

Lab 5 & 6: Arteries & Veins

In these two labs you should familiarize yourself with the microscopic structure of blood vessels as well as with the major arteries and veins of the systemic and pulmonary circulation system. We will also look at the fetal circulatory pattern and how it bypasses the developing lungs and parts of the digestive system.

Think of the circulatory system as a continuous circuit. Be able to trace a blood cell on its continuous journey through the parts of your body. Begin your study by identifying the vessels you have to know on the diagrams in your lab book. Then do the tracing questions on this sheet as well as those in your lab book. Identify vessels on the models only after you are comfortable with the tracing questions.

Arteries to know:

Thorax, Arm, Neck

Pulmonary Trunk	R & L Subclavian	R & L Radial
Pulmonary	R & L External Carotid	R & L Ulnar
Aortic	R & L Internal Carotid	R & L Palmar Arch
Brachiocephalic	R & L Axillary	
R & L Common Carotid	R & L Brachial	
	R & L Deep Brachial	

Abdomen

Aortic	Splenic	Inferior Mesenteric
Celiac Trunk	R & L Gastric	R & L Common Iliac
Common Hepatic	R & L Renal	Median Sacral
Hepatic, or Hepatic	R & L Gonadal	R & L Internal Iliac
Artery Proper	(Ovarian or Testicular)	R & L External Iliac
	Superior Mesenteric	

Leg

R & L Femoral	R & L Anterior Tibial	R & L Plantar Arch
R & L Deep Femoral	R & L Posterior Tibial	
R & L Popliteal		

Veins to know:

Thorax, Arm, Neck

Pulmonary	R & L Internal Jugular	R & L Basilic
Superior Vena Cava	R & L Subclavian	R & L Median Cubital
R & L Brachiocephalic	R & L Axillary	R & L Radial
R & L External Jugular	R & L Cephalic	R & L Ulnar
	R & L Brachial	R & L Palmar Arch

Abdomen

Inferior Vena Cava Hepatic Hepatic Portal R & L Gonadal (Ovarian or Testicular)	R & L Renal R & L Common Iliac R & L Internal Iliac R & L External Iliac Median Sacral	R & L Gastric Splenic Superior Mesenteric Inferior Mesenteric
---	--	--

Leg

R & L Anterior Tibial R & L Posterior Tibial R & L Small Saphenous	R & L Popliteal R & L Venous Arch R & L Great Saphenous	R & L Femoral
--	---	---------------

Fetal Circulation (p487 in lab manual):

Be aware that circulation changes considerably when a newborn takes his/her first breath. Be prepared to name, and explain function both prior to and after the first breath is taken.

Fetus

Ductus arteriosus
Foramen ovale
Ductus venosus
Umbilical vein
Umbilical arteries

Adult

Ligamentum arteriosum
Fossa ovalis
Ligamentum venosum
Ligamentum teres
Medial umbilical ligaments

Name the innermost lining of blood vessels. _____

Which tunic is composed primarily of smooth muscle? _____

Exchanges of gases, nutrients, and wastes occur in _____.

Are elastic arteries closer to the heart than muscular arteries? yes no

Why or why not? _____

Name the vessel supplying the left arm. _____

Name the large vessel draining the digestive viscera. _____

Name the vessel supplying the liver. _____

Name one major artery supplying the brain. _____

Name the vessel draining the gonads. _____

Name the two structures that bypass the lung in the fetal circulation. _____

Trace from the R ventricle to the L hand and back to the R atrium

R ventricle

Aorta

L hand

R atrium

Trace from the L ventricle to the kidney and back to the R atrium

L ventricle

Kidney

R atrium

Trace from the spleen to the stomach

Spleen

Capillaries in Liver

Capillary beds in Stomach wall