

Dr. Myeroff's Shoulder Arthritis Information Sheet

What is shoulder arthritis?

- **Osteoarthritis** – this is 'wear and tear' type arthritis from loss of cartilage on the humeral head (ball) and glenoid (socket) (figure 1). It results from a combination of heavy activity level, previous injuries, genetics, and bad luck. Typically, cartilage has the friction of ice on ice. Advanced arthritis is closer to sandpaper on sandpaper. Typically, patients complain of increasing aching pain and loss of motion in the shoulder. It tends to progress over time to the point that sleep and activities can be profoundly affected.
- **Inflammatory arthropathy** – This is a type of arthritis from immune conditions (like rheumatoid arthritis, lupus, psoriatic arthritis). The inflammation in the joint can deteriorate the tissues, cartilage and the rotator cuff.
- **Rotator Cuff Tear Arthropathy** –In the case of a longstanding large rotator cuff tear, the shoulder does not function properly. This can result in a unique combination of pain (arthritis), and weakness (called pseudoparalysis). Some patients do well despite this condition, while others are quite unsatisfied by pain, weakness and dysfunction.

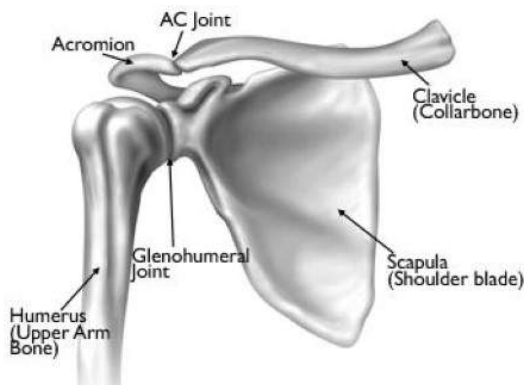


Figure 1 Normal Shoulder Bony Anatomy.
<https://orthoinfo.aaos.org/en/diseases--conditions/arthritis-of-the-shoulder>

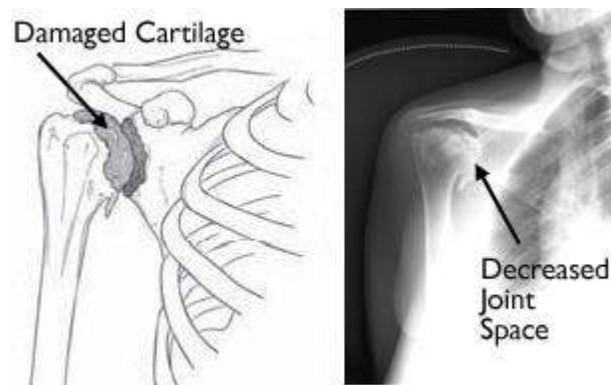


Figure 2(Left) An illustration of damaged cartilage in the glenohumeral joint. (Right) This x-ray of the shoulder shows osteoarthritis and decreased joint space (arrow).

How is shoulder arthritis diagnosed?

- The first thing I do is listen to your story, which usually includes a period of increasing pain, stiffness and weakness.
- Exam: I will examine your shoulder carefully looking at your strength, motion, site of pain. This is where I rule out any additional source of your pain.
- Imaging: If you haven't had them recently, I will obtain X-rays.
 - In osteoarthritis, the shoulder joint space will be narrowed from the loss of cartilage (bone-on-bone), and osteophytes (bone spurs). These spurs are your body's attempt to decrease shoulder motion, theoretically limiting your pain (Figure 2).
 - In rotator cuff tear arthropathy, the ball is unusually high compared to the socket. This tells me the rotator cuff has not been functional for a long time. In more advanced stages, some patients also develop a similar cartilage loss and spurs found in osteoarthritis.

What are your treatment options?

- Since osteoarthritis causes progressive pain and stiffness, I see no benefit to physical therapy. It will likely increase your pain and waste your time and money.
 - Select patients with rotator cuff tear arthropathy may benefit from therapy.
- Ice, anti-inflammatories and activity modification are the first line treatment.
 - If tolerated by your kidneys and stomach, I recommend 600mg Ibuprofen up to three times per day as needed.
 - Since this is a progressive process, it is in your interest to work on ways to limit future wear and tear on your shoulder by modifying your hobbies, work, exercise, and activities as much as possible. However, my goal is to keep you active!
- Steroid Injections
 - I am happy to provide steroid injections in clinic. If it is more convenient, I will place an order for injections to be performed by one of my colleagues with image guidance (slightly more accurate, may be more convenient).
 - I sterilize the skin and use a cold spray that can decrease the pain.
 - I use 2 medications
 - Marcaine – A local anesthetic that will numb the inside of the shoulder for up to 8 hours. Make sure not to “over-do it” that day.
 - Depomedrol – A steroid (acts like a high dose ibuprofen inside your joint) that will start working about 2 days later.
 - Hence, a 2-day gap where your pain may be worse.
 - Injections can provide anywhere from 0-3 months of pain relief. Repeat injections can be performed depending on how beneficial they are.
 - Please keep a log for your next appointment:
 - How long did the injection help? What % relief did you have?
 - These can be repeated up to 4 times per year.

- What are the risks?
 - Injections can buy you months of pain relief but do tend to be less and less helpful over time.
 - While it is slightly uncomfortable, I use a thin needle and most of my patients find it quite tolerable.
 - If you have diabetes, the steroid can increase your blood sugars for several days, you will need to monitor them closely.
 - There is roughly a 1:10,000 risk of infection
 - Injections are forbidden within 3 months of a shoulder replacement due to the risk of a post-operative infection.
- **Shoulder Replacement**
 - When all other options fail, shoulder replacement offers the most predictable and long-lasting improvement in pain, range of motion and function. This has been shown in many studies.
 - Shoulder replacement for arthritis is never urgent or mandatory. Some patients can put it off for years or even forever while others are simply too painful and wish to return to their work and activities.
 - There are some varieties (posterior glenoid wear) that do progress more quickly and may best be treated with earlier rather than later surgery.
 - If you have this variety, I will let you know. I will see you more frequently and obtain X-rays to watch for bone loss over time.
 - Indications for replacement:
 - End stage shoulder arthritis where:
 - Non-operative treatments are no longer worthwhile
 - You have more bad days than good
 - You are unable to perform the activities you enjoy in comfort
 - Age
 - Ideally patients can reach the age of 50 before this surgery is needed.
 - Good result can be obtained in younger patients, however, younger and more active patients do wear out the parts more quickly.
 - **What is a Total Shoulder Arthroplasty?**
 - Like a total knee or hip, I replace your shoulder with metal and plastic.
 - Based on your condition, there are 2 types of implants that I frequently use:
 - 1. Anatomic Total Shoulder Arthroplasty**
 - Used for osteoarthritis
 - Replaces the ball with metal and the socket with plastic to recreate your normal anatomy (hence “anatomic”) (Figure 3a)

- Requires the detachment and reattachment of one of your rotator cuffs (the subscapularis) which needs to be protected post-operatively with activity restrictions.
 - You will not be allowed to lift more than a coffee cup for 6 weeks
 - You will be limited to passive shoulder range of motion for the first 6 weeks
 - Gravity eliminated supine forward elevation 0-140 degrees, and external rotation 0-30 degrees with a stick.
- Risks – While each of the below risks is low (around 1%), it is important you know they are possible albeit unlikely. The overall risk of complications (large and small) is 10%. In decreasing order of frequency, the risks include:
 - Implants loosening or wearing out, instability(dislocation), rotator cuff tear, bone fracture, infection, blood loss, blood clot, neurovascular injury, medical complications.
 - You have a 20% risk of needing another surgery within the next 20 years.
 - This is why we prefer to wait as long as possible.

2. Reverse Total Shoulder Arthroplasty

- This implant is used when the rotator cuff is not functional.
 - massive irreparable rotator cuff tear, rotator cuff tear arthropathy, inflammatory arthropathy, proximal humerus fractures
- Your socket is replaced with a ball, and your ball is replaced with a socket (hence “reverse”) (Figure 3b). This allows your deltoid (the biggest, outer muscle, of the shoulder) to do more of the work!
- The reverse shoulder arthroplasty was FDA approved in 2003. While long term data is limited, it has quickly become the most common type of shoulder replacement worldwide due to such predictable results even in severe cases.
- Risks (in decreasing order of frequency)
 - Instability (dislocation), implant loosening, nerve or vascular injury, bone fracture, blood loss or blood clot, infection.
 - Overall you have a 16% risk of a complications
 - You have a 7% risk of needing another surgery within the next 10 years.

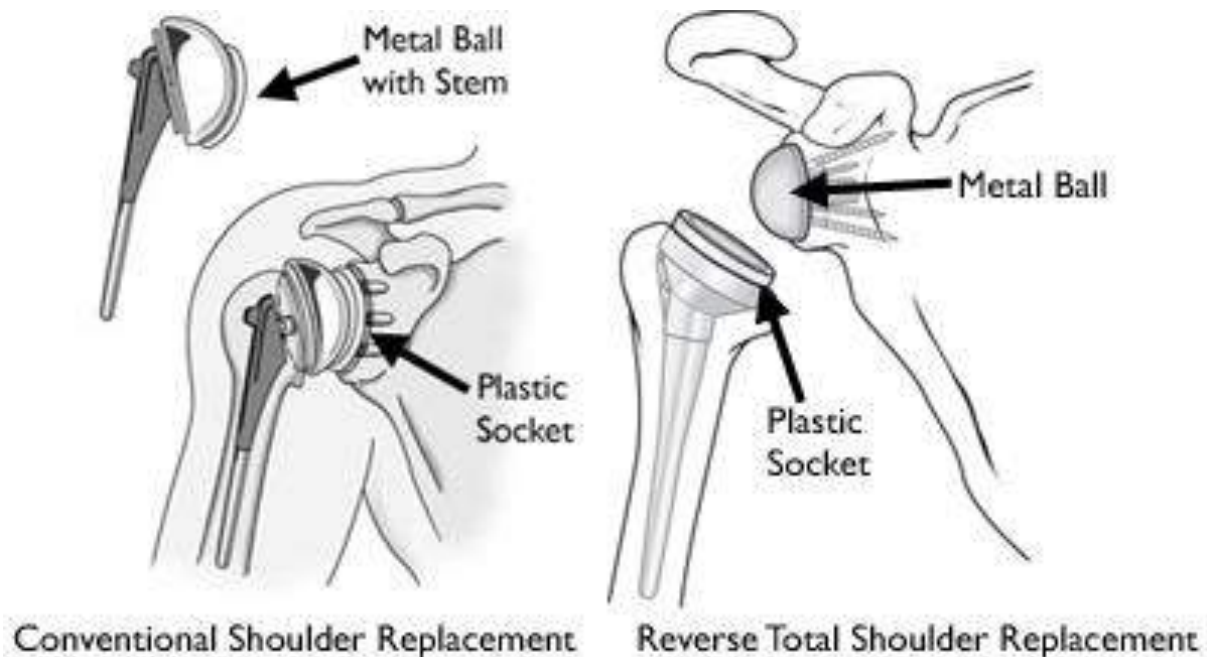


Figure 3(Left) A conventional total shoulder replacement (arthroplasty) mimics the normal anatomy of the shoulder. (Right) In a reverse total shoulder replacement, the plastic cup inserts on the humerus, and the metal ball screws into the shoulder socket. Available: <https://orthoinfo.aaos.org/en/diseases--conditions/arthritis-of-the-shoulder>

- After Surgery
 - Either done outpatient or a 1-night hospital stay
 - 0-6 weeks: You will wear your sling full time except for basic therapy. You can return to desk work.
 - Formal outpatient physical therapy will start on the day of your first post-operative visit in clinic.
 - 6-12 weeks: Your sling is removed, therapy increases, you can drive if I deem it safe. You can return to 'light duty'.
 - 3 months: You will begin strengthening, you will begin full duty work when you are cleared by your therapist as being safe.

Want More information?

- Please visit:
 - twincitiesshoulderandelbow.com
 - <https://orthoinfo.aaos.org/en/diseases--conditions/arthritis-of-the-shoulder>
- Regions Hospital / Health Partners Specialty Center
 - Clinical questions: 651-254-8300 option 2
 - To schedule appointments: 651-254-8300 option 1
 - To schedule surgery: 651-254-8399 or 651-254-8338
 - Fax employer or insurance related paperwork ASAP to 651-254-8127.
- TRIA Orthopaedic Center
 - Clinical questions: 952-977-3301
 - To schedule an appointment: 952-831-8742
 - To schedule surgery: 952-977-3414
 - Fax employer or insurance related paperwork ASAP to 952-977-3459.