

VERTEBRATE ANATOMY

1. PHYLUM CHORDATA

Four notable characteristics of the phylum:

- The presence of pharyngeal gill clefts at some point in development.
- The presence of a notochord at some point in development.
- The presence of a single, hollow, dorsal nerve cord.
- Post anal tail.

2. THE RAT DISSECTION

- Use a scissors, not a scapel, to snip the skin and muscles.
- Do not plunge the scissors deeply into either the abdominal or thoracic cavities or you will damage the organs underneath. Be especially careful when cutting through the rib cage into the region near the heart.
- If you cut the intestines, it may STINK considerably.
- Remove ALL pins from the rat when finished. Wrap the rat NEATLY in a plastic bag, secure with 2 strips of tape, and place in the freezer.

You should be able to define: dorsal, ventral, medial, distal, proximal, lateral, posterior, anterior.

You should be able to identify all of the following structures.

External Features:

Head: External nares ("nostrils"), Vibrissae ("whiskers"), Pinnae ("ears").

Oral Cavity: Incisors, hard and soft palate, tongue

Internal Features: (visible after dissecting the rat).

Digestive System

- Abdominal cavity (lined with peritoneum)
- Pharynx (vs. larynx)
- Esophagus
- Stomach
- Small intestine (duodenum & jejunum-ileum)
- Caecum
- Liver
- Submaxillary
- Parotid
- No gall bladder in rats
- Colon
- Pancreas

Excretory System

- Kidneys
- Ureters

- Urinary bladder
- Urethra

Miscellaneous Structures

- Adrenal gland
- Mesentery

Respiratory System

- Pleural Cavity

- Trachea with cartilaginous rings
- Epiglottis
- Lungs
- Diaphragm

Immune System

- Lymph nodes
- Spleen
- Thymus

Circulatory System

- Heart*
 - rt. & lt. atria
 - rt. & lt. ventricles
- Pulmonary veins & arteries,
- Aorta and vena cava

Neck Region

Salivary Glands

- Submaxillary
- Parotid
- Lacrimal glands
- Lymph nodes
- Parotid duct
- Facial nerve

Mammary Glands

Nipples

Salivary Glands

- Submaxillary
- Parotid

Reproductive System

Male

- Testes
- Seminiferous tubules (inside of testes)
- Coagulating gland
- Vas Deference
- Seminal vesicles
- Prostate gland
- Epididymis (cauda and caput)
- Preputial gland

Female

- Ovary
- Fallopian tube
- Uterus
- Preputial gland

3. REQUIRED DRAWINGS: Include labels.