

Shoulder Arthritis

WHAT IS SHOULDER ARTHRITIS?

Shoulder (glenohumeral) arthritis is most often due to osteoarthritis which occurs from “wear and tear” of the shoulder. This results in loss of cartilage which is the smooth surface covering the ball (humerus) and socket (glenoid). This loss of cartilage eventually leads to a “bone on bone” shoulder joint (Figure 1 and 2) which may cause significant pain and dysfunction. Additionally, osteoarthritis results in the formation of osteophytes (bone spurs) and inflammation of the surrounding tissues. These bone spurs and tissue inflammation contribute to increased pain and decreased motion of the shoulder.



Figure 1: Non-arthritic shoulder with a maintained joint space.

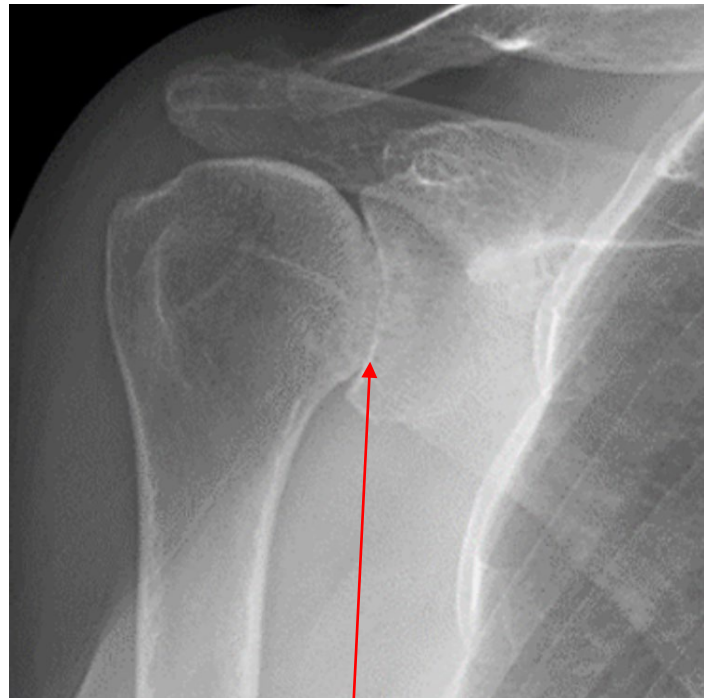


Figure 2: Arthritic shoulder with complete loss of joint space (“bone on bone”).

Rotator cuff arthropathy is another form of shoulder arthritis that is a result of chronic rotator cuff tears. When a person has a chronic rotator cuff tear, the ball loses its ability to be stabilized on the socket and will tend to translate upward (Figure 3). This can cause the top of the socket (glenoid) and acromion (bone above the ball) to erode. This can make moving the arm very painful and difficult.



Figure 3: Shoulder with rotator cuff deficiency showing superior migration of the humeral head with erosion into the acromion and superior erosion of the socket.

Other common causes of shoulder arthritis and degeneration include rheumatoid arthritis, post-traumatic arthritis due to a previous injury, or avascular necrosis of the humeral head (collapse of the ball due to disruption of blood supply).

WHAT ARE COMMON SYMPTOMS OF SHOULDER ARTHRITIS?

- Pain that progressively worsens and is aggravated by movement and activity
- Decreased shoulder motion
- Cracking, grinding, and snapping sounds (crepitus)
- Decreased shoulder strength
- Night pain and difficulty sleeping

WHAT ARE NON-SURGICAL TREATMENT OPTIONS FOR SHOULDER ARTHRITIS?

Common non-surgical treatment options for shoulder arthritis include activity modifications, home exercise and stretching programs, physical therapy (PT), over-the-counter or prescription anti-inflammatory medications, and injections.

In our experience, patients who regularly stretch and maintain good shoulder motion tolerate shoulder arthritis the best. Because of this, home exercise programs and PT should focus on regular stretching with occasional, light strengthening.

Over-the-counter medications such as Tylenol or NSAIDs (Aleve and Ibuprofen) may also help decrease pain and inflammation. There are some prescription strength anti-inflammatory medications (Celebrex) that Dr. Schuette may also discuss with you.

Injections, most commonly corticosteroid (cortisone) injections, can be used sparingly for symptomatic control. While corticosteroids will not cure your shoulder arthritis, they can help alleviate symptoms. The duration of symptomatic relief varies significantly among patients, with relief most often ranging from a few weeks to months. In general, we try to limit the use of corticosteroid injections as their efficacy will decrease over time and repeat injections may increase a patient's risk of infection following future shoulder replacement surgery.¹

Platelet rich plasma (PRP) injections are another potential treatment for shoulder arthritis; however, this treatment option is currently not covered by insurance. PRP involves using a patient's own blood to deliver a high level of growth factors and anti-inflammatory factors into the shoulder.² While research on the clinical outcomes of PRP for shoulder arthritis are limited, it is often explored as an alternative therapy in patients looking to avoid surgery.

CAN ARTHROSCOPIC (SCOPE) SURGERY TREAT MY SHOULDER ARTHRITIS?

In general, arthroscopic surgery is not recommended for most patients with shoulder arthritis; however, there is evidence that it may provide modest benefits in select patients.³ A shoulder arthroscopy for arthritis typically involves releasing stiff tissue to improve motion, removing loose bodies to decrease pain and locking, and addressing other pain generators such as the biceps tendon. Dr. Schuette will discuss whether he believes you could benefit from a shoulder arthroscopy.

WHAT ARE THE SHOULDER REPLACEMENT OPTIONS FOR MY SHOULDER ARTHRITIS?

There are three different types of shoulder replacements that Dr. Schuette regularly performs for shoulder arthritis. These include a reverse total shoulder replacement, an anatomic total shoulder replacement, and a pyrocarbon partial shoulder replacement. Dr. Schuette will discuss which option may be best for you based on several different factors. Please see additional information packets for each procedure.

REFERENCES

1. Schoell K, Crabb R, Simpson E, Deshpande V, Gardner V, Quilligan E, Parvaresh K, Kassam H. Preoperative corticosteroid injections are associated with a higher periprosthetic infection rate following primary total shoulder arthroplasty: A systematic review and meta-analysis. *J Shoulder Elbow Surg.* 2024 Jul 11:S1058- 2746(24)00478-6.
2. Millet PJ, Horan MP, Pennock AT, Rios D. Comprehensive arthroscopic management (CAM) procedure: clinical results of a joint-preserving arthroscopic treatment for young, active patients with advanced osteoarthritis. *Arthroscopy.* 2013 Mar;29(3):440-448.
3. Shapiro SA, Piuizzi NS, Rossi LA. Glenohumeral osteoarthritis: the role for orthobiologic therapies. *JBJS Rev.* 2020 Feb;8(2):e0075-e0075.