



Understanding your shoulder

What is the shoulder complex?

The shoulder consists of the clavicle (collarbone), scapula (shoulder blade) and the humerus (upper arm bone). These bones form 4 joints that work together to move your arm.

Just like a chain, if one of these links is weak or has a problem, the entire shoulder joint is affected. Think of the shoulder joint like a tent. A tent needs poles, pegs and guide ropes for the tent to be able to do its job. The poles and ropes together support and stabilize the tent, just like the muscles and ligaments work together to support and stabilize the shoulder joint.

The shoulder (glenohumeral) joint is a ball and socket joint between the head of humerus and the scapula. A potential problem with the shoulder joint is that it has a small and very flat socket, so the bones offer very little structural support.

You can compare the flat socket of the shoulder joint to a golf ball sitting on a golf tee, with the head of humerus being the golf ball, and the socket of the scapula being the golf tee.

The shoulder joint is therefore designed more for movement. This finely controlled movement relies on the delicate balance of the shoulder's capsule, ligaments and muscles. By way of comparison, the hip joint has a much deeper bony socket, which gives the hip more stability so that it can take the weight of the body.

Stability of the shoulder complex

The shoulder joint receives stability and control from muscles surrounding the joint. These muscles (there are 4 of them) are called the rotator cuff

muscles. When evenly balanced they control the slide, glide and roll of the humeral head in its socket to allow painless movement of the arm.

The socket (shoulder blade) must be positioned correctly in order to maintain smooth co-ordinated shoulder movement. Therefore it is also important the muscles that control the shoulder blade are able to control movement of the socket. The muscles that control the scapula are mainly attached to the spine and the scapula. They act to control the movement of the scapula around the back of the rib cage.

Raising your arm out to the side of the body sounds like a simple task. However, there is more than one joint that comes into play during this movement and so it is not as simple as it sounds.

The humerus moves upwards, the scapula rotates upwards and the collarbone rotates backwards for the task to be completed. Timed coordinated movement at all joints must occur, otherwise problems such as wear/tear can occur. When this occurs, pain may arise.

Depending on the level of your injury, you may or may not have all the muscles around the shoulder working. In addition to, muscle support around the shoulder joint, there is also capsular and ligament control. Ligaments are like rubber bands, which tighten up when stretched and therefore help to control (and restrict unwanted) shoulder joint movement.

The capsule surrounds the shoulder joint and is larger and stronger than ligaments, but has a similar function to them. These may be subject to wear and tear and over stretching if the shoulder muscles are not able to function properly.





Not only is it important to maintain flexibility of your muscles surrounding the shoulder joint, but also maintain flexibility of the capsule and ligaments. Stretches and positioning of your arm will assist with maintaining this. The fine control and balance of the muscles surrounding your shoulder is something that your physiotherapist will be able to help you with.

Courtesy: Queensland Government

