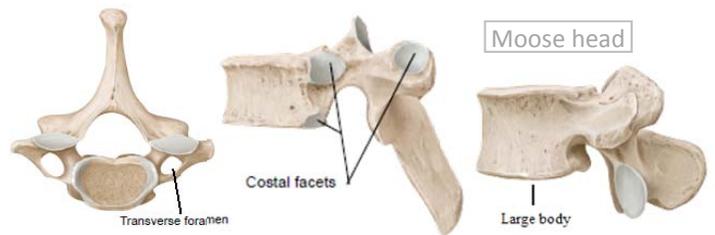


LAB 3 (Axial Skeleton) Study Aid

1. Orient yourself
 - a. Especially in regard to the skull (inferior view vs. cranial cavity superior view).
2. Colored skull is helpful to initially identify bones, but will not be on exam itself -> get to know white skull!
3. Use names to your advantage. Know what these general names mean:

- a. **Foramen** = hole
- b. **Process** = outgrowth of tissue/projecting part
- c. **Facet** = smooth, flat surface on a bone
 - i. Sometimes slightly concave/convex
 - ii. Site of articulation
- d. **Sinus** = air-filled cavity/space in a bone
- e. **Meatus** = a canal through a bone
- f. **Condyle** = rounded knob that articulates with another bone
 - i. Note: **Epicondyle** = protrusion that is superior (*epi-* = above) to a condyle



4. Mnemonics

- a. Vertebrae are numbered based on common meal times:
 - i. **7 cervical** (breakfast)
 - ii. **12 thoracic** (lunch)
 - iii. **5 lumbar** (dinner)
- b. Thoracic vs. Lumbar vertebrae
 - i. Thoracic = look like giraffe head when viewed from side
 - ii. Lumbar = look like moose head when viewed from side
- c. Atlas/Axis:
 - i. in ABC order (Atlas comes before axis -> so is located above)
 - ii. Atlas is "holding up the skull" like the Greek god "holds up the earth"
 - iii. Axis is used to rotate the neck.
 - iv. Visualize how atlas rotates on axis:

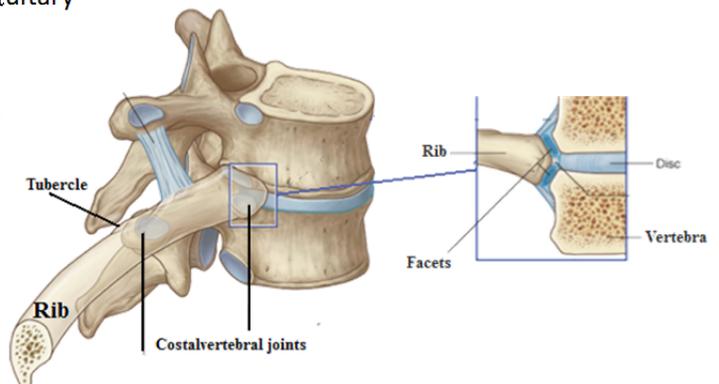


<http://hal.bim.msu.edu/RCervical/Biomechanics/Images/c1c2cm.gif>



5. Other Notes:

- a. **Articulation** = location at which two or more bones make contact (a Joint)
- b. **Costa** = rib (**Costal** = related to rib)
- c. **Hyoid** = 'floats'; bone that can break when someone is choked to death
 - i. Note: not your Adam's apple (this is the thyroid cartilage surrounding the larynx [Lab 7])
- d. **Styloid process** = looks like a stylus
- e. **Pterygoid process** = looks like pterodactyl wing [in fact, *ptery* = 'wing' (pterodactyl means 'winged-hand')]
- f. **Palatine bone** = think about the hard-palate (the farthest-back hard part on the roof of your mouth)
- g. **Lacrimal bone** = contains the nasolacrimal canal, which is your tear duct
- h. **Ethmoid** = usually think about it more specifically:
 - i. Nasal cavity: ethmoid exists primarily as **nasal conchae**
 - ii. Superior view: ethmoid exists primarily as **cribriform plate**
 - iii. Orbit: Ethmoid is along medial orbit wall set-back behind lacrimal bone
- i. **Sphenoid** = means "wedge"; think of the sphenoid being *wedged* into the center of the skull
- j. **Sella Turcica** = "*Turkish* saddle" -> think about the Pituitary Gland acting as a jockey sitting in the saddle
- k. **Rib** articulates with vertebrae in 3 locations
 - i. Head: Inferior costal facet of upper vertebra and Superior facet of lower vertebra
 - ii. Tubercle: transverse process
- l. **Cranial Sutures**
 - i. **Lambdoid** = lambda (λ) shape
 - ii. **Squamous** = means 'scale' (think fish scale)
 - iii. **Coronal** = plane that divides ventral/dorsal
 - iv. **Sagittal** = plane that divides right/left



Exam Notes

1. Make sure you start with the right # on your answer sheet
(if you start at station #15, make sure you start at question #15 on your exam)
2. Structure of exam:
 - a. 50 identification
 - i. 1.5 minutes per ID station (2 questions per station)
 - ii. Students will always receive credit if their answer is more specific than the answer we were looking for, but the reverse is not true (ex: parietal bone could potentially be a correct answer for skull, but skull is NOT a correct answer for parietal bone).
 - iii. Look for clues at the stations such as “be specific” and “bone”
 - iv. Some ID questions can be illustrations/images
 - b. 50 points of word questions [function, location, ‘think’ questions]
 - i. 50 minutes at end of exam
 - ii. You can work on this portion as you rotate through the ID stations
 - iii. Questions equally divided among 3 labs
 - c. Rules:
 - i. **Touching the models is prohibited. [you will LOSE points]**
 - ii. **No returning to models under any circumstances.**
 - iii. **No questions asked during exam** (Unless you’re having color blind issues)
 - iv. Make sure to place your stuff in the front of the lab when you come in. Do not start exam until I instruct you to do so.
 - d. Student Preparation
 - i. “Bedtime Stories” - read small portions of lab manual at a time so you are not overwhelmed
 - ii. Open Labs – **Saturday/Sunday before exam -- See earlier email for details!**
 - iii. **Be over prepared for first exam**
 - iv. **Quizlet flashcards posted on Sakai (Under Resources\‘Flashcards’)**
 - v. **Unlabeled manuals on Sakai**
 - vi. **Worksheets**