

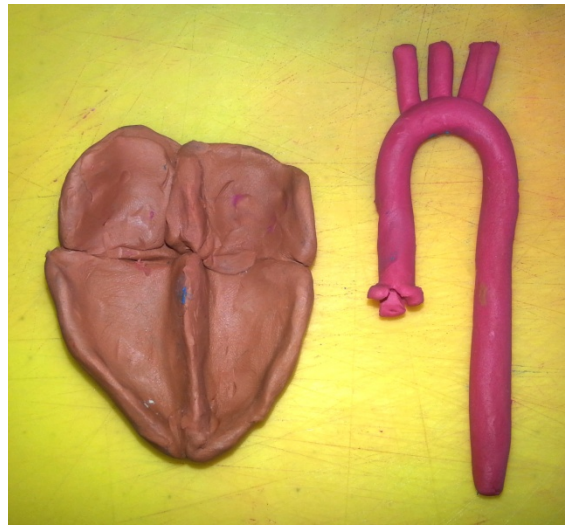
Building a Clay Heart from an Internal View

By Brandee Gillham

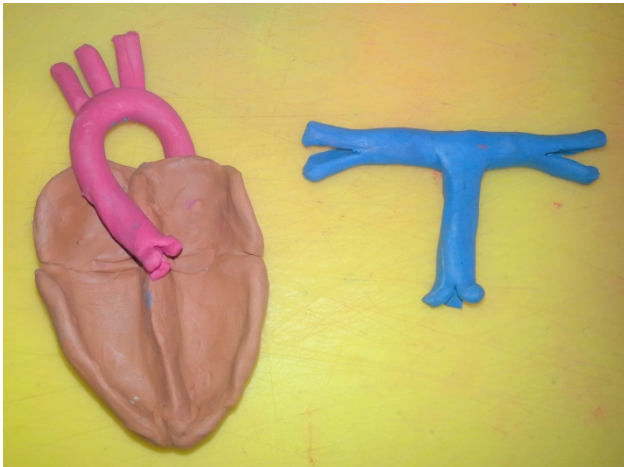
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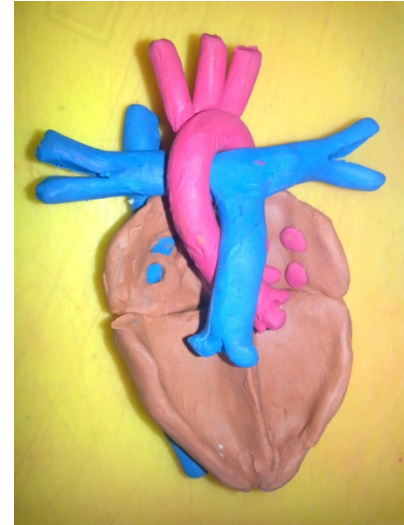
Build the posterior portion of the heart. Pinch the center of the inferior portion to represent in the *interventricular septum*. Pinch the center of the anterior portion to represent the *interatrial septum*. Identify the four chambers of the heart: *left & right atria, left & right ventricles*. Remember we are looking at the heart from a surgeon's perspective.



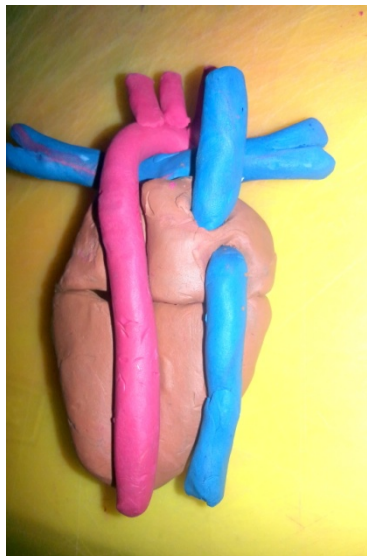
Now create a pink tube that will represent the *aorta*, the *aortic arch*, and the *descending aorta*. Fork the inferior end of the aorta to represent the 3-cusp *aortic semilunar valve*. Add three primary branches off the superior portion of the aortic arch: *brachiocephalic trunk, left common carotid, and left subclavian arteries*.



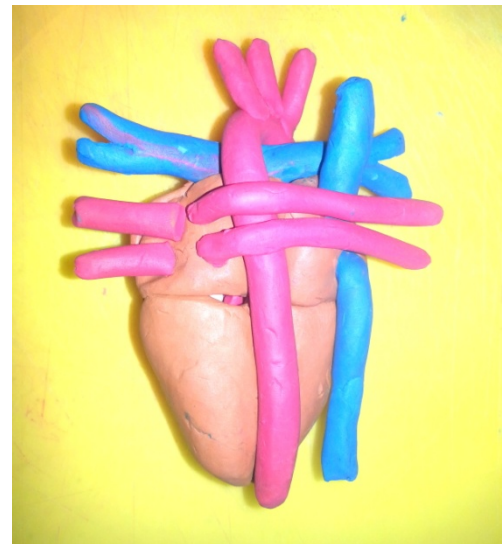
Place the aortic arch so the aortic semilunar valve is connected to the left ventricle. Using blue clay create a "T" to represent the *pulmonary trunk*. Fork the inferior end of the trunk to represent the 3-cusp *pulmonary semilunar valve*. The pulmonary trunk delivers oxygen poor blood to the lungs initially dividing into *left & right superior and inferior pulmonary arteries*. Why are they blue?



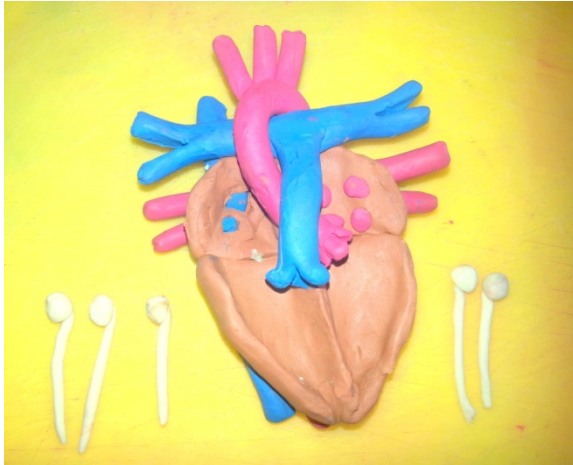
Thread the right pulmonary arteries under the aortic arch. Place the pulmonary semilunar valve so it is connected to the right ventricle. Remember we are still looking at the heart from a surgeon's perspective. (Your left and right should seem reversed...) Now place two blue dots in the right atrium to represent the *superior vena cava and inferior vena cava* dumping oxygen poor blood into that chamber. While we are here we can add four pink dots to represent the *left and right pulmonary veins* dumping into the left atrium.



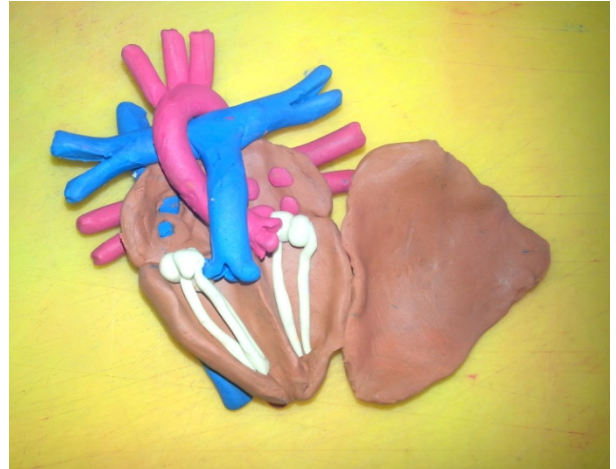
Roll the heart to a posterior view. Create two blue tubes – one longer (inferior vena cava) and one shorter (superior vena cava). Attach these two vessels to the right atrium



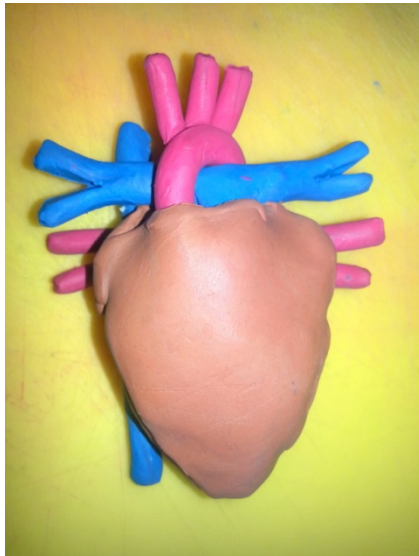
While still looking at the heart from a posterior view, create 4 pink tubes – 2 longer (*right pulmonary veins*) and 2 shorter (*left pulmonary veins*).



Roll the heart back to an anterior view. Create five bone-colored “ball and string” structures. The balls represents the cusps of the valve and the strings represent the *chordae tendineae* attached to *papillary muscles*.



Three “ball and string” structures should be clustered together and placed at the location of the *right atrioventricular valve (tricuspid valve)*. Two “ball and string” structures should be clustered together and placed at the location of the *left atrioventricular valve (bicuspid or mitral valve)*.



Create a flap that will represent the anterior surface of the heart. Don’t make your heart flat, but really allow this “flap” to create a dome over the structures you have already built. *Can you identify the apex of the heart? Where would the lungs be?*