

SWIM SMOOTH **PHYSIO TALK** with Michelle

A BRIEF ANATOMY LESSON

The Shoulder

The **shoulder joint**, known as the **glenohumeral joint**, is a ball and socket joint.

The **ball** is called the **head of the humerus**, which is the long bone located in your upper arm between your elbow and shoulder.

The **socket**, known as the **glenoid cavity** is part of the scapula or **shoulder blade**.

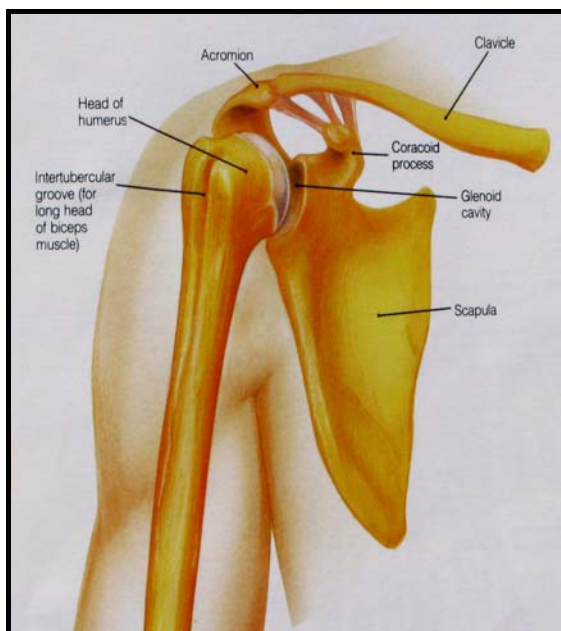


Figure 1. The shoulder joint.

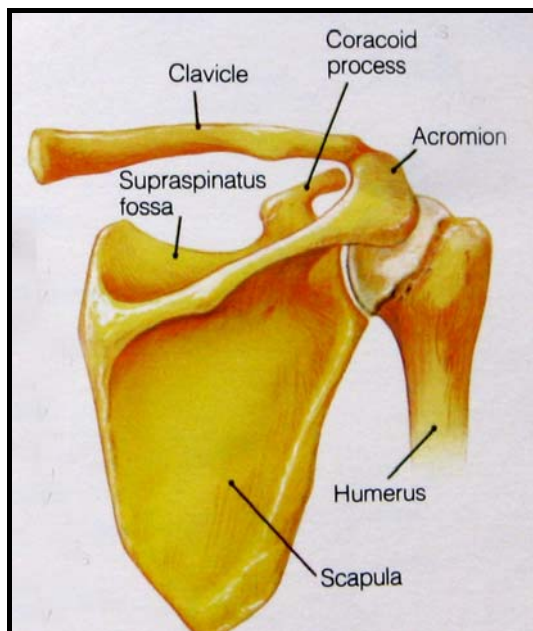


Figure 2. The shoulder joint from behind

There is another small joint which is included in the shoulder joint. This joint is located at the top of the shoulder and is called the **acromioclavicular joint** or the joint between the acromion, which is **part of the shoulder blade** and the clavicle, or **collar bone**.

The discrepancy between the large humeral head and the shallow glenoid cavity allows for a large range of movement but at the expense of stability. The more something moves the less stable it is going to be.

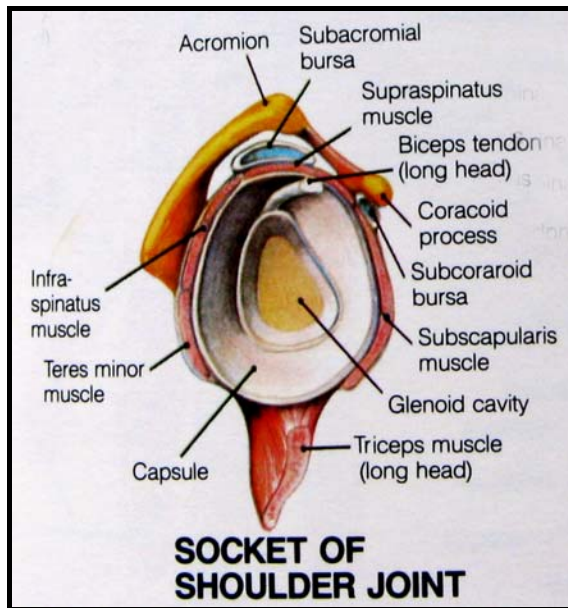


Figure 3. The socket of the shoulder joint.

This is why the rotator cuff muscles (the active component) and the ligaments holding the ball in the socket (the passive component) play such a crucial role in the function of the shoulder.

The ligaments sit deep inside the shoulder and act as tight elastic bands, which hold the ball in the socket.

The rotator cuff muscles are small muscles surrounding the shoulder, which help to hold the ball in the socket as well as assist with some movements of the arm. For example these muscles are especially important when the arm is lifted away from the body because they help to keep the ball in the socket while the arm is moving.

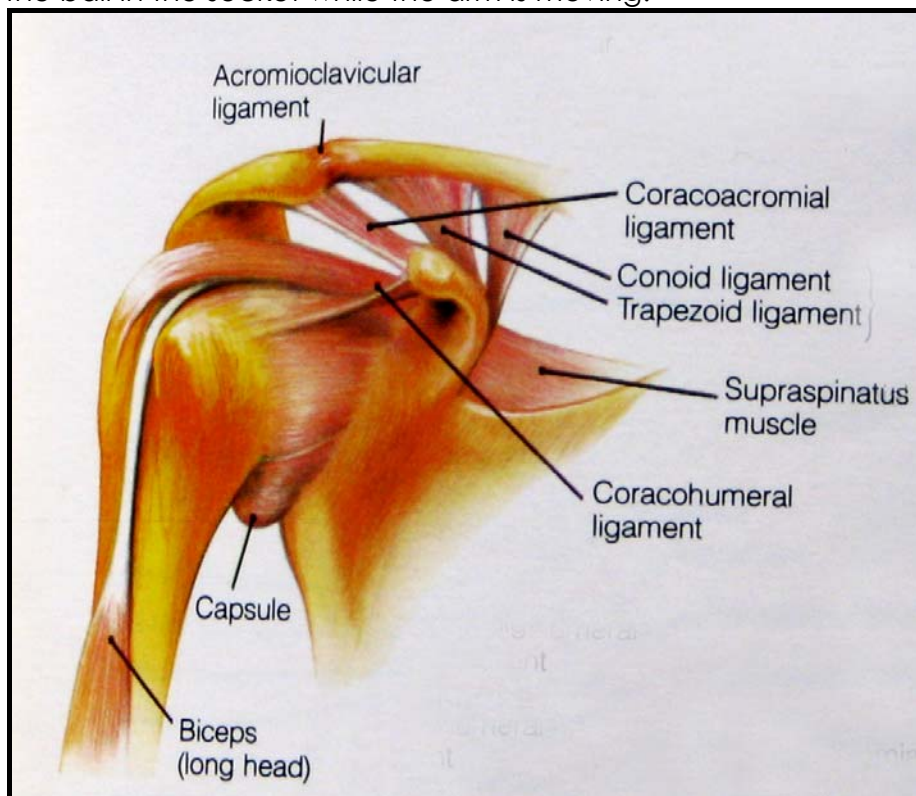


Figure 4. Rotator Cuff Muscles.

The large power muscles surrounding the shoulder, also known as prime movers, are responsible for moving the shoulder joint and can endure larger forces than the small rotator cuff muscles. These muscles include;

- **Deltoids** Located at the front, side and back of the shoulder.
- **Biceps** Located at the front of the arm.
- **Pectoralis Major** Located in the chest area.
- **Latissimus Dorsi and Teres Major** Located at the side below the shoulder.

Finally, the subacromial bursa, which is a fluid filled sac, sits beneath the acromion (part of the shoulder blade) and contributes to the smooth passage of the rotator cuff muscles and top of the humeral head during lifting of the arm.