Lab 10 Exercises 1, 2 and 3
Fetal Pig Dissection

Overview

This lab will introduce students to anatomical features of the fetal pig. Students will learn about the structure and function of organs from five different systems including the digestive, respiratory, cardiovascular, urinary and reproductive systems. Students will also become familiar with accessory structures found in the five systems.

Learning objectives

By the end of this lab, students will be able to:

- Identify structures of the oral cavity and digestive system
- Identify structures of the respiratory and cardiovascular system
- Identify structures of the urogenital system

Materials and equipment

In-person labs

- Lab manual(s) for fetal pig dissection
- Fetal Pig Dissection Answer Booklet

Instructors will perform the dissection.

- Fetal pig
- Dissecting tray
- Dissecting equipment
- Lab coat
- Goggles
- Gloves
- Absorbent towels (paper towels)

Online labs

- Lab manual(s) for fetal pig dissection
- Fetal Pig Dissection Answer Booklet

- View dissection video from Carolina Biologicals
- Illustration of artery and vein (Appendix, Figure 1)
- Histological image of artery and vein (Appendix, Figure 2)

Pre-lab Assignment

- Read the *Fetal Pig Dissection Manual* and *Module 10: Cardiovascular/Respiratory System and Pig Dissection* to become familiar with the dissection procedure (free to read online and to download)
- Complete the EdPuzzle video

The Digestive System

OpenStax Readings:

The OpenStax Readings are linked chapters from *Anatomy and Physiology*, which is free to access online and to download as an e-book. Copyright and attribution information are below on page 4.

- Overview of the Digestive System
- The Mouth, Pharynx and Esophagus
- The Stomach
- The Small and Large Intestines
- Accessory Organs in Digestion: The Liver, Pancreas, and Gallbladder

Exercise 1: The Oral Cavity and Digestive System

In this exercise students will identify structures of the oral cavity and digestive system organs.

Identify the following organs and structures:

- Hard palate
- Soft palate
- Filiform papillae
- Vallate papillae
- Fungiform papillae
- Marginal papillae
- Glottis
- Epiglottis
- Liver
- Stomach
- Gall bladder
- Small intestine
- Large intestine

Complete these activities in *Fetal Pig Dissection Answer Book:* 6, 7, 8, 9, and 10

The Respiratory and Cardiovascular System

OpenStax Readings:

I. The Cardiovascular System

- The heart anatomy
- Blood Vessels
- Development of Blood Vessels and Fetal Circulation

II. The Respiratory System

- Organs and structure of the respiratory system
- The lungs
- Gas Exchange
- The transport of gases
- Modifications in respiratory functions
- Embryonic development of the respiratory system

Exercise 2: The Respiratory and Cardiovascular System

In this exercise students will identify structures and organs of the respiratory and cardiovascular system organs. Please use pages 28-40 in *Fetal Pig Dissection Manual (BIOL 105)* and Lumen Biology II Laboratory Manual Module 10: Cardiovascular/Respiratory System and Pig Dissection. Both are free to read online and to download.

Identify the following structures and organs:

- Lungs
- Diaphragm
- Trachea
- Heart

Complete these activities in *Fetal Pig Dissection Answer Book:* 1, 2, 3, 4, 5, and 7

The Urogenital System

OpenStax Readings:

- Physical Characteristics of Urine
- Gross Anatomy of Urine Transport
- Gross Anatomy of the Kidney
- Microscopic Anatomy of the Kidney

Exercise 3: The Urogenital System

In this exercise students will identify structures and organs of the urogenital system. Please use pages 44-52 in *Fetal Pig Dissection Manual (BIOL 105)* and Lumen Biology II Laboratory Manual Module 10: Cardiovascular/Respiratory System and Pig Dissection.

Identify the following structures and organs:

- Kidneys
- Renal vein
- Bladder

First and last name:

Follow your instructor's directions in renaming and submitting your lab.

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Appendix

Lumen lab manual for fetal pig dissection

Fetal Pig Dissection Manual (BIOL 105)

Lab 10 Exercises 1, 2 and 3 Fetal Pig Dissection

Lab 10 Word format

Lab 10 PDF format

Figure 1. Differences in the walls of arteries and veins

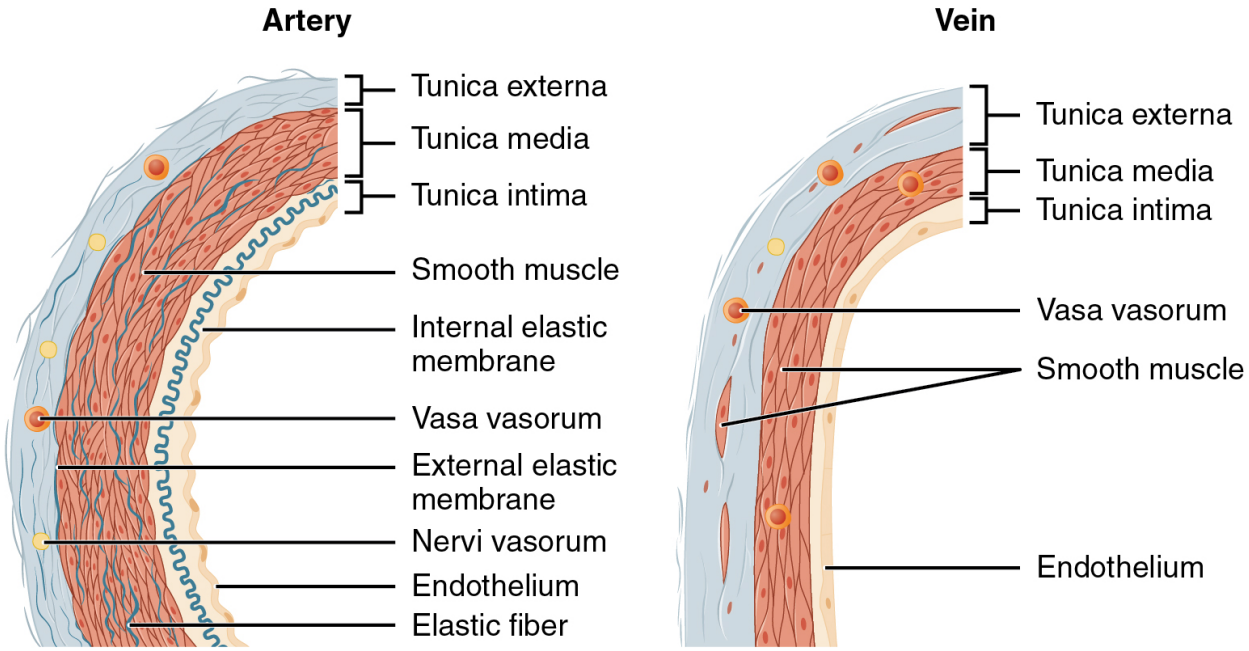

Figure 2. Histology image of vein and artery