

Scapula

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General Features

- **Flat, triangular bone** forming the posterior part of the shoulder girdle.
 - Lies on the **posterolateral aspect of thorax** between 2nd and 7th ribs.
 - Provides large surface area for **muscle attachment** and contributes to the shoulder joint.
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Parts of Scapula

1. Angles

- Superior angle ? level of T2 vertebra.
- Inferior angle ? level of T7 vertebra.
- Lateral angle ? thick, bears glenoid cavity.

2. Borders

- Superior ? short, with suprascapular notch.
- Medial (vertebral) ? parallel to vertebral column.
- Lateral (axillary) ? thick, bears infraglenoid tubercle.

3. Surfaces

- Costal surface ? concave, forms subscapular fossa.

- Dorsal surface ? divided by spine into supraspinous and infraspinous fossae.

4. Processes

- **Spine** ? prominent ridge, ends laterally as **acromion**.
- **Acromion** ? articulates with clavicle.
- **Coracoid process** ? hook-like projection, muscle attachment.

5. Glenoid Cavity

- Shallow, pear-shaped cavity.
- Articulates with head of humerus ? forms shoulder joint.
- Supraglenoid tubercle (long head of biceps).
- Infraglenoid tubercle (long head of triceps).

Attachments (Summary)

- **Muscles attached:**

- Medial border ? serratus anterior, levator scapulae, rhomboids.
- Lateral border ? teres minor, teres major.
- Coracoid process ? pectoralis minor, short head of biceps, coracobrachialis.
- Spine ? trapezius (upper), deltoid (lower).
- Subscapular fossa ? subscapularis.
- Supraspinous fossa ? supraspinatus.

- Infrapinuous fossa ? infrapinatus.
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Ossification of Scapula

- **Begins: 8th week intrauterine life.**
 - **Primary center:** appears near the glenoid cavity ? expands to form body.
 - **Secondary centers:**
 - 2 for coracoid process.
 - 2 for acromion.
 - 1 for medial border of scapula.
 - 1 for inferior angle.
 - 1 for glenoid cavity.
 - Fusion of secondary centers completed around **20–25 years**.
 - Thus, scapula has **1 primary + 7 secondary centers**.
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Clinical Anatomy

- **Fractures:**
 - Rare due to protection by muscles and chest wall.
 - When occur, usually associated with rib fractures.
- **Winged scapula:**
 - Paralysis of serratus anterior (injury to long thoracic nerve).

- Medial border of scapula protrudes backward when pushing against resistance.

- **Dislocation of acromioclavicular joint:**

- Common in contact sports.
- Results in prominent acromion (step deformity).

- **Scapular dyskinesis:**

- Abnormal scapular movements due to muscle imbalance.

- **Ossification centers:** important in **forensic age estimation**.