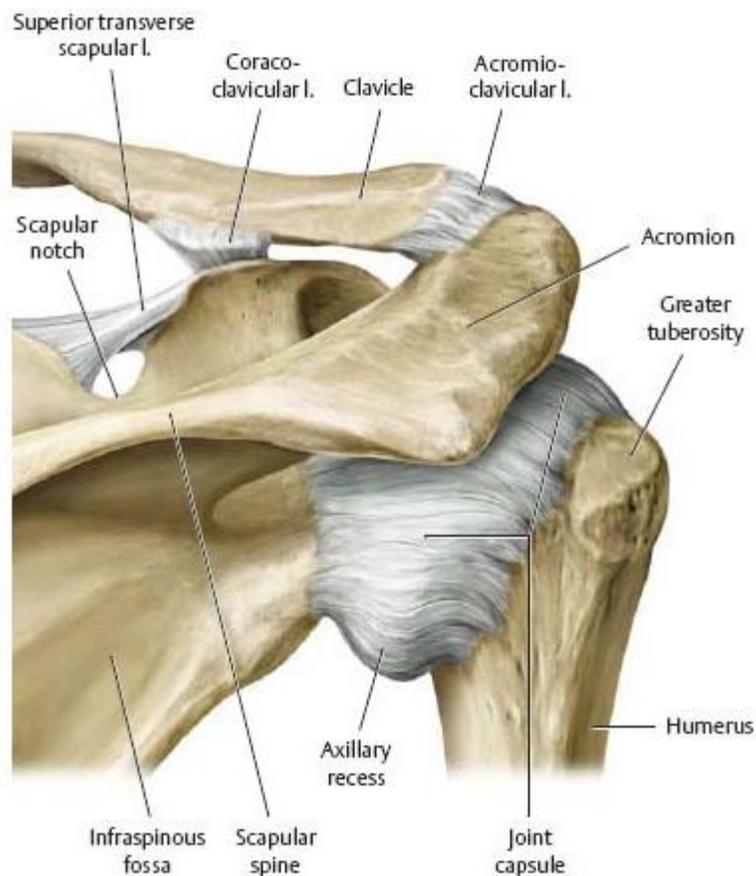


## Bones & Joints of the Shoulder

The bones of the shoulder consist of the **humerus** (the upper arm bone), the **scapula** (the shoulder blade), and the **clavicle** (the collar bone).

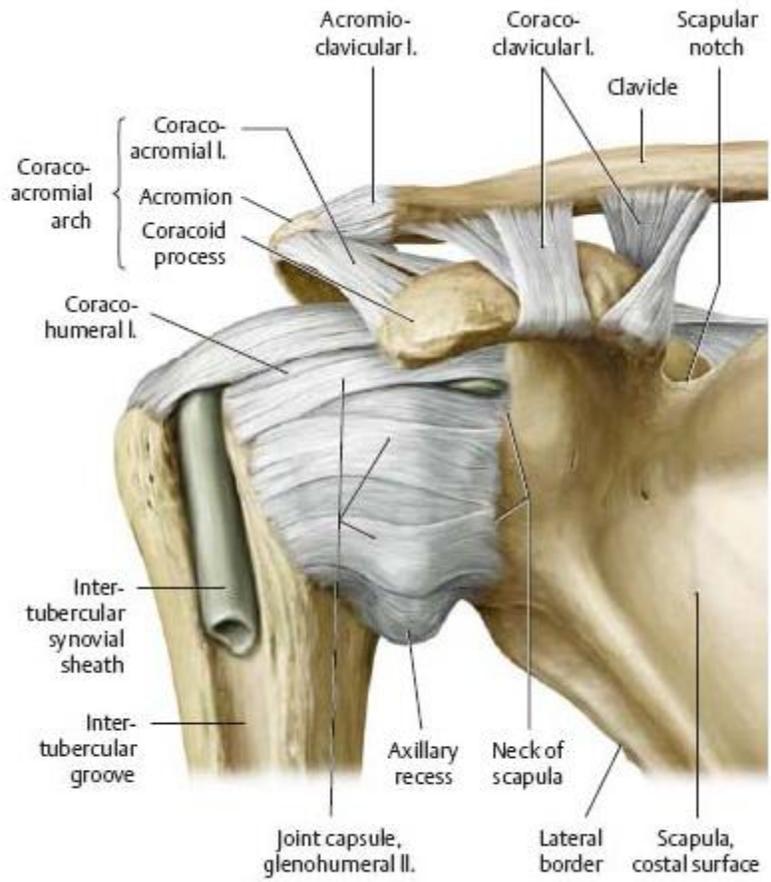
The clavicle is the only bony attachment between the trunk and the upper limb. It forms the front portion of the shoulder girdle and is palpable along its entire length with a gentle S-shaped contour. The clavicle articulates at one end with the **sternum** (chest bone) and with the **acromion** of the scapula at the other. This articulation between the acromial end of the clavicle and the acromion of the scapula forms the roof of the shoulder.

The scapula is a large, flat triangular bone with three processes called the acromion, spine and **coracoid process**. It forms the back portion of the shoulder girdle. The spine (which is located at the back of the scapula) and the acromion can be readily palpated on a patient.



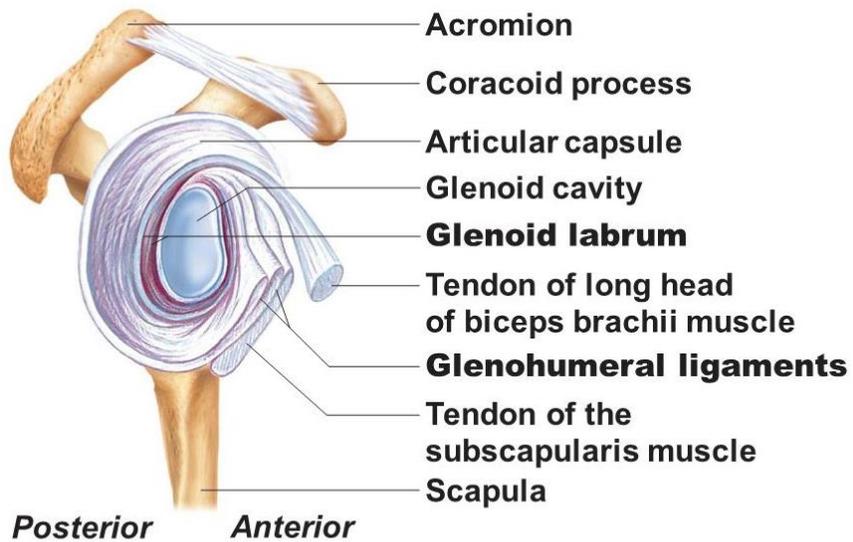
Posterior View

The flat blade of the scapula glides along the back of the chest allowing for extended movement of the arm. The coracoid process is a thick curved structure that projects from the scapula and is the attachment point of ligaments and muscles.



Anterior View

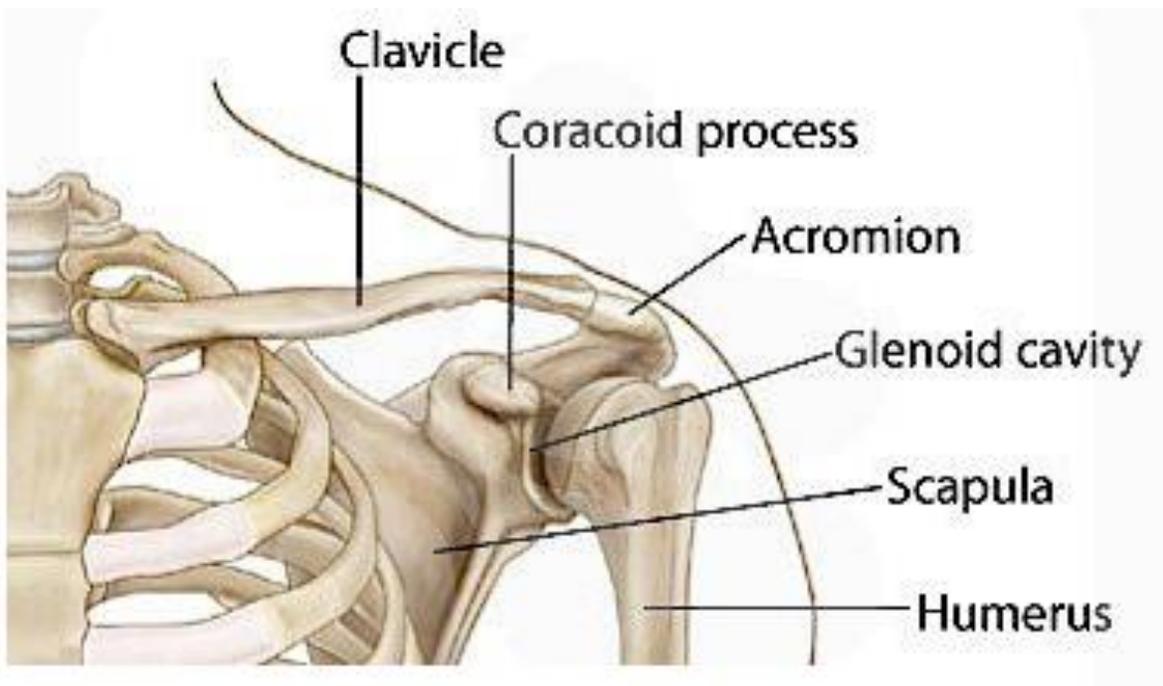
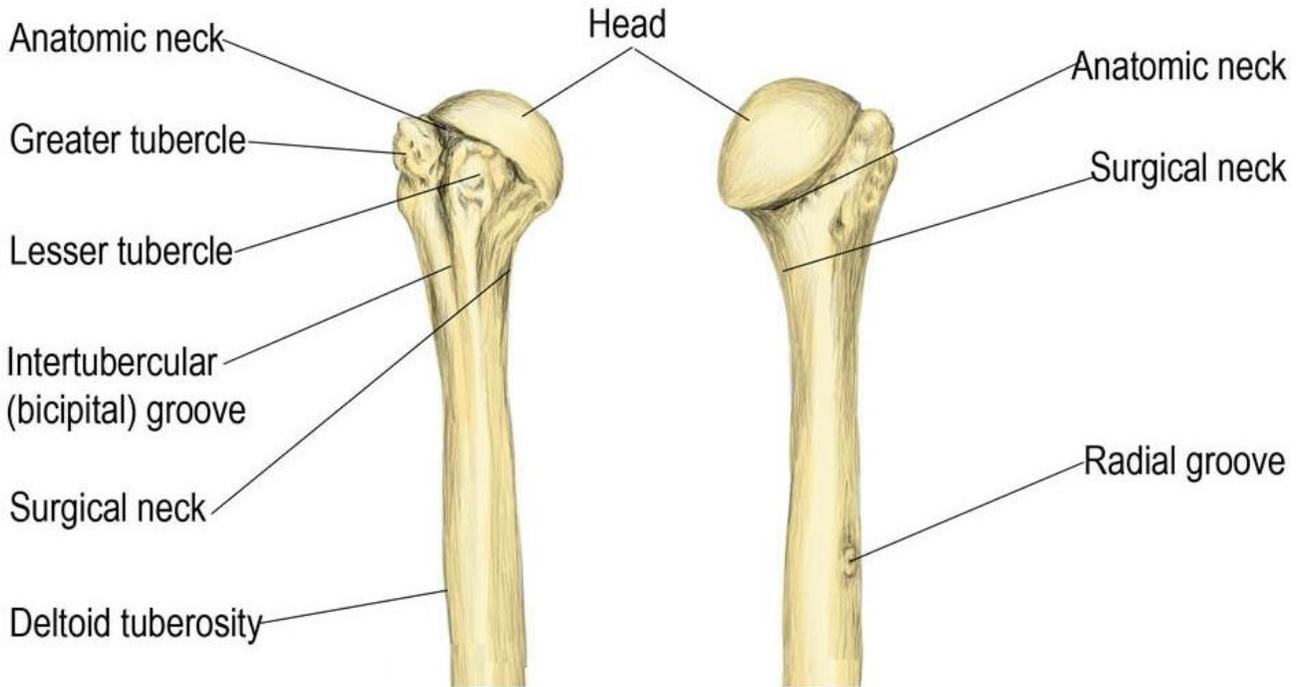
The scapula is also marked by a shallow, somewhat comma-shaped **glenoid cavity**, which articulates with the head of the humerus.



Lateral view of socket of right shoulder joint, humerus removed

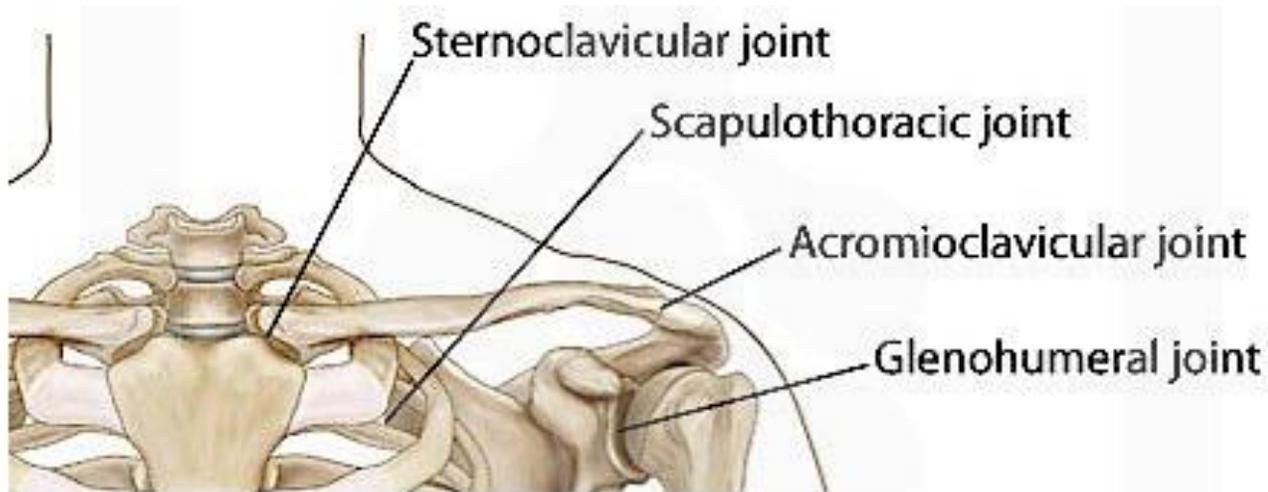
The top end of the humerus consists of the head, the neck, the greater and lesser tubercles, and the shaft. The head is half-spherical in shape and projects into the glenoid cavity. The neck lies between the head and the greater and lesser tubercles. The greater and lesser tubercles are prominent landmarks on the humerus and serve as attachment sites for the rotator cuff muscles.

Anterior View of Humerus      Posterior View of Humerus



There are **four joints** making up the 'shoulder joint':

1. The shoulder joint itself known as the **Glenohumeral joint**, (is a ball and socket articulation between the head of the humerus and the glenoid cavity of the scapula)
2. The **acromioclavicular (AC) joint** (where the clavicle meets the acromion of the scapula)
3. The **sternoclavicular (SC) joint** (where the clavicle meets the chest bone [sternum])
4. The **scapulothoracic joint** (where the scapula meets with the ribs at the back of the chest)



Note how the ball (**head**) of the humerus fits into a shallow socket on the scapula called the **glenoid**. One can see that this ball does not fit into the glenoid cup at all; this allows for the wide range of movement provided by the shoulder, at the cost of skeletal stability. Joint stability is provided instead by the rotator cuff **muscles**, related bony processes and **glenohumeral ligaments**.

