

## PhySci 107 2022

## Week 6 Lab Worksheet

## Bones of the Upper Limb and Vertebral Column

Learning Outcomes

- Students should be able to describe the shoulder girdle including the joints that comprise it.
- Students should be able to identify vertebrae from the 4 vertebral regions and describe the movements allowed in each region.

1. What are the structures that make up the 'shoulder joint' (bones and bony landmarks)?

3 bones

bony landmarks

- scapula, → glenoid fossa, acromion process
- clavicle → acromial end, ~~sternal end~~
- humerus → head of humerus

★ acromial end = lateral end, flat on model (lat is flat)

~~sternoclavicular joint: sternal end of~~ — not part of shoulder, but part of pectoral girdle

- acromioclavicular joint: acromion process of scapula & acromial end of clavicle
- glenohumeral joint: head of humerus & glenoid fossa on scapula


2. Using your answer above, in which direction do you think dislocation of the shoulder joint would occur. Why?

- anteriorly because posteriorly, the acromion process restricts.
- could also slip inferiorly or pull out laterally, but not as common bc lots of tendons there to hold it in place.
- glenohumeral joint is very shallow.



3. For each region of the vertebral column name ONE EASILY definable feature:

⑦ Cervical: only region w/ transverse foramen

- bifurcated spinal process (bifid)
- vertebral foramen is  shape. (this is where cord fits)

⑫ Thoracic: only region w/ <sup>transverse</sup> costal facets (demifacet) - articulates w/ ribs  
(on transverse process)

spinal  
process  
points  
down

⑤ Lumbar:

- moose looking spinous process, short and blunt
- largest vert. body (weight bearing)
- large sup/inf art processes, prevent rotation

⑤ Sacral: - snake/dragon

\* 1 sup process fits the inf process of the above vert.

4. What bony structures of the vertebrae restrict their movement relative to each other?

• articular processes restrict

• cervical = less restriction, more movement allowed  
- base of head, so can rotate C1 & C2

least  
mobile →

• lumbar = limited lateral flexion, no rotation, can  
flex/extend. art facets allow only <sup>limited</sup> flex/extend

• thoracic: <sup>limited</sup> flex & extend, <sup>limited</sup> lateral flex ~~extend~~, ~~rotation~~  
rotation

- spinous process & articular processes  
block

- all have transverse processes, but only thoracic  
has costal facets bc only that region interacts  
w/ ribs