MEDICAL EDUCATION RESOURCE

Frequently Askes Queations

Frequently Asked Questions – Joints of Upper Limb

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1. What is the only bony joint connecting the upper limb to the trunk?

? **Sternoclavicular joint** — a saddle synovial joint functionally acting as ball-and-socket.

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2. Why is the sternoclavicular joint rarely dislocated?

Because it has **strong ligaments** (costoclavicular, interclavicular) and a **complete articular disc** that absorbs shock and adds stability.

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3. Which joint allows gliding movements between clavicle and scapula?

? **Acromioclavicular joint** — a **plane synovial joint** stabilized by **coracoclavicular ligament** .

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4. What is the main ligament stabilizing the acromioclavicular joint?

? **Coracoclavicular ligament** — made of **conoid** (medial) and **trapezoid** (lateral) parts.

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5. What are the bones forming the shoulder (glenohumeral) joint?

? **Head of humerus** and **glenoid cavity of scapula** (deepened by glenoid labrum).

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6. Why is the shoulder joint highly mobile but less stable?

- Shallow glenoid cavity.
- Loose capsule.

- Large humeral head.
- Stability depends mainly on **rotator cuff muscles (SITS)**.

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7. Name the muscles forming the rotator cuff.

? **SITS** – Supraspinatus, Infraspinatus, Teres minor, Subscapularis.

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8. Which tendon is intracapsular but extrasynovial in shoulder?

? **Long head of biceps brachii tendon.**

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9. What are the main ligaments of the shoulder joint?

- **Coracohumeral**, **glenohumeral**, **transverse humeral**, **coracoacromial**, and **capsular** ligaments.

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10. Which bursa lies between supraspinatus and acromion?

? **Subacromial (subdeltoid) bursa.**

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11. What is the “painful arc” syndrome?

Pain during **60°–120° abduction** due to **supraspinatus tendinitis** under the coracoacromial arch.

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12. Which nerve is most commonly injured in shoulder dislocation?

? **Axillary nerve** — leads to deltoid paralysis and loss of sensation over the “regimental badge” area.

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13. What type of joint is the elbow?

? **Complex hinge-type synovial joint** (humeroulnar + humeroradial).

14. Name the ligaments strengthening the elbow joint.

- **Ulnar collateral**, **radial collateral**, and **annular ligament** of radius.

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15. What is the carrying angle and why is it important?

? Angle between the long axes of humerus and forearm (10–15° in males, 15–20° in females).
Significance: Keeps forearm clear of hips during walking.

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16. What is “pulled elbow” (nursemaid’s elbow)?

Partial dislocation of **head of radius** from **annular ligament** — common in children after a sudden jerk.

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17. Name the joints involved in supination and pronation.

? **Superior and inferior radioulnar joints** (pivot type).
Axis passes through **head of radius ? head of ulna**.

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18. What are the muscles of pronation and supination?

- **Pronation:** Pronator teres, Pronator quadratus (median nerve).
- **Supination:** Supinator, Biceps brachii (radial & musculocutaneous nerves).

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19. What is the function of the interosseous membrane?

- Connects radius and ulna.
- Transmits forces from radius to ulna.
- Provides muscle attachment.

- Maintains forearm stability.

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20. What type of joint is the wrist (radiocarpal)?

? **Ellipsoid (condyloid) synovial joint.**

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21. Which bones participate in wrist articulation?

- **Radius** and **articular disc** (above) with **scaphoid, lunate, triquetral** (below).
- **Ulna does not** participate directly.

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22. What are the major ligaments of the wrist?

? Palmar radiocarpal, dorsal radiocarpal, ulnar collateral, radial collateral.

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23. What is the most commonly fractured carpal bone?

? **Scaphoid** — tenderness in anatomical snuffbox, risk of avascular necrosis.

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24. What type of joint is the 1st carpometacarpal joint of thumb?

? **Saddle-type synovial joint.**
Allows flexion, extension, abduction, adduction, opposition, and circumduction.

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25. What movement enables opposition of the thumb?

? Combined **abduction, flexion, and medial rotation** at 1st CMC joint.

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26. Which joints in the hand share a common synovial cavity?

? **Intercarpal**, **midcarpal**, and **CMC (2nd–5th)** joints share a cavity.
The **1st CMC** and **pisotriquetral** are separate.

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27. What type of joint is the MCP joint?

? **Condyloid (ellipsoid) synovial joint.**
Permits flexion, extension, abduction, adduction, and circumduction.

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28. What type of joint is the interphalangeal (IP) joint?

? **Hinge-type synovial joint** allowing flexion and extension only.

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29. Which ligaments prevent hyperextension at MCP and IP joints?

? **Palmar (volar) plates.**

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30. What is the “axis” for finger abduction and adduction?

? The **middle finger** acts as the central axis — can abduct both ways but cannot adduct.

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31. What deformity results from rupture of extensor tendon at DIP joint?

? **Mallet finger** — distal phalanx droops.

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32. What deformities are typical of rheumatoid arthritis?

? **Swan-neck** (PIP hyperextension, DIP flexion) and **Boutonnière** (PIP flexion, DIP hyperextension).

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33. What causes “trigger finger”?

Thickening of **fibrous flexor sheath** ? tendon catches during motion ? finger “snaps” on extension.

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34. What is Dupuytren’s contracture?

Fibrosis of **palmar aponeurosis** ? flexion deformity at MCP and PIP joints, usually of ring and little fingers.

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35. Why is thumb opposition important?

It enables **precision grip** and fine motor control unique to humans.

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36. What is the role of deep transverse metacarpal ligaments?

They connect the 2nd–5th MCP joints, **maintaining the palmar arch** and alignment during grip.

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37. Which joint allows the greatest mobility in the upper limb?

? **Glenohumeral (shoulder) joint.**

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38. Which joint provides greatest stability in upper limb?

? **Elbow joint** — strong ligamentous support and interlocking bony architecture.

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39. What are the three joints forming the elbow complex?

? Humeroulnar, Humeroradial, and Superior radioulnar joints.

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40. What movements occur at the radiocarpal joint?

? Flexion, extension, abduction, adduction, and circumduction.

? **Summary Insight**

> Every joint of the upper limb is adapted for **maximum mobility with functional stability**, supported by **ligaments, muscle tone, and joint congruence**.
> Pathologies often reflect overuse, trauma, or degeneration of these stabilizing structures.