

Bio 22 PAL Worksheet

Joints and Motions

1. Describe a traumatic or funny experience you had with a joint in your body.
 - a. Name the joint.
 - b. Name the structural and functional category.
 - c. What was the pathology, and what specific structure was affected?
 - d. Find the joint in the images below and then draw it on the white board. If your joint isn't available, pick one at random and draw and label it.

2. Draw a concept map including joint categories by function. Highlight differences in stability and mobility for each.
 - a) Synarthrosis

 - b) Amphiarthrosis

 - c) Diarthrosis

3. Define the following joint classification by its structure:
 - a) Fibrous

 - b) Cartilaginous

 - c) Bony Fusion

 - d) Synovial

4. Fill in the blanks:

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- a) A tooth bonded to its bony socket is called _____, a type of fibrous joint. It provides _____ movement.
- b) The pubic symphysis is structurally classified as _____ and provides _____ movement.
- c) In a synovial joint, bones do not directly articulate because of the presence of _____.
 - i. List and describe the three functions of the blank above.

5. Let's talk about motion!

- a) Define the following movements:
 - i. Adduction
 - ii. Abduction
 - iii. Flexion
 - iv. Extension
 - v. Hyperextension
 - vi. Rotation
 - vii. Pronation
 - viii. Supination
 - ix. Elevation
 - x. Depression

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- xi. Protraction
- xii. Retraction
- xiii. Dorsiflexion
- xiv. Eversion
- xv. Inversion
- xvi. Plantar flexion

b) Given the region, list what movements can occur in that region:

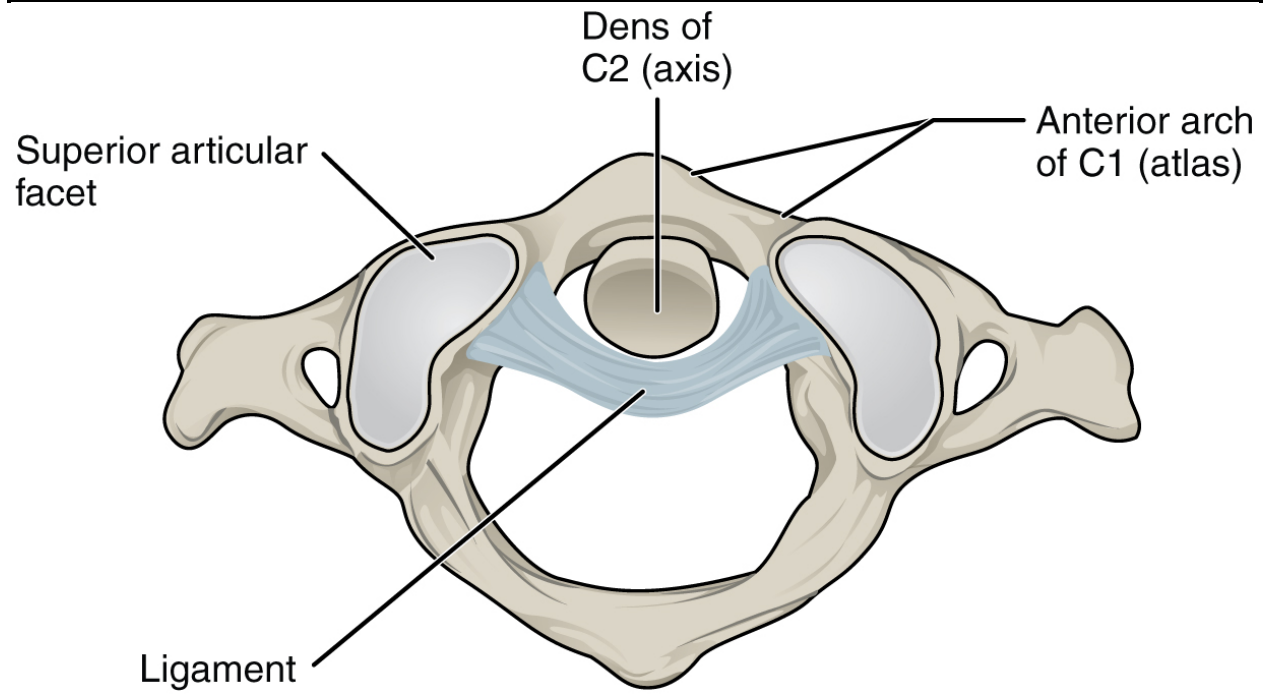
- i. Head
- ii. Arms/Legs
- iii. Wrist
- iv. Vertebral Column
- v. Jaw
- vi. Foot/ ankle

6. Fill in the following table given the anatomical joint name

Anatomical Name	Common Name	Structural Category	Number of Axes
<i>Glenohumeral joint</i>			
<i>Radiocarpal joint</i>			
<i>Metacarpophalangeal joint</i>			
<i>Coxal joint</i>			

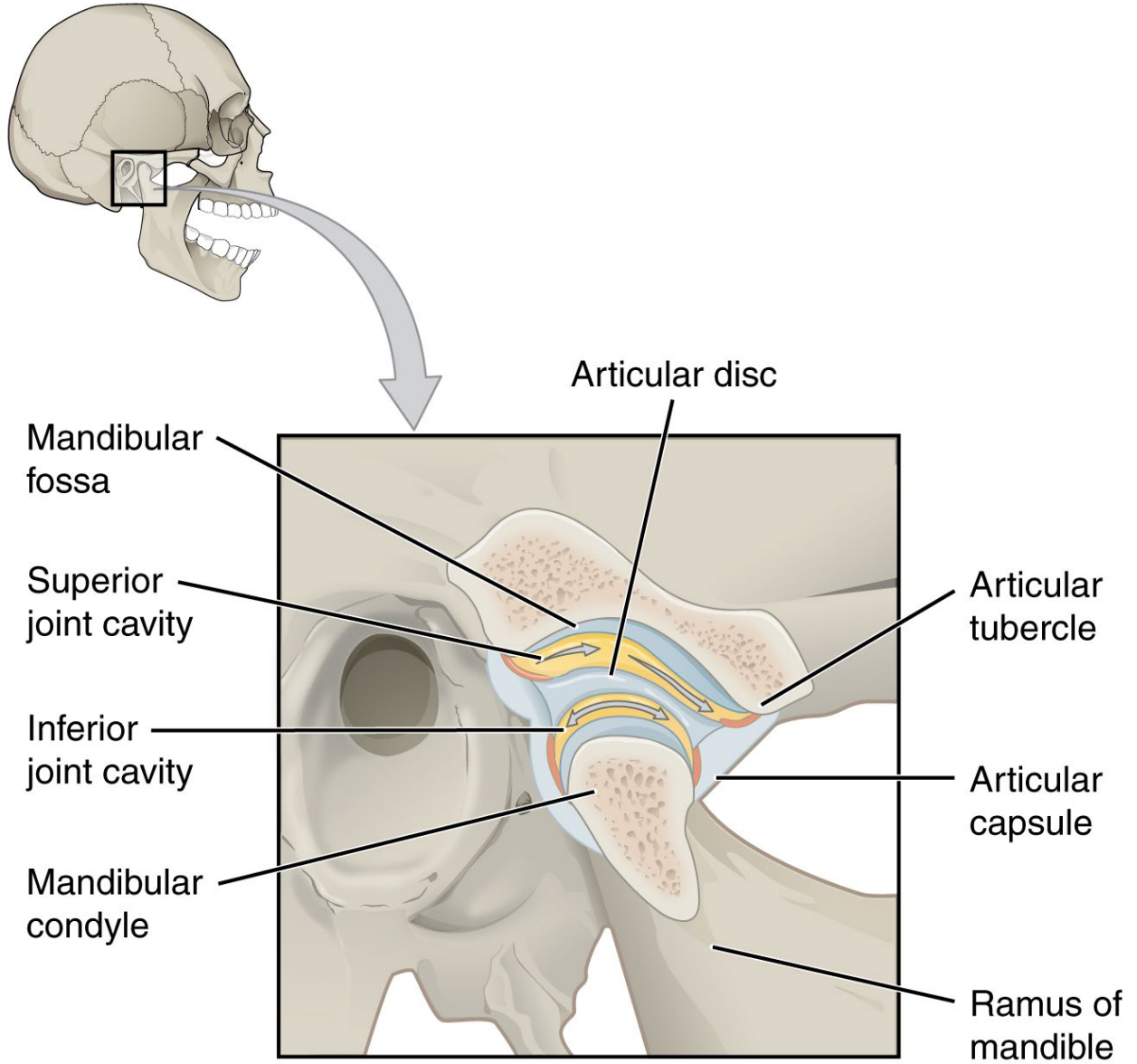
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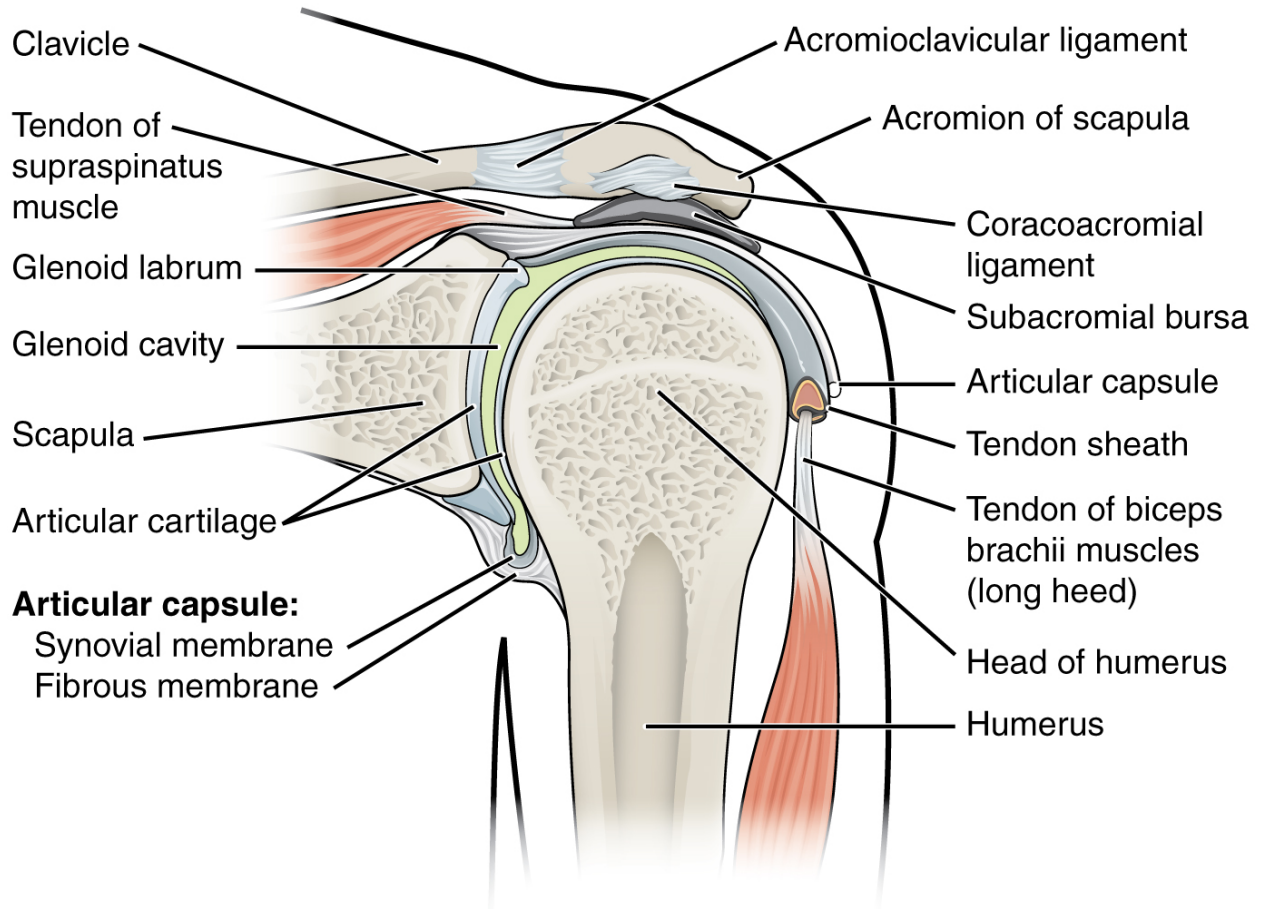


Superior view of atlas

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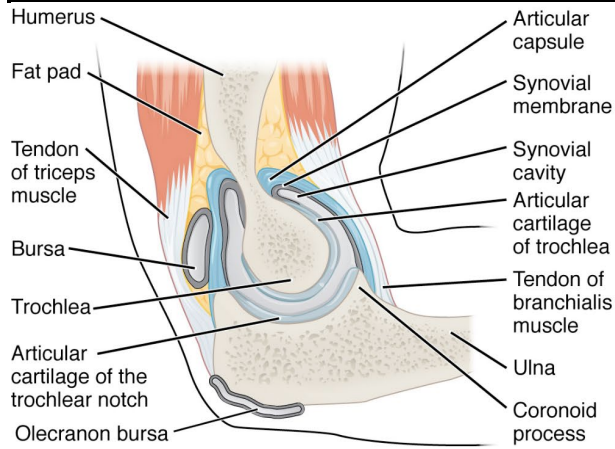


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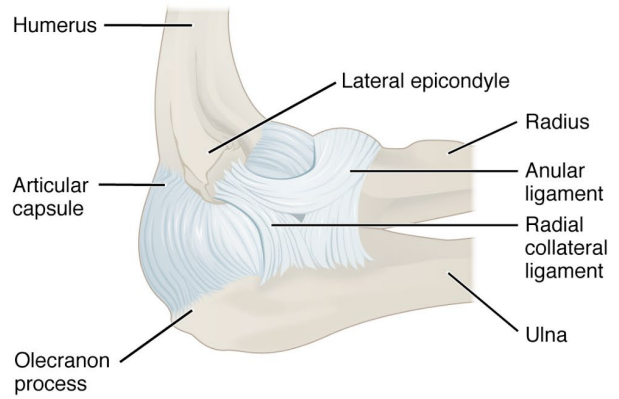


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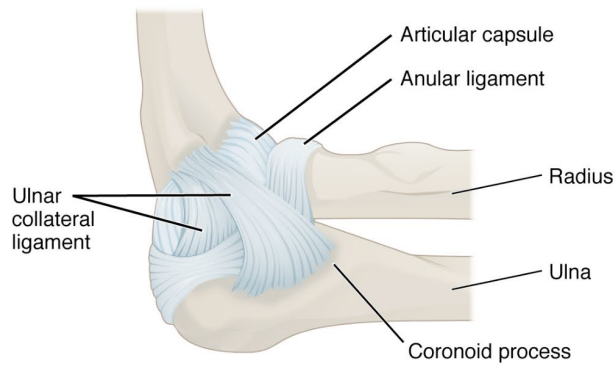
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(a) Medial sagittal section through right elbow (lateral view)



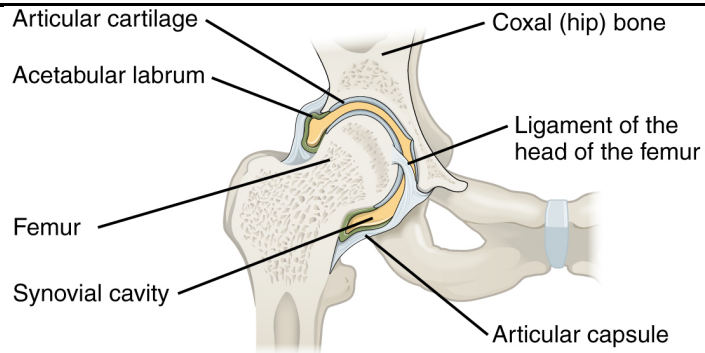
(b) Lateral view of right elbow joint



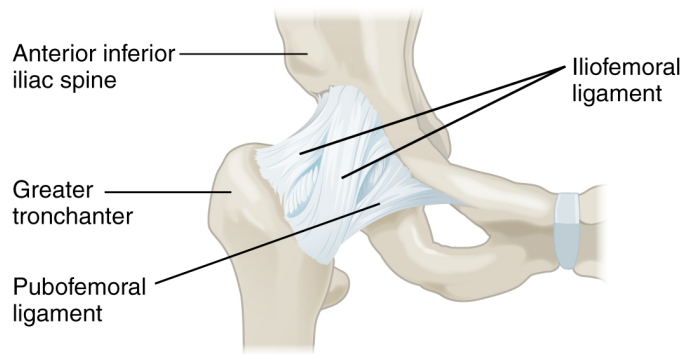
(c) Medial view of left elbow joint

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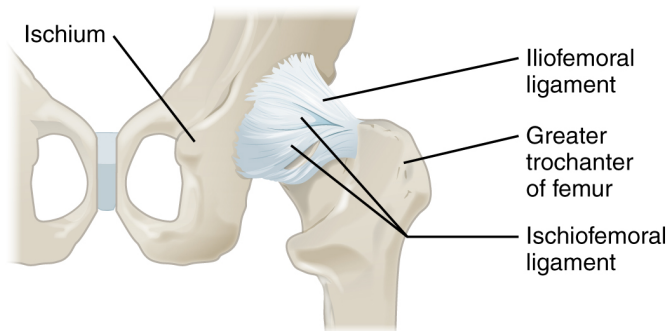
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(a) Frontal section through the right hip joint



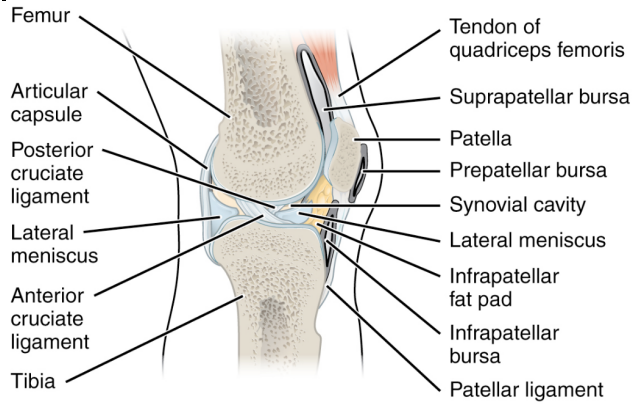
(b) Anterior view of right hip joint, capsule in place



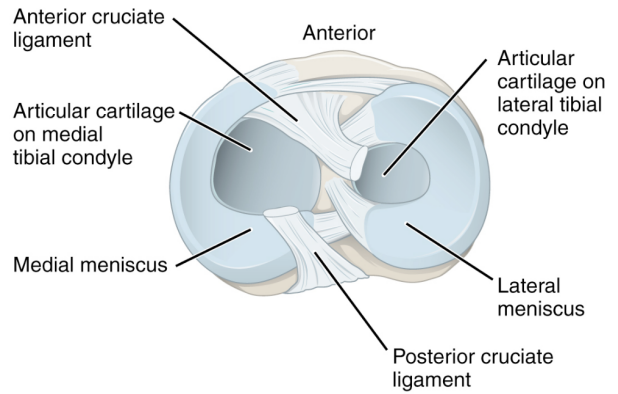
(c) Posterior view of right hip joint, capsule in place

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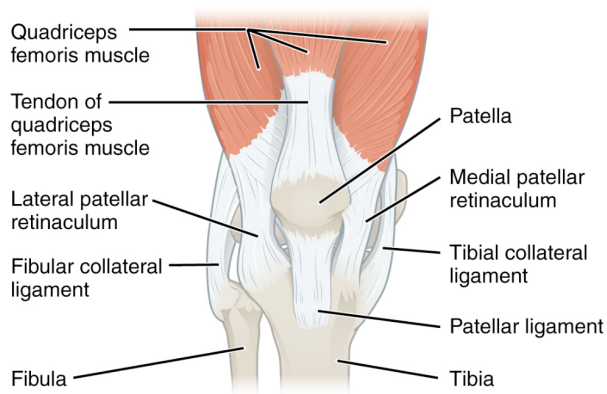
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(a) Sagittal section through the right knee joint



(b) Superior view of the right tibia in the knee joint, showing the menisci and cruciate ligaments



(c) Anterior view of right knee

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