**Circulatory System: Blood Vessels**

**Arteries**

Transport \_\_\_\_\_\_\_\_\_\_\_\_\_ from the \_\_\_\_\_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ pressure and carry oxygen \_\_\_\_\_\_\_\_\_\_\_\_ blood (except pulmonary \_\_\_\_\_\_\_\_\_\_\_\_\_\_)

3 Tunics

-Tunic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-friction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lining \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Tunic media-bulky \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ layer muscle and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tissue

-Tunic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tissue

**Veins**

Transport blood \_\_\_\_\_\_\_\_\_\_\_\_\_ to the \_\_\_\_\_\_\_\_\_\_\_\_ under \_\_\_\_\_\_\_\_\_ pressure. Same 3 layers except \_\_\_\_\_\_\_\_\_\_\_\_\_\_ walls. Valves=blood flow in \_\_\_\_\_\_\_\_\_direction

**Capillaries**

One thin layer of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Play an \_\_\_\_\_\_\_\_\_\_\_\_\_\_ role with tissue cells for \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and waste. Capillary beds \_\_\_\_\_\_\_\_\_ and close to \_\_\_\_\_\_\_\_\_\_ blood from one body system to \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Pressure \_\_\_\_\_\_\_\_\_\_\_. Lumen is the \_\_\_\_\_\_\_\_\_\_\_

**Pulse**

-Pulse is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ expansion and \_\_\_\_\_\_\_\_\_\_ of a blood vessel wall as the heart \_\_\_\_\_\_\_\_\_; felt over any external \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ artery=pressure \_\_\_\_\_\_\_\_\_\_

Blood Pressure+-

Blood pressure is the \_\_\_\_\_\_\_\_\_\_\_\_\_ that blood \_\_\_\_\_\_\_\_\_\_\_\_ on the walls of the blood \_\_\_\_\_\_\_\_\_\_\_\_. Forces \_\_\_\_\_\_\_\_\_\_ to continue \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Pressure is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ over a pressure point, both \_\_\_\_\_\_\_\_\_\_\_\_\_ and diastolic. Arterial blood pressure is influenced by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (higher=higher) or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to blood flow: decrease in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, stretch of vessels, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of blood

**Special Circulations**

**Hepatic Portal**

The hepatic portal \_\_\_\_\_\_\_\_\_ drain the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ organs, spleen, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and deliver \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rich blood to the liver-which is involved in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the proper \_\_\_\_\_\_\_\_\_\_\_\_\_\_, fat, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ concentrations.

**Brain Circulation**

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ blood supply is maintained by \_\_\_\_\_\_\_\_\_ pairs of arteries:

-The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ carotids

-The vertebral \_\_\_\_\_\_\_\_\_\_\_\_\_\_

The internal carotids each divide and \_\_\_\_\_\_\_\_ into the \_\_\_\_\_\_\_\_\_\_\_\_\_ and middle \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ arteries.

Vertebrals each divides to form the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cerebral arteries. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and posterior blood \_\_\_\_\_\_\_\_\_\_\_ are connected by \_\_\_\_\_\_\_\_\_\_\_\_\_\_-forming a complete \_\_\_\_\_\_\_\_\_\_\_.

**The Circle of Willis**

-It \_\_\_\_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_\_\_ by supplying more than \_\_\_\_\_\_\_\_ route to reach all brain \_\_\_\_\_\_\_\_\_\_\_\_.

**Fetal Circulation**

-A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ circulation involving \_\_\_\_\_ vessels:

1. One \_\_\_\_\_\_\_\_\_\_\_\_\_\_-nutrients and \_\_\_\_\_\_\_\_\_\_\_\_ to the fetus

2-3. Two umbilical \_\_\_\_\_\_\_\_\_\_\_\_-carry carbon dioxide and \_\_\_\_\_\_\_\_\_\_\_\_ to the \_\_\_\_\_\_\_\_\_\_\_\_\_

-Shunts bypass the \_\_\_\_\_\_\_\_\_\_ and the \_\_\_\_\_\_\_\_\_\_

**Naming the Systemic Arteries and Veins**

-Starting with the arteries, we will move away from the \_\_\_\_\_\_\_\_\_ (arteries move blood away)

**Arteries above the Diaphragm**

-All branch off the \_\_\_\_\_\_\_\_ (largest artery). 1st small branch is the \_\_\_\_\_\_\_\_\_\_\_\_ artery which serves the \_\_\_\_\_\_\_\_. 1st large branch is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; 2nd large branch is the \_\_\_\_\_\_\_\_\_\_\_\_ common carotid; 3rd large branch is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Off the Brachiocephalic:**

-\_\_\_\_\_\_\_\_ common carotid

-Left \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Each of the Common Carotids Branch into:**

-\_\_\_\_\_\_\_\_\_\_\_\_ carotid which goes to the \_\_\_\_\_\_\_\_\_

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_ carotid which serves the \_\_\_\_\_\_\_\_\_\_

**Each of the Subclavian’s will:**

-1st branch will be \_\_\_\_\_\_\_\_\_\_\_\_\_ which goes to the \_\_\_\_\_\_\_\_\_\_

-Under the \_\_\_\_\_\_\_\_\_\_\_\_\_, the subclavian becomes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_, which in the upper arm is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ where blood \_\_\_\_\_\_\_\_\_\_\_\_\_ is normally taken. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will split into the \_\_\_\_\_\_\_\_ (medial) and the \_\_\_\_\_\_\_\_\_ (lateral)

**Arteries under the Diaphragm**

All branch off the \_\_\_\_\_\_\_\_\_ (abdominal)

-1st branch is the \_\_\_\_\_\_\_\_\_\_ trunk with 3 branches:

 -Gastric to \_\_\_\_\_\_\_\_\_\_\_\_\_

 -Hepatic to \_\_\_\_\_\_\_\_\_\_\_\_

 -Splenic to \_\_\_\_\_\_\_\_\_\_

-Next comes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mesenteric which serves the \_\_\_\_\_\_\_\_\_\_ part of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Continuing down the Abdominal Aorta:**

-Right and left \_\_\_\_\_\_\_\_\_ brings blood to the \_\_\_\_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ brings blood to the back \_\_\_\_\_\_\_\_\_\_\_. Gonadal brings \_\_\_\_\_\_\_\_\_\_\_ to the gonads. At the end of the torso: common \_\_\_\_\_\_\_\_\_\_ artery

**The Common Iliac Artery Splits:**

-External \_\_\_\_\_\_\_\_ which becomes the \_\_\_\_\_\_\_\_\_\_\_ in the thigh. Internal \_\_\_\_\_\_\_\_\_ loops back towards the \_\_\_\_\_\_\_\_\_\_. Deep \_\_\_\_\_\_\_\_\_\_\_\_ goes towards \_\_\_\_\_\_\_\_\_\_\_\_\_. Femoral continues down the \_\_\_\_\_\_\_\_\_, and will become the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ behind the \_\_\_\_\_\_\_\_\_\_. It splits into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and posterior \_\_\_\_\_\_\_\_\_ and ends in the \_\_\_\_\_\_\_\_\_ at the dorsalis \_\_\_\_\_\_\_\_.

The \_\_\_\_\_\_\_\_\_ being blood \_\_\_\_\_\_\_ to the heart so we start at the distal end and move towards the \_\_\_\_\_\_\_\_\_.

**All the Veins above the Diaphragm Drain into the Superior Vena Cava**

-The \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_ veins from the forearm drain into the \_\_\_\_\_\_\_\_\_\_\_\_ vein. The \_\_\_\_\_\_\_\_\_\_\_\_\_ (lateral) and \_\_\_\_\_\_\_\_\_\_\_ (medial) meet at the median \_\_\_\_\_\_\_\_\_\_\_\_\_ (place where you get blood \_\_\_\_\_\_\_\_\_\_\_\_ for bloodwork). They all drain into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ vein.

The brachial drains into the \_\_\_\_\_\_\_\_\_\_\_ under the armpit. The axillary drains into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_. The \_\_\_\_\_\_\_\_\_\_\_\_ takes blood from the posterior head and drains into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The right and left \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ drain into the right and left \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The external \_\_\_\_\_\_\_\_\_\_\_\_\_\_ drains the head and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ jugular drains the \_\_\_\_\_\_\_\_\_\_; both empty into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The right and left \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ join to form the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ vena cava which enters the \_\_\_\_\_\_\_\_\_\_. The \_\_\_\_\_\_\_\_\_\_\_\_ is a single vein that runs up the \_\_\_\_\_\_\_\_\_, drains the entire thorax and enters the \_\_\_\_\_\_ just before the \_\_\_\_\_\_\_\_\_\_.

**All Veins below the Diaphragm Drain into the Inferior Vena Cava**

-The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and posterior \_\_\_\_\_\_\_\_drain the calf and \_\_\_\_\_\_\_\_, then become the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at the knee. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ becomes the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at the thigh. The Great \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ vein is the \_\_\_\_\_\_\_\_\_\_\_\_ vein in the body; it drains the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ veins of the leg and empties into the \_\_\_\_\_\_\_\_\_\_\_\_\_.

The femoral drains into the \_\_\_\_\_\_\_\_\_\_\_\_ iliac. The \_\_\_\_\_\_\_\_\_\_\_\_\_ iliac drains the \_\_\_\_\_\_\_\_\_\_. The external and internal iliacs \_\_\_\_\_\_\_ to form the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The \_\_\_\_\_\_\_\_\_\_ veins drain the \_\_\_\_\_\_\_\_\_\_\_\_\_. The gonadal veins drain the \_\_\_\_\_\_\_\_\_\_\_. The \_\_\_\_\_\_\_\_\_\_\_\_\_ veins drain the \_\_\_\_\_\_\_\_\_\_\_. They all drain into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. REMEMBER, ALL DIGESTIVE ORGANS (GASTRIC, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) DRAIN INTO THE \_\_\_\_\_\_\_\_\_\_\_\_\_\_ PORTAL AND GO TO THE \_\_\_\_\_\_\_\_\_\_\_\_\_ FOR PROCESSING, THEN ARE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BY THE HEPATIC VEIN!

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ enters the heart, and it starts all over again.