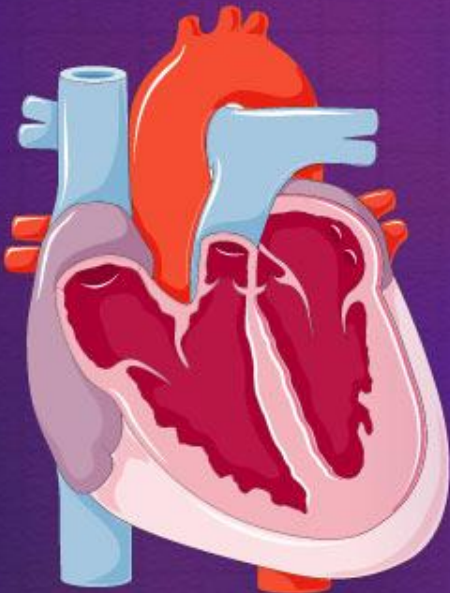


Clay Anatomy of the Circulatory System – Part 2 Veins

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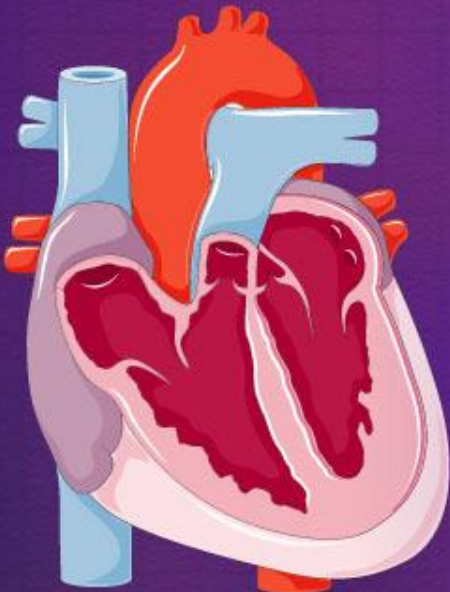
Hands-On Body Systems
by Starla A. Ewan

Presentation arranged by
Lydia Williams



Arterial Review:

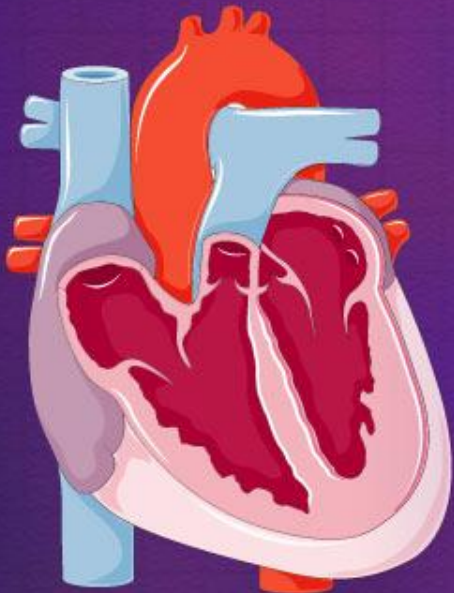
- The heart pumps bld into the arteries in order to keep all tissues alive and in homeostasis.
- The job of the arteries is to take bld away from the heart & out to the tissues.
- These arteries represent the 'Systemic Loop' of the cardiovascular system.
- Most arteries are named according to the regional area or bone that they are traveling through.
- Arteries and arterioles usually travel with major nerves.



- Red clay is used because it represents oxygenated blood.
- Arteries are elastic and stretch in order to slow blood down before going into the tissues.

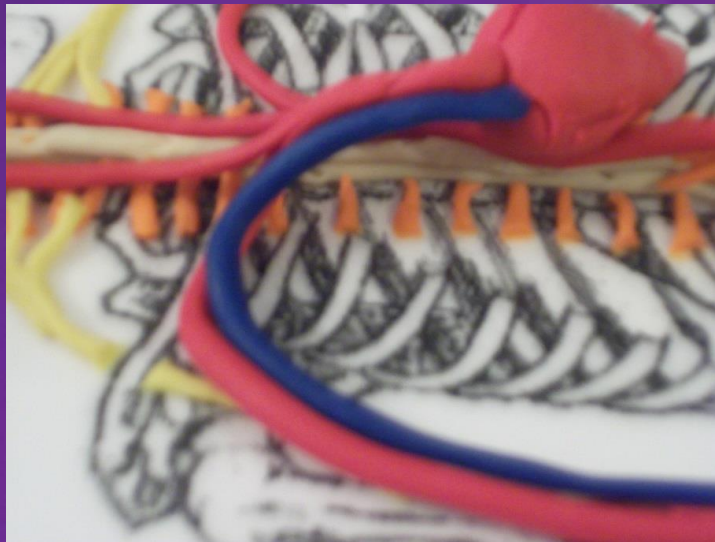
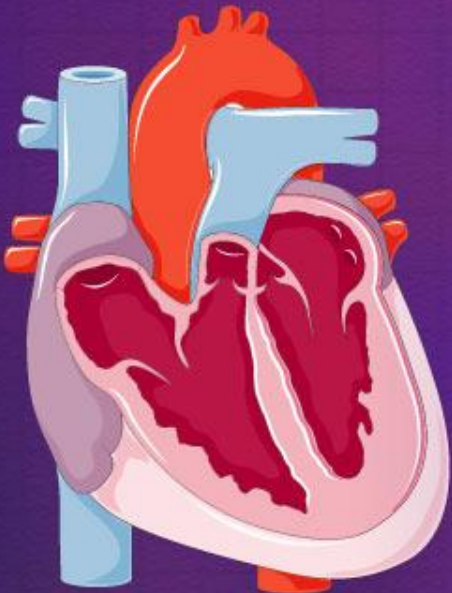
Building the Veins

- Blood low in oxygen is a brick red color AND when someone is at rest, the deoxygenated blood is still quite saturated with oxygen. This is the reason why CPR can be successful with just compressions. The blood is still saturated enough to keep the brain alive until EMS can arrive.



Superior Vena Cava – receives all the blood from the upper body.

- Roll out blue strand of clay the same diameter as the aorta you already built.
- Attach the end of the strand to the Rt. Atria of the heart. The strand follows the Brachiocephalic (from underneath) and under (inferior) the Subclavian artery, medial to the Axillary artery, medial to the Brachial artery.



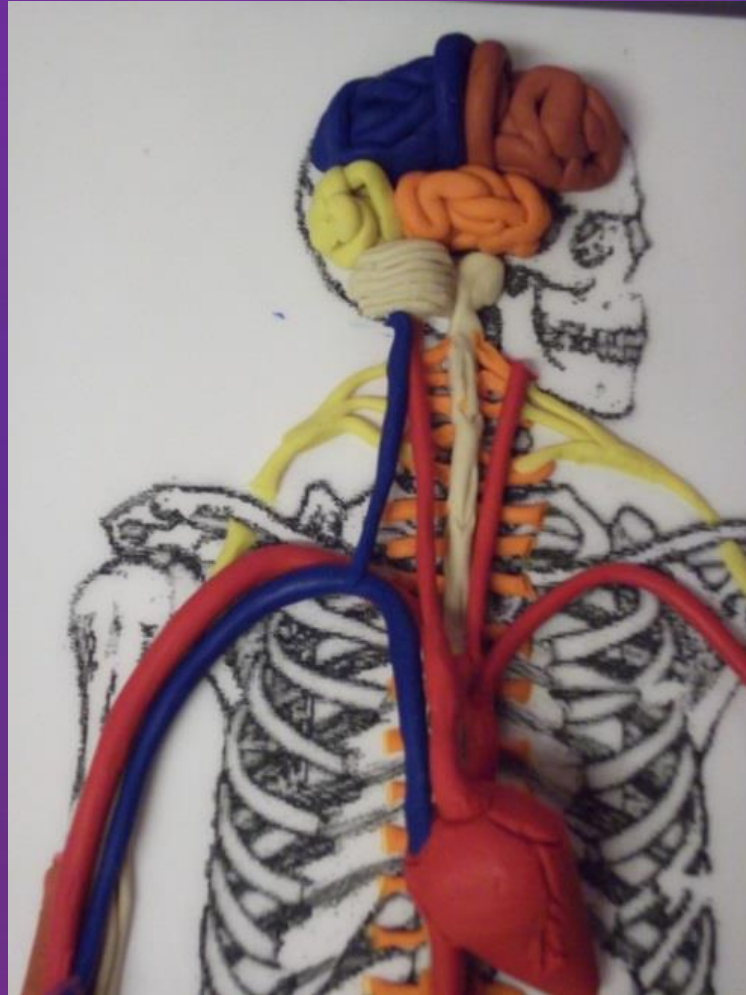
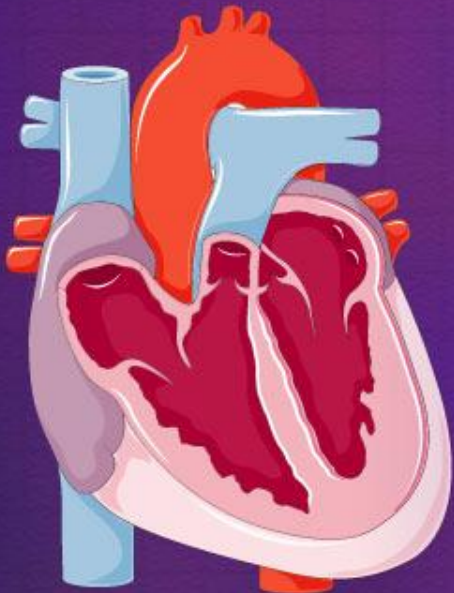
As the vein comes off the Superior Vena Cave, the vein will take the name of the artery next to it. (I.E. Subclavian artery travels with the Subclavian vein; Axillary artery travels with the Axillary vein; etc.)

Veins of the Arm: make the diameter smaller as the vein travels down the arm. Stop the clay at the Antecubital (cubital) region. (Fold of the elbow)



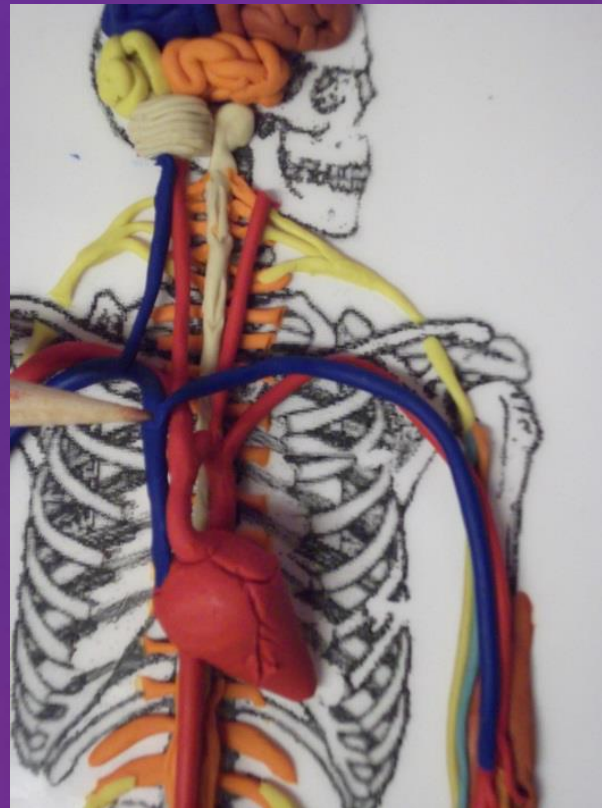
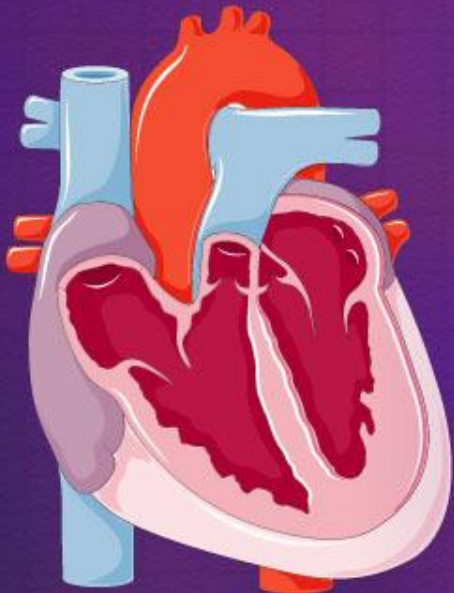
Students roll out a strand of blue clay smaller in diameter than the radial and ulnar arteries. The strand needs to be long enough in order to attach to the end of the blue strand at the cubital area, go down to the palm, and then back up to the cubital area.

Right External Jugular: Attach a blue strand (about the diameter of the Carotid) from the Subclavian vein up the right side of the neck and break it off as it reaches the base of the skull.



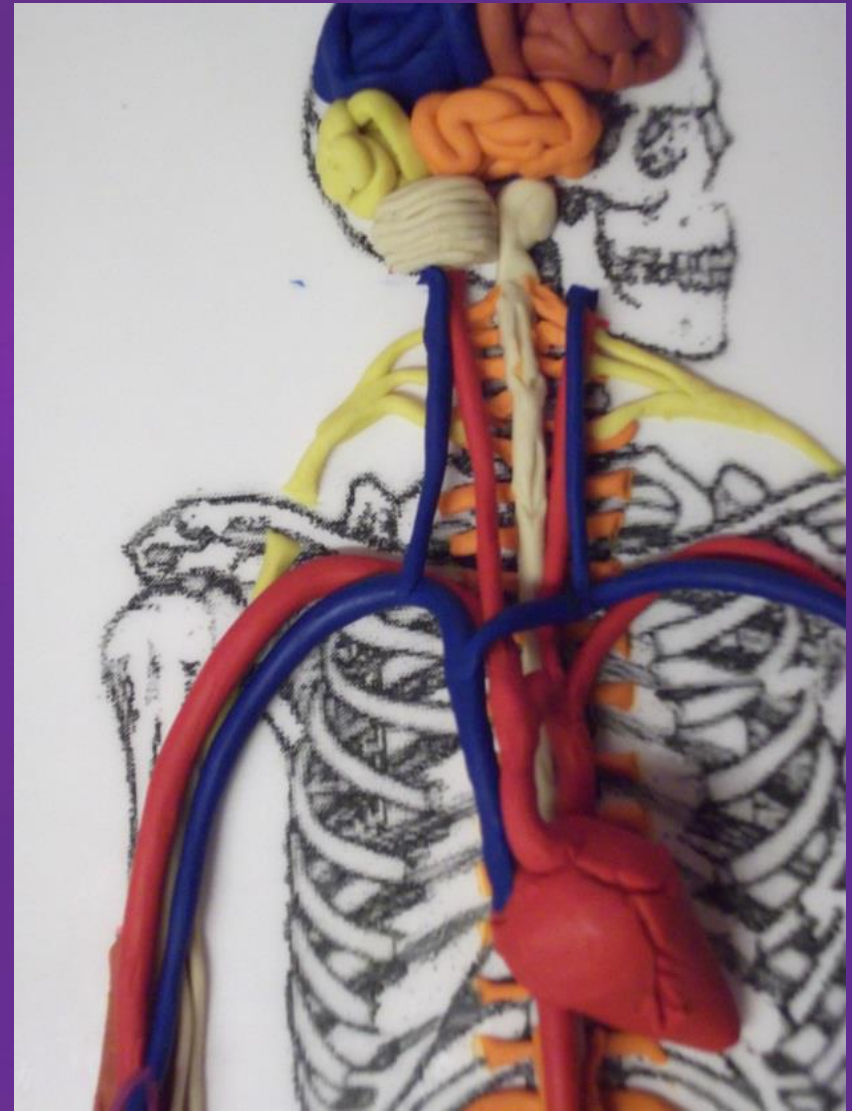
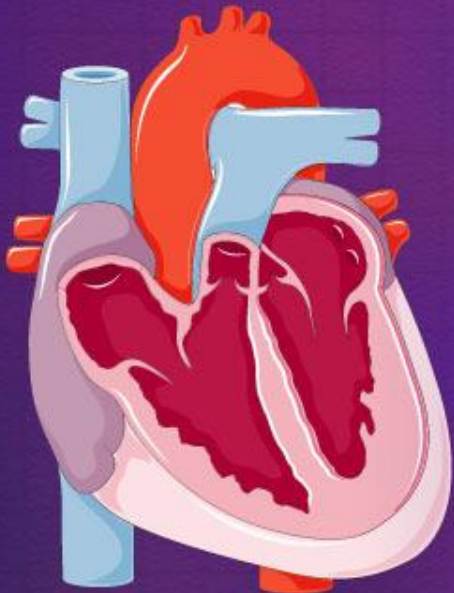
Left Brachiocephalic Vein: Students form another blue strand about the same diameter as the right side.

- Attach the end of the strand to the Superior Vena Cava just above the aorta arch. Run the strand across and over to the Subclavian artery, Axillary, medial Brachial. (*We are following the same pattern as we did on the right side of the diagram.*)

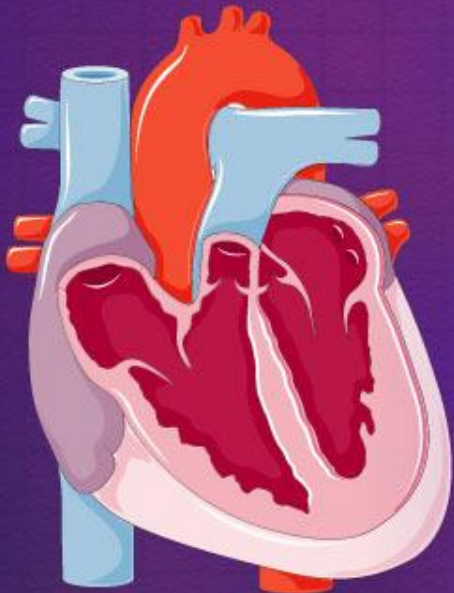


Left External Jugular: Attach the blue strand to the left Subclavian vein and run it up to the base of the mandible.

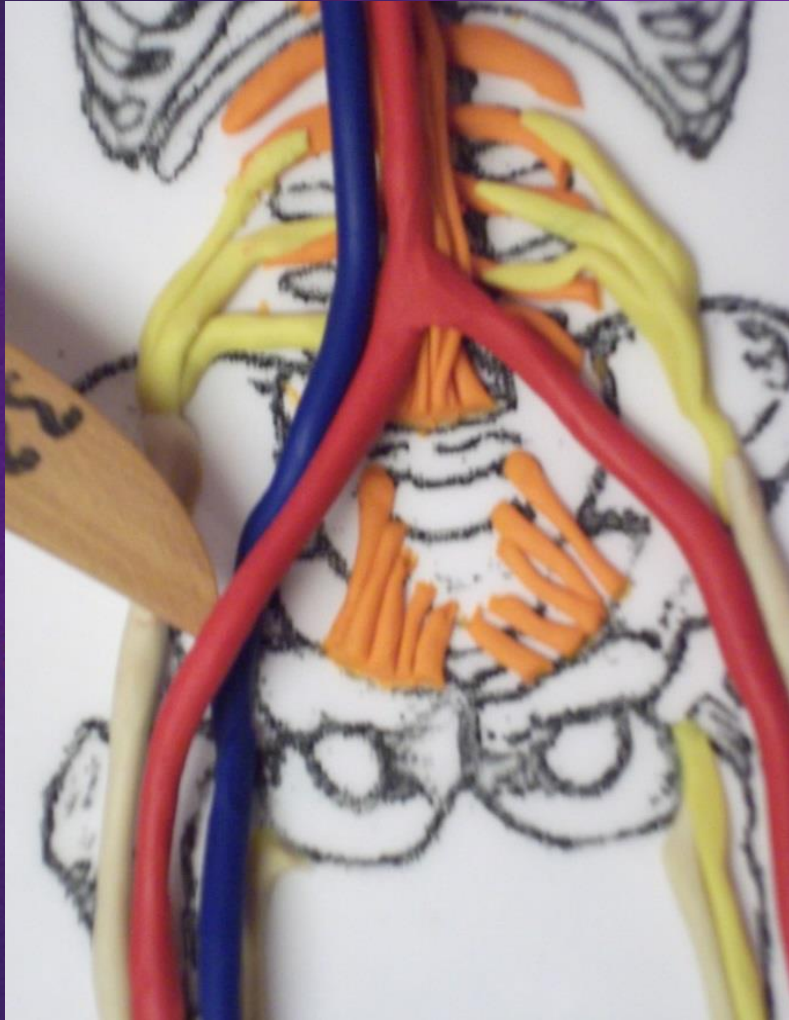
Students build the radial, palmar venous arch, ulnar vein as they did on the right arm.



Inferior Vena Cava: Attach the strand to the Rt. Atria headed down towards the abdomen. The inferior vena cava will ALWAYS travel to the (person's/diagram's) right of the descending/abdominal aorta.



As the Inferior Vena Cava runs down next to the aorta, lift up the right Iliac artery and run the iliac vein under it and then medial to the femoral artery. The femoral veins are ALWAYS medial to the femoral artery.



This is an entry point for Angiograms. Cardiologists use a needle (percutaneous entry) to penetrate the artery and then place a one-way sheath over the needle to have entry to the iliac artery. Using the sheath, different catheters can be used to diagnose cardiovascular problems using a contrast dye.

Cardiologists are also beginning to use the radial artery for angiograms.

Attach another strand of blue to the bottom of the Inferior Vena Cava to build the left iliac and femoral vein.

Using your tool or pencil have students place an upside down 'V' into the clay at intervals to show that the veins below the heart contain valves to stair-step the blood back to the right atrium.

