# Lab Exam 3 Objectives

(8/7/2012)

## Hematology

### Histology

Identify each of the following formed elements as well as the functions of each type.

| |
|---|
| **Red blood cells** (RBCs) or **erythrocytes** (ah RITH ro sites) |
| **White blood cells** (WBCs) or **leukocytes** (LOO ko sites) |
| **Platelets** or **thrombocytes** (THROM bo sites) |

### Hematocrit/Packed Red Cell Volume

Hematocrit reader centrifuge – identify use of device
Interpret results

### Blood Typing

Procedure
Interpret blood typing results

## Circulatory System

### Anatomy of the Heart

| | |
|---|---|
| Aorta | Left pulmonary artery |
| Aortic arch | Left pulmonary veins |
| Ascending aorta | Left ventricle (VENT tri cul) |
| Descending aorta | Ligamentum arteriosum |
| Aortic semilunar valve | Marginal artery |
| Apex of heart | Mediastinum |
| Auricle | Myocardium |
| Base of heart | Opening to coronary arteries |
| Bicuspid (mitral) valve (MY trahl) | Papillary muscle |
| Cardiac vein | Parietal pericardium |
| Chordae tendineae (KOR day TEN dah nay) | Pericardial cavity |
| Circumflex artery | Posterior interventricular artery |
| Coronary sinus | Pulmonary trunk |
| Diaphragm | Pulmonic semilunar valve |
| Endocardium | Right atrium |
| Fibrous pericardium (PER ah KAR de um) | Right coronary artery |
| Fossa ovalis (o VA lus) | Right pulmonary artery |
| Inferior vena cava | Right pulmonary veins |
| Interatrial septum | Right ventricle |
| Interventricular septum | Superior vena cava |
| Left anterior descending artery | Tricuspid valve |
| Left atrium (A tre um) | Visceral pericardium (epicardium) |
| Left coronary artery | |

# Lab Exam 3 Objectives

### Sheep's Heart

| | |
|---|---|
| Aorta | Myocardium |
| Aortic semilunar valve | Opening to coronary arteries |
| Apex | Papillary muscle (PAP ah ler ee) |
| Bicuspid valve | Pulmonary trunk |
| Chordae tendineae | Pulmonic semilunar valve |
| Fibrous pericardium | Right atrium |
| Inferior vena cava | Right ventricle |
| Interatrial septum | Superior vena cava |
| Interventricular septum | Tricuspid valve |
| Left atrium | Visceral pericardium (epicardium) |
| Left ventricle | |

### Blood Pressure Monitoring

| | |
|---|---|
| Sphygmomanometer | Diastolic (dahy uh STOL ik) blood pressure |
| Procedure | Normal values |
| Systolic (si STOL ik) blood pressure | |

## Arteries & Veins

### Histology

Differentiate and identify an artery and vein.

### Major arteries

| | |
|---|---|
| Anterior tibial | Inferior mesenteric (MES en TER ik) |
| Aorta | Internal carotid (kah ROT id) |
| Aortic arch | Internal iliac (hypogastric) (IL ee ak) |
| Ascending aorta | Left subclavian |
| Descending aorta | Left common carotid (kah ROT id) |
| Axillary (AK sah LER ee) | Popliteal (POP lah TE al) |
| Brachial | Posterior tibial |
| Brachiocephalic (trunk) (BRAK e o sah FAL ik) | Radial |
| Celiac (trunk) (SE le ak) | Renal |
| Common iliac (IL ee ak) | Right common carotid (kah ROT id) |
| Deep palmar arch | Right subclavian |
| Dorsalis pedis (PEED ahs) | Superior mesenteric (MES en TER ik) |
| External carotid (kah ROT id) | Superficial temporal |
| External iliac (IL ee ak) | Ulnar |
| Facial | Vertebral |
| Femoral (FEM or al) | |

# Lab Exam 3 Objectives

### Major veins

| | |
|---|---|
| Axillary | Great saphenous (sah FE nus) |
| Azygos (a ZYE gus) | Hepatic |
| Basilic (bah SIL ik) | Inferior vena cava |
| Brachial (note: 2 in each arm) | Internal iliac (hypogastric) |
| Brachiocephalic (right & left) | Internal jugular |
| Cephalic (sah FAL ik) | Median cubital (KU bi tal) |
| Common iliac (right & left) | Popliteal |
| External iliac | Renal |
| External jugular | Subclavian (right & left) |
| Femoral | Superior vena cava |

### Portal Circulation, Human

| | |
|---|---|
| Hepatic portal vein | Splenic vein |
| Inferior mesenteric vein | Superior mesenteric vein |

## Lymphatic System

| | |
|---|---|
| Axillary lymph nodes | Right lymphatic duct |
| Cervical lymph nodes | Spleen |
| Cisterna chyli (sis TER nah KYE lee) | Thoracic duct |
| Inguinal lymph nodes (ING gwah nal) | Thymus gland |
| Lymphatic vessels | |

## Respiratory System

### Respiratory Organs

| | |
|---|---|
| Alveolus (pl. alveoli) (al VE o lus) (al VE o lie) | Naris (pl. nares) |
| Arytenoid cartilage (ah RIT ahn oid) | Nasal cavity |
| Auditory tube aperture | Nasal conchae |
| Bronchiole (BRONG ke ol) | Inferior, Middle, and Superior |
| Bronchus (right & left) (BRONG kus) (pl. bronchi) | Nasopharynx (NAY zo FAR ingks) |
| Carina (BRONG kus) | Oblique fissure (right & left lung) |
| Cricoid cartilage (KRY koyd) | Oral cavity |
| Cricothyroid membrane | Oral vestibule |
| Diaphragm | Oropharynx (O ro FAR ingks) |
| Epiglottis | Palatine tonsil |
| Esophagus | Parietal pleura |
| Hard palate | Pharyngeal tonsils (adenoids) (AD ah noyds) |
| Horizontal fissure (right lung) | Pleural cavity |
| Hyoid bone | Thyroid cartilage |
| Laryngopharynx (lah RING go FAR ingks) | Tongue |
| Larynx | Trachea |
| Lingual tonsils (LING gwal) | Upper (superior) lobe (right & left) |
| Lower (inferior) lobe (right & left) | Uvula (U vu lah) |
| Lung (right & left) | Visceral pleura |
| Middle lobe (note: right lung only) | Vocal folds (cords) |

# Lab Exam 3 Objectives

## Spirometry: Lung Capacities

Procedure
Spirometer

## Volumes

| | |
|---|---|
| Expiratory reserve volume | Tidal volume |
| Inspiratory reserve volume | Vital capacity |