(continued on next page)

4. Create the left internal and external jugular veins by attaching the strand of blue clay to the superior vena cava just above the heart.

3. Create the right and left brachiocephalic veins by attaching a "V" of pink clay on the aorta with a 6" strand of pink clay.

2. Create the left subclavian artery by replacing the left subclavian artery with a 3.5" strand of pink clay on the aorta with a 3.5" strand of pink clay.

1. Create the left common carotid artery by replacing the left common carotid artery with a 3.5" strand of pink clay on the aorta with a 3.5" strand of pink clay.

LEFT-SIDED MANIKIN

Bases the right subclavian artery.

From this point the brachiocephalic artery

brachiocephalic artery "V" from the aorta.

attaching a 3.5" strand of pink clay to the

right common carotid artery by replacing the

right common carotid artery with a 3.5" strand of pink clay on the aorta with a 3.5" strand of pink clay.

RIGHT-SIDED MANIKIN

CREATING THE VESSELS OF THE HEART

Roll out strands of pink and blue clay. Pink is for the arteries and blue is for the veins (except the pulmonary vessels).

Arteries are deep in color so begin with the aorta and other blood vessels of the head (see accompanying illustrations).

Build the blood vessels of the aorta and other blood vessels of the head. Next divide into two groups and attach one group to the sternum. Theextensions of the aorta and branches of the heart will be dependent on whether you are using a right or left-sided manikin (see instructions below).

Select one of the two hearts you created in the last lab that best fits inside the thoracic cavity of the manikin.

DIRECTIONS:

SCULPTING THE HUMAN BLOOD VESSELS WITH CLAY
1. Examine the aorta and the inferior vena cava down the posterior body wall to the top of the sacrum.

2. Using the attached illustrations create the arteries and veins of the arm and leg. Follow the numbing system on the illustrations.

3. Begin with the arteries and build them proximal to distal. When the arteries are completed, build the veins distal to proximal as indicated in the illustrations.

CUTTING THE BLOOD VESSELS OF THE ARM AND THE LEG

1. Position the carotid and external jugular veins along the neck along side of the common carotid artery.

2. Position the common carotid artery along the neck approximately where the sternothyroid muscle has been positioned.

3. Tread the subclavian artery and vein under the clavicle and into the axillary region of the arm. They are now called the axillary artery and vein respectively.

4. Examine the aorta and inferior vena cava through the grooves in the diaphragm, with the aorta deep to the vena cava.

5. Carefully while supporting the blood vessels' position the heart into the thoracic cavity of the manakin so that it rests on the

PLACING THE HEART AND ITS VESSELS IN THE THORACIC CAVITY OF THE MANIKIN

Vein is now called the right subclavian vein

When the external jugular. The remaining right brachiocephalic

brachiocephalic vein. Make the internal clavicle

attaching two 3.5” strands of blue day to the right

4. Create the right internal and external jugular veins by

above the heart.

LEFT-SIDED MANIKIN

Make the internal clavicle than the external jugular. The remaining

4. two 3.5” strands of blue day to the left brachiocephalic vein.

RIGHT-SIDED MANIKIN

3. Create the right & left brachiocephalic veins by attaching
1. Make a Palmer Venous Arch.

2. Continue the Palmer Arch medially up the arm deep to the flexor muscles. This is the Ulna Vein.

3. Continue the Palmer arch laterally up the arm deep to the flexor muscles. This is the Radial Vein.

4. Unite the Ulna and Radial Veins at the elbow to form the Brachial Vein.

5. Continue the Brachial Vein up the arm. In the Axilla it merges with and becomes the Axillary Vein.

6. Continue the Palmer Arch up the lateral superficial surface of the arm to the shoulder where it joins the Axillary Vein. This is the Cephalic Vein.

7. Continue the Palmer Arch up the medial superficial surface of the arm to the shoulder where it joins the Axillary Vein. This is the Basilic Vein.

8. Make a lateral branch between the Basilic and Cephalic Veins that crosses the elbow. This is the Median Cubital Vein, a common site for drawing blood.

9. Make a branch from the wrist and run it along the anterior surface near the “middle” of the arm. This is the Median Antibrachial Vein, it flows into the Basilic Vein.
1. Continue the Axillary Artery down the arm to the elbow. This is the Brachial Artery.

2. At the elbow, the Brachial Artery divides into two branches.

3. Continue laterally from the elbow down to the wrist. This is the Radial Artery. Position it deep to the flexor muscles.

4. Continue medially from the elbow down to the wrist. This is the Ulnar Artery. Position it deep to the flexor muscles.

5. The Ulnar and Radial Arteries flow into the Palmar Arch.
1. Make the Dorsal Venous Arch.

2. Bring the vein across the tibia (from the medial side). This is the Anterior Tibial Vein.

3. Extend the Anterior Tibial Vein to the top of the Tibia and attach it so that it appears to pass through to the posterior side.

4. Make a Posterior Tibial Vein along the back of the Tibia and a Fibular Vein along the back of the fibular.

5. Unite the Posterior Tibial and Fibular veins below the knee where the Anterior Tibial would pass through.

6. All three 3 veins join to form the Popliteal Vein behind the Patella.

7. Continue upward by passing the vessel through the adductor magnus hiatus to the anterior thigh. This is now the Femoral Vein.

8. Continue the Femoral Vein upward, it becomes the External Iliac Vein as it enters the pelvis. Use thicker blue clay.

9. Make the Internal Iliac Vein here.

10. Continue upward, it now becomes the Common Iliac Vein. Use thicker blue clay.

11. The Common Iliac Vein merges with the Inferior Vena Cava.

12. From the medial side of the Dorsal Venous Arch extend a superficial vein up the leg to merge with the femoral vein at the top of the thigh. This is the Great Saphenous Vein.

13. From the lateral side of the Dorsal Venous Arch extend a superficial vein up the leg. At the knee it raps around the leg and joins the Popliteal Vein. This is the Small Saphenous Vein.
1. Build an artery from the base of the Aorta toward the pelvis. This is the Common Iliac Artery.

2. Continue down to the base of the pelvis. This External Iliac Artery

3. Extend a small branch medially. This is the Internal Iliac Artery.

4. Continue down the thigh. This is the Femoral Artery.

5. Above the knee pass the Femoral Artery through the Adductor hiatus so that it emerges on the back of the leg.

6. Continue down behind the knee. This is the popliteal Artery.

7. Continue down the medial surface behind the Tibia. This is the Posterior Tibial Artery. It ends at the Plantar Arch.

8. Extend a branch from the Posterior Tibial Artery just below the knee and continue it down the back of the fibula. This is the Fibular Artery.

9. Build the Anterior Tibial Artery by attaching a strand of pink clay to the top of the Tibia and extending it down to the Dorsalis Pedis Artery. This indicates that it passed through to the anterior surface as a branch of the Popliteal Artery.

Dorsalis Pedis Artery