

Scapula

The **scapula** (*shoulder bone, shoulder blade, wing bone*) is a flat bone, triangular in shape. It is placed on a posterolateral aspect of the thoracic cage, ranging from the level of the second rib to the level of the seventh rib.

Scapula connects with the humerus (upper arm bone) in the glenohumeral (shoulder) joint and the clavicle (collar bone) in the acromioclavicular joint. There is no direct connection between the thoracic cage and scapula. It is held in place thanks to the surrounding muscles.

The name *scapula* comes from early Roman times, meaning a small shovel.

Functions

The scapula is the origin and instertion of various muscles

The scapula protects the thoracic cavity form the dorsal side

Moving the upper limb

As is, the humerus can only move 90° upwards, into the horizontal plane. Moving any more, the humerus' head would collide with the coracoid process of the scapula. To move the upper limb above the horizontal plane, the coracoacromial ligament (*fornix humeri*) needs to be engaged.

The scapula and humerus move in a 1:2 ratio. When the upper limb is abducted 180°, 60° of those 180 occur by rotation of the scapula and 120° by movement of the humerus itself.

Borders

The three borders of the scapula are:

Margo medialis

Medial border, parallel to the longitudinal axis of the spine

Margo lateralis

Lateral, or axillary border

Margo superior

Superior border

Angles

Borders of the scapula connect in three angles:

Angulus superior

Superior and medial border

Angulus inferior

Medial and lateral border

Angulus lateralis

Lateral and superior border

Surfaces

Dorsal surface

The back of the scapula is divided into two unequal parts by the *spine of the scapula*. The *spine* ends in a process called the *acromion*. The acromion forms the cavity of the glenohumeral joint.

The portion of the dorsal surface above the spine is called the **supraspinous fossa**. *M. supraspinatus* originates there.

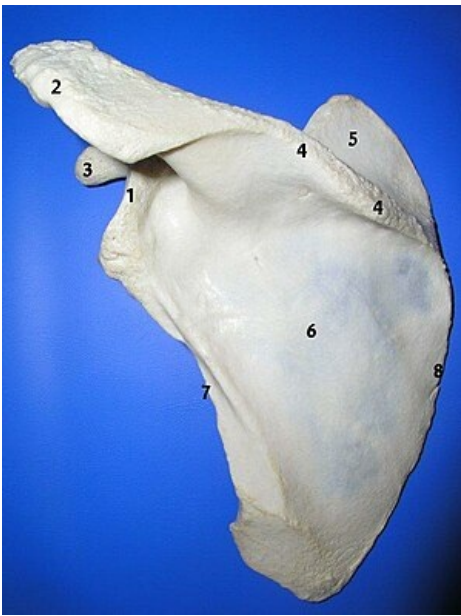
The portion of the dorsal surface below the spine is called the **infraspinous fossa**. It is much larger than the supraspinous fossa. *M. infraspinatus* originates there.

Both muscles are parts of the rotator cuff, rotating the humerus and providing stability for the glenohumeral joint.

The *coracoid process* originates from the superior border.



Right scapula



Left scapula from the back side,
numbered

1. Lateral angle
2. Acromion
3. Coracoid process
4. Spine
5. Supraspinous fossa
6. Infraspinous fossa
7. Medial border
8. Lateral border

Ventral surface

The front of the scapula has a concavity called the **subscapular fossa**. *M. subscapularis* originates in the fossa.



Left scapula from the front side,
numbered

1. Glenoid cavity
2. Acromion
3. Coracoid process
4. Infraglenoid tubercle
5. Superior angle
6. Subscapular fossa
7. Inferior angle

Lateral surface

The glenoid cavity can be found at the lateral angle. The acromion and the coracoid process make its top border.

Above and below the cavity, two tubercles serve as origins of muscles:

Supraglenoid tubercle

Origin of the long head of *m. biceps brachii*

Infraglenoid tubercle

Origin of the long head of *m. triceps brachii*

References

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Left scapula from the lateral side