

# Understanding the Shoulder

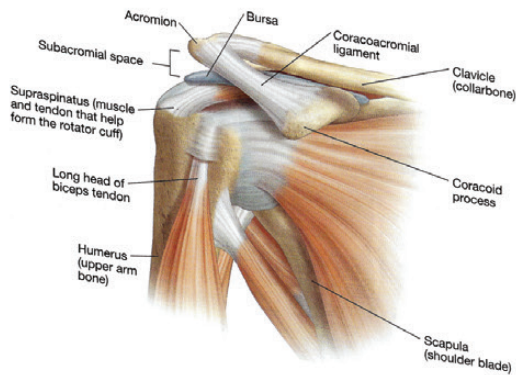
The shoulder is made up of bones, muscles, ligaments, and tendons. They work together so you can reach, lift, and use your arm in comfort. Learning about the parts of the shoulder and joint will help you to understand your shoulder problem.

## The Parts of the Joint

The shoulder joint is where the humerus (upper arm bone) meets the scapula (shoulder blade). Muscles and ligaments help make up the joint. They attach to the shoulder blade and upper arm bone. At the top of the shoulder blade are two bony knobs called the acromion and coracoid process.

## The Subacromial Space

The subacromial space is between the top of the humerus and the acromion. This space is filled with tendons and muscles. This space also contains the bursa. The bursa is a thin, slippery sac that cushions the tendons so the joint moves smoothly. When you raise your arm, the subacromial space compresses. When you lower your arm, the space opens up again.



## How Impingement Begins

Impingement occurs when the subacromial space is too narrow. The bones do not move easily. This may be due to inflammation (irritation) of the bursa. The parts of the shoulder take up more room and make the space smaller. Shoulder bones may also add to impingement. Shoulders may also add to impingement over time. So you may not notice a problem until it causes pain.

## Overuse and Inflammation

Constant shoulder use can irritate the bursa and tendons. This causes more blood to the irritated areas, causing swelling. As a result, two problems can develop:

- **Bursitis** is inflammation of the bursa. The bursa fills up with fluid, limiting the joint space.
- **Tendinitis** is inflammation of the tendons. Swollen tendons take up more space, making the joint space smaller. They also cause pain when muscles contract.

## Bone Shape and Condition

The acromion may be naturally flat or hooked. A hooked acromion makes the acromial space smaller than normal. Shoulder problems are more likely. Bone spurs (growth on the bone) can also narrow the space.

## Other Causes

Your shoulder health may also be affected by poor posture and other conditions.

## Finding Relief

If impingement remains untreated, it can cause more damage to the rotator cuff tendons. Rest and treating your shoulder so it can heal.

Gonzalo Barinaga, MD

# SHOULDER IMPINGEMENT

Treatment to Restore Strength and Movement

