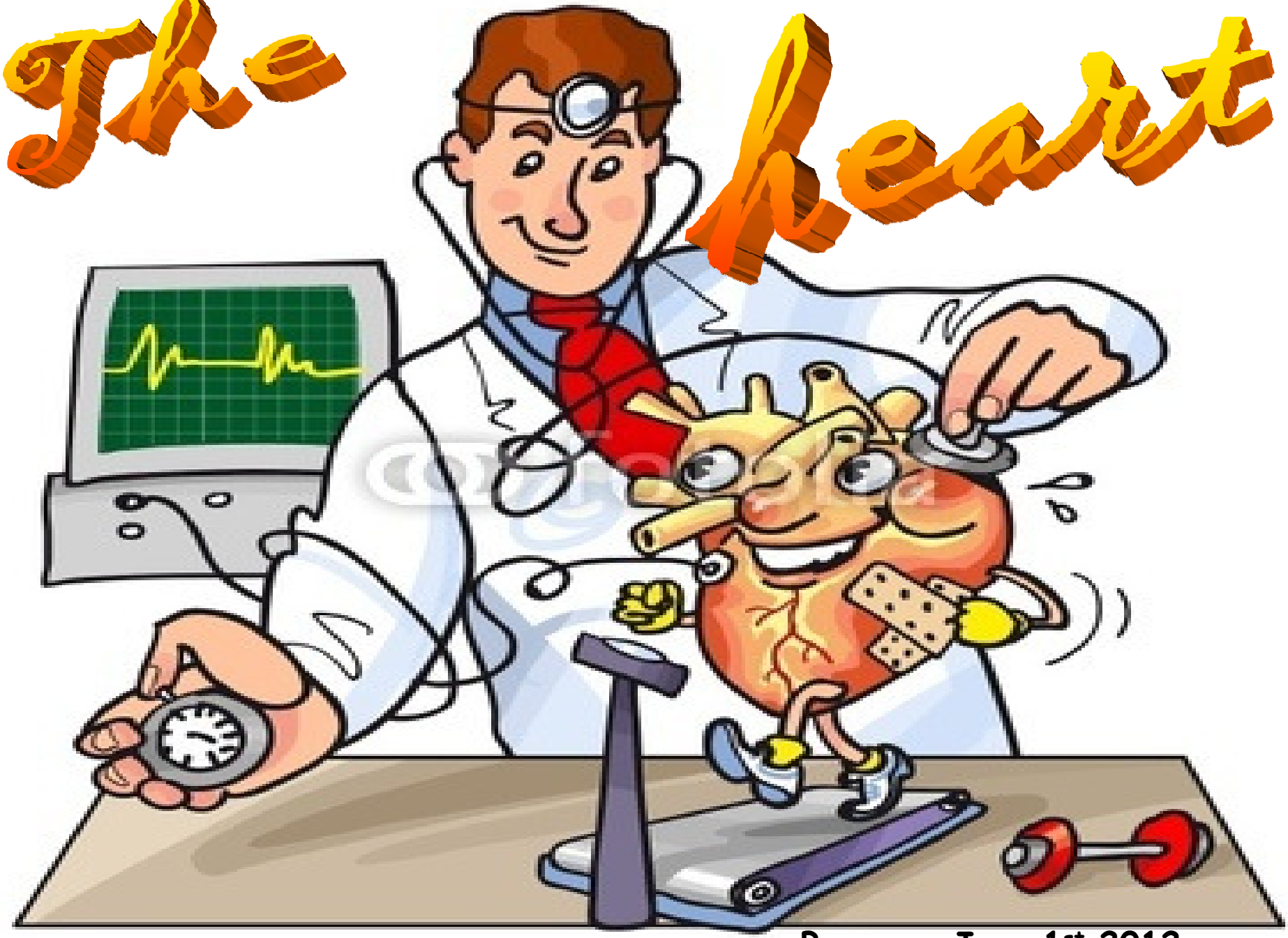
The heart

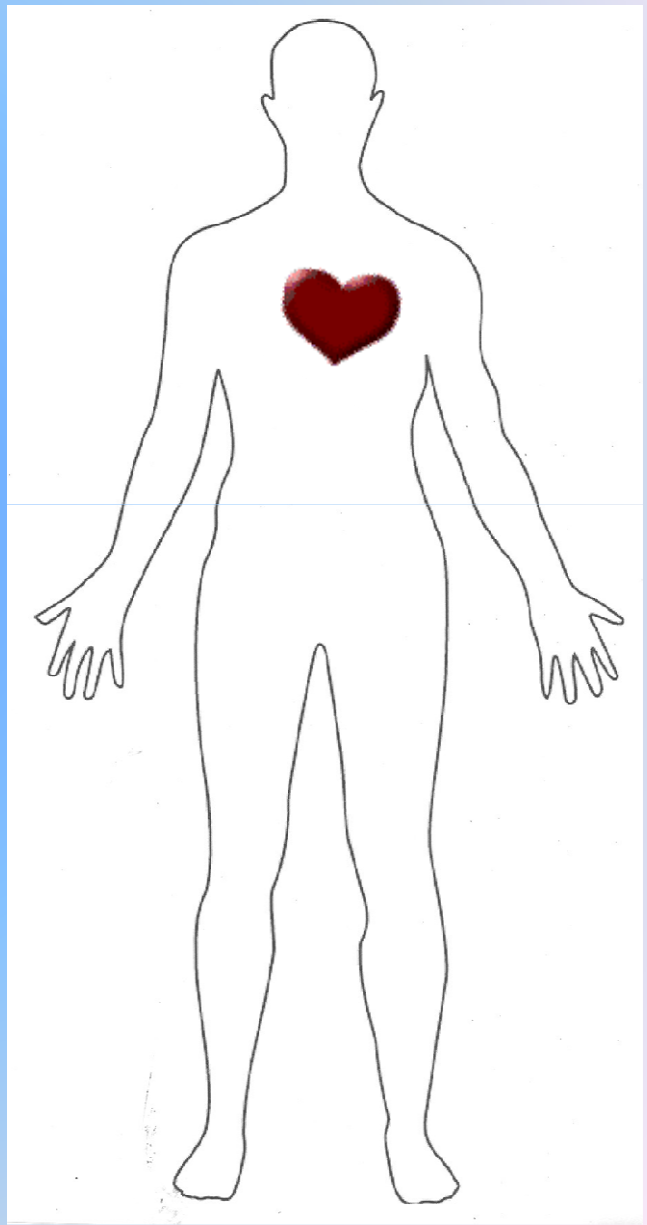


Bussero, June 1st 2012

Your heart works hard

Your heart is the most active part of your body.

Each movement is a heartbeat



Where is the heart?

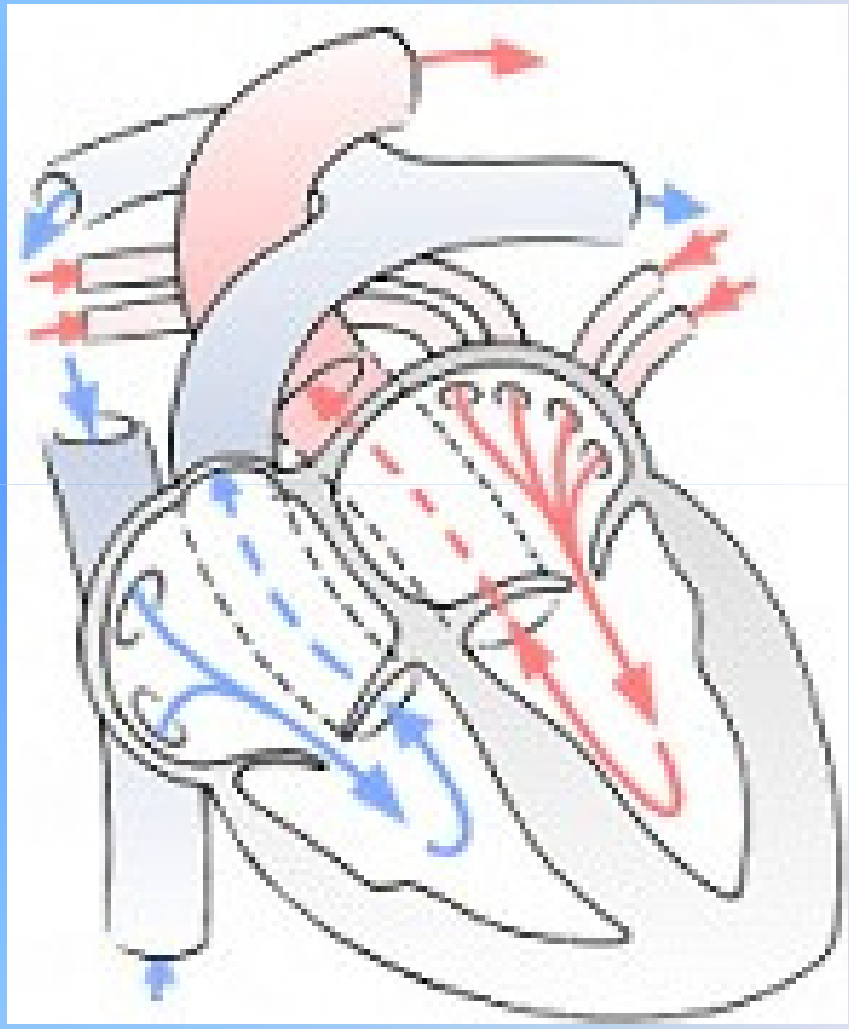
The heart is on the left side of your body, behind the rib cage and the lungs. We have only got one heart.

How is the heart?

The heart has four different parts

(two on each side).

Each part has a different job.



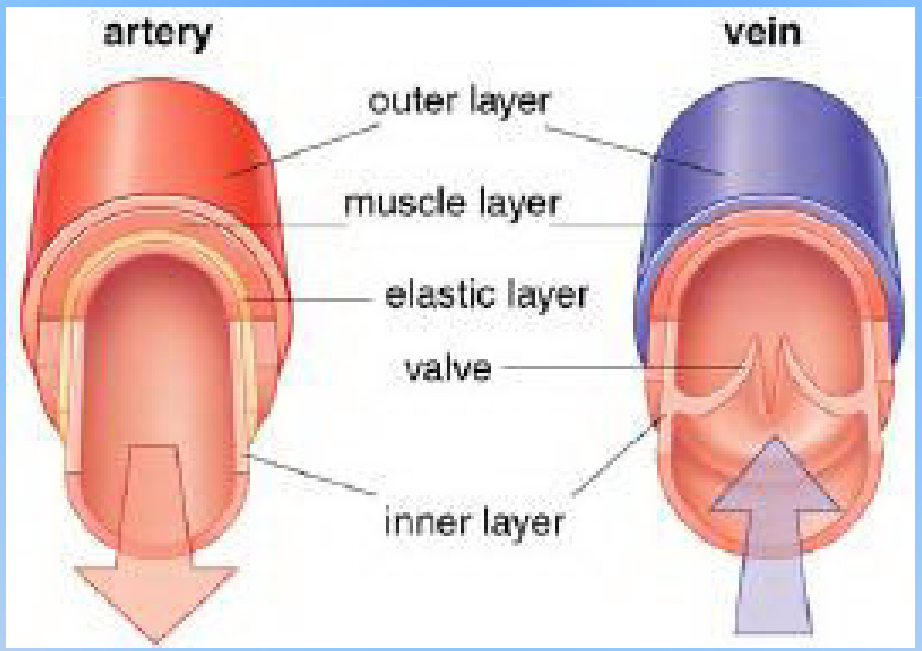
What does the heart do?

The heart sends th blood all around the body. The heart is a pump which squeezes blood through the heart every second.

How does the heart work?

When your heart beats, the pump pushes blood out into the arteries.

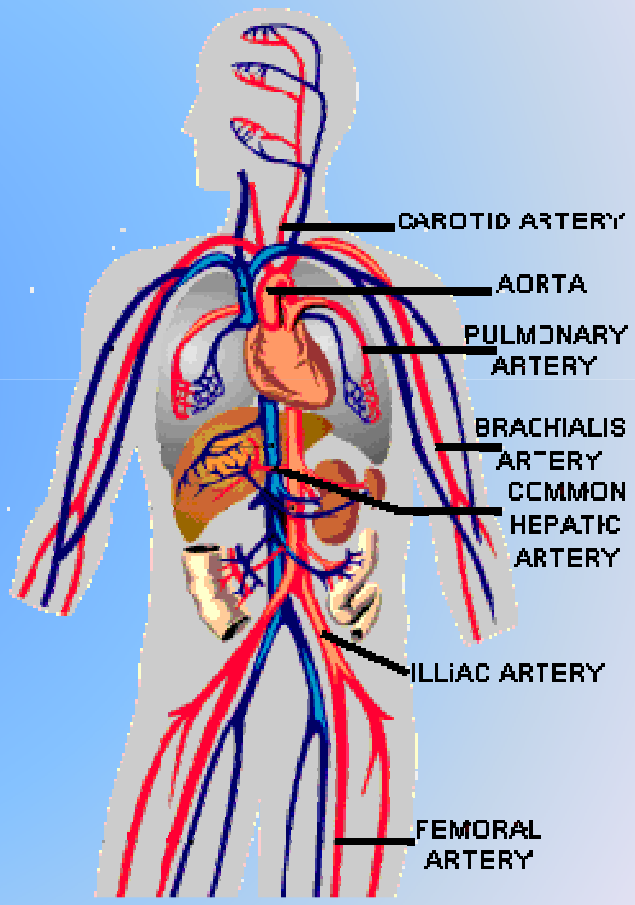
The blood goes back to the heart through the veins.



Arteries

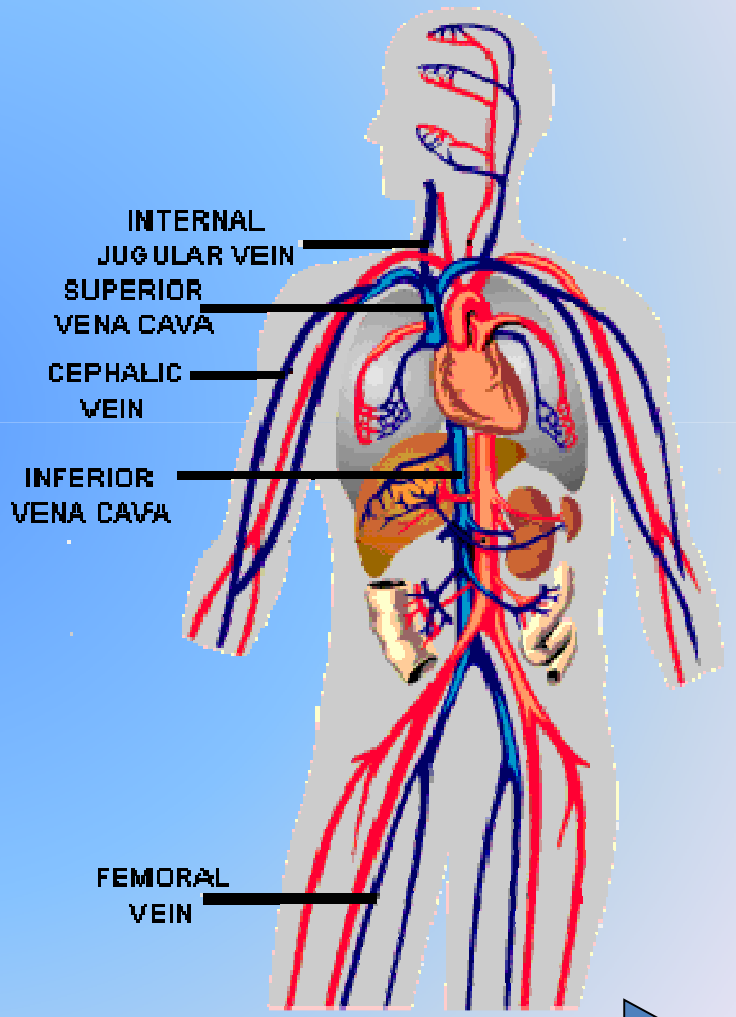
- Arteries are tubes
- There is oxygen in the arteries of the systemic loop. The blood circulates into the body, bringing this oxygen to all its organs.
- The pulmonary arteries carry the blood to the lungs.

  Here the blood picks up new oxygen.



Veins

- Veins are also tubes
- In the systemic loop veins carry the blood, which has to be oxygenated, in the right side of the heart.
- The pulmonary veins collect oxygenated blood from the lungs and circulates into the left side of the heart.



Why does your heartbeat change?

Your heartbeat can change from 70 beats a minute to 120 beats a minute.

When you are doing exercise, your heart works faster.

When you are resting, you don’t need much oxygen.

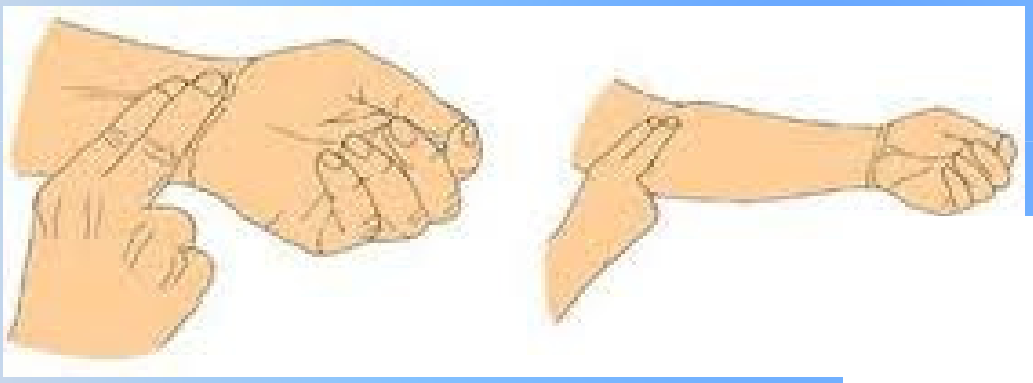
Your heartbeat is slower.

Vital signs and heart's work index

- Pulsing
- Blood pressure

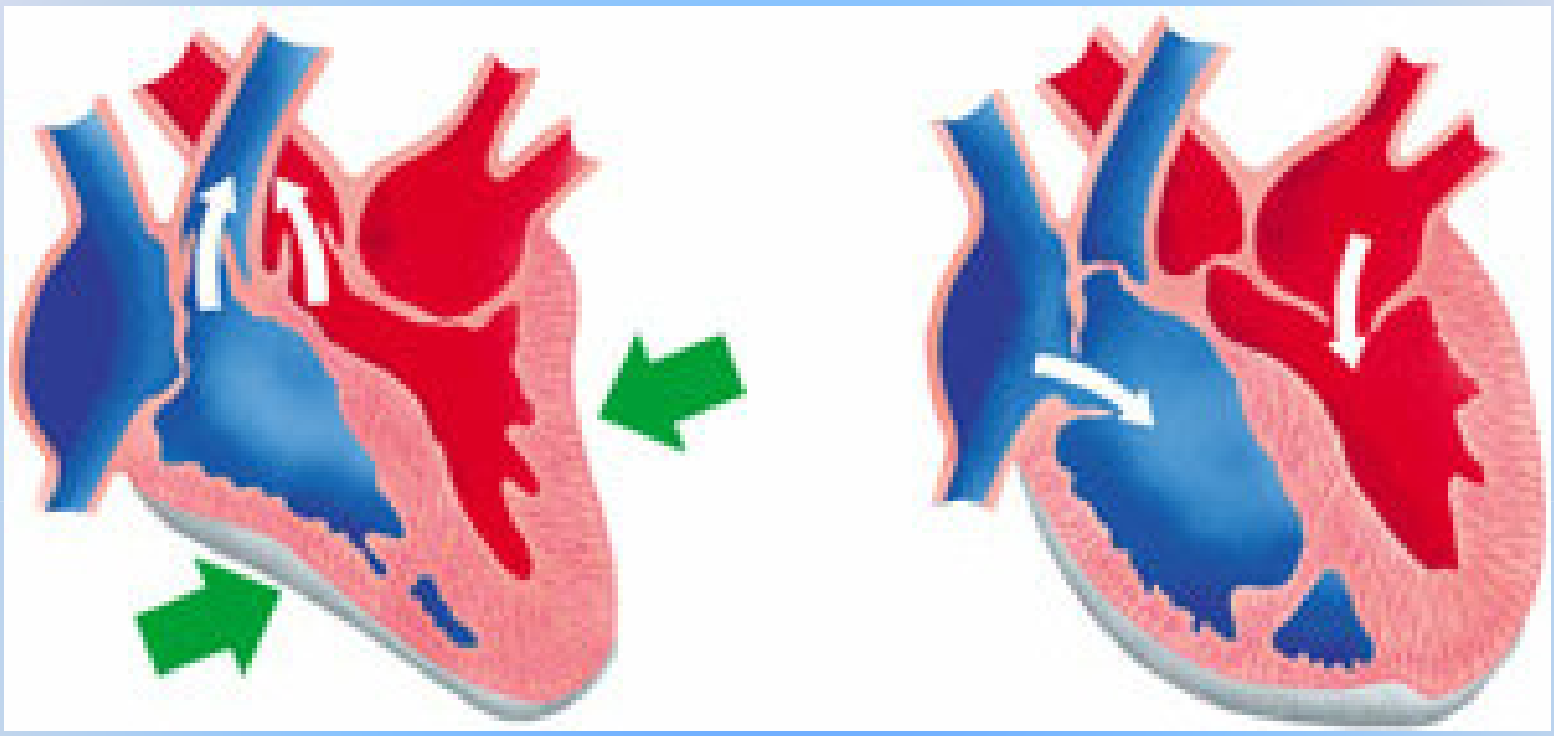
Pulsing

You can feel your pulse just inside your wrist, or on the side of your neck.



The blood pressure

- Blood pressure is the pressure exerted by circulating blood upon the walls of blood vessels.
- "blood pressure" usually refers to the arterial pressure of the systemic circulation.
- During each heartbeat, blood pressure varies between a maximum (systolic) and a minimum (diastolic) pressure.



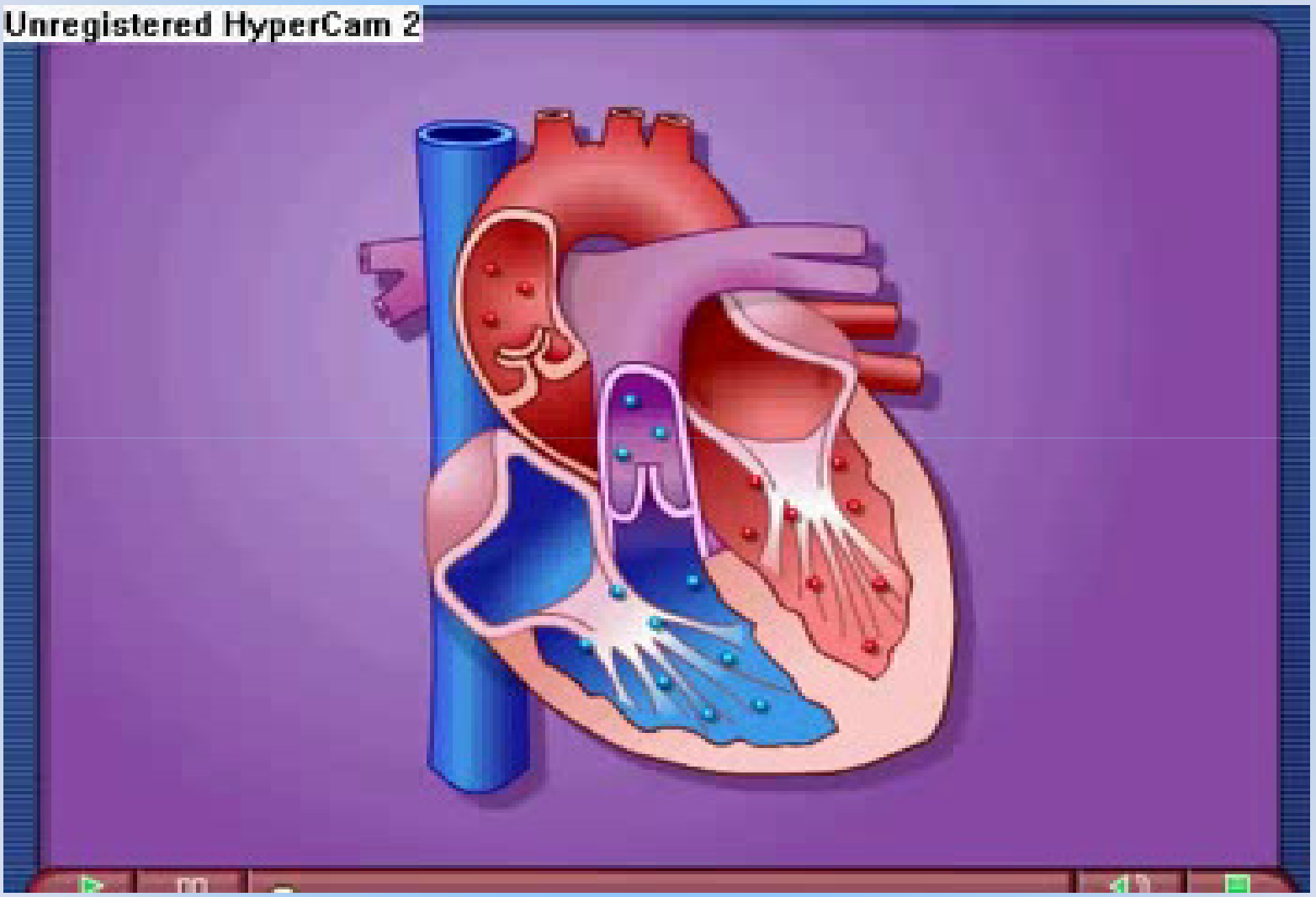
SYSTOLE

The rhythmic contraction of the heart, especially of the ventricles, by which blood is driven through the aorta and pulmonary artery.

DIASTOLE

The rhythmic dilatation of the heart: the muscle relaxes and the chambers fill with blood.

SYSTOLE and DIASTOLE



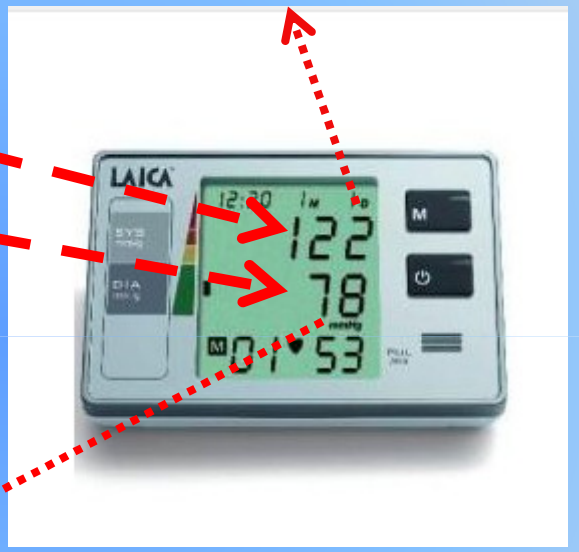
Blood pressure is recorded as **two numbers:**

$$\frac{122}{78}\ mmHg$$

Read as "122 over 78 millimeters of mercury"

Systolic

The top number, which is also the higher of the two numbers, measures the pressure in the arteries when the heart beats (when the heart muscle contracts).



Diastolic

The bottom number, which is also the lower of the two numbers, measures the pressure in the arteries between heartbeats (when the heart muscle is resting between beats and refilling with blood).

Device used to measure blood pressure: sphygmomanometer

systolic

diastolic

Beats/min

Now try!