

Latest Treatments for Arthritic Shoulders

Meredith Mayo, MD

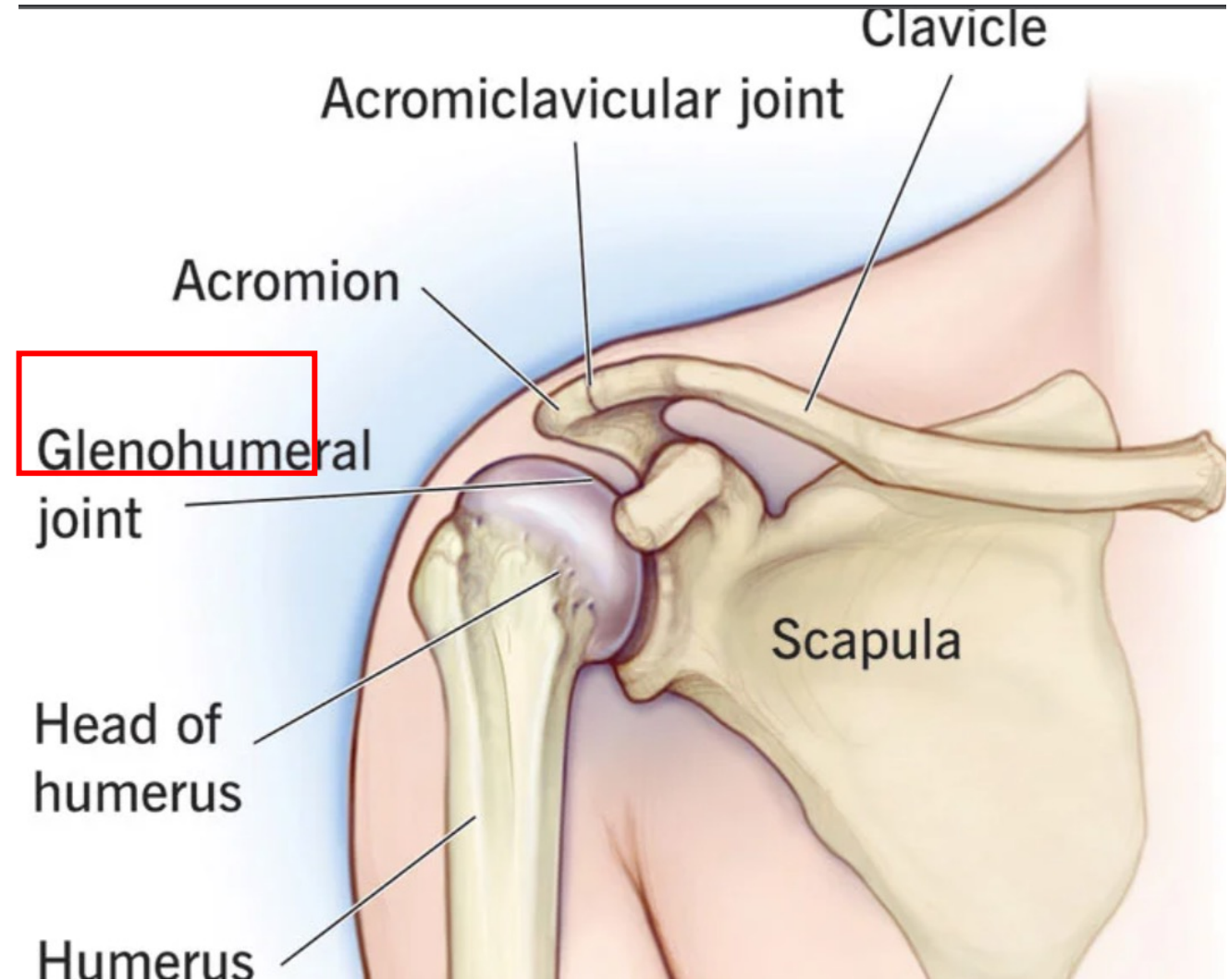
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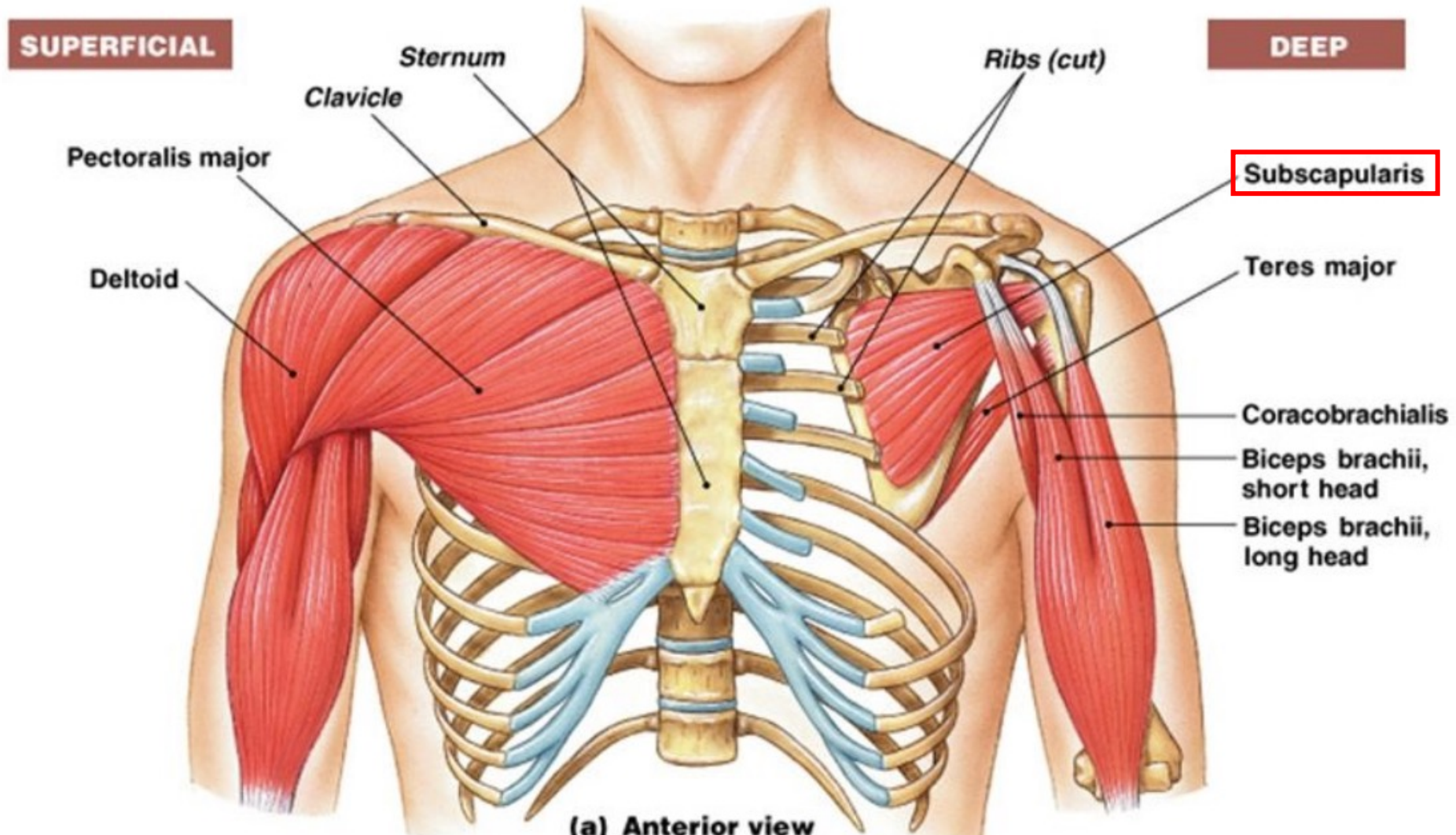
- **Relevant Shoulder Anatomy**
 - Glenohumeral Joint
 - Surrounding Musculature
- **What is Arthritis?**
- **How Does Arthritis Impact the Shoulder?**
- **Conservative Treatment**
- **Procedural Options**
 - Comprehensive Arthroscopic Management
 - Shoulder Joint Sensory Nerve Ablation
- **Total Shoulder Replacement**
 - Anatomic Total Shoulder
 - Reverse Total Shoulder

Shoulder Joint Anatomy

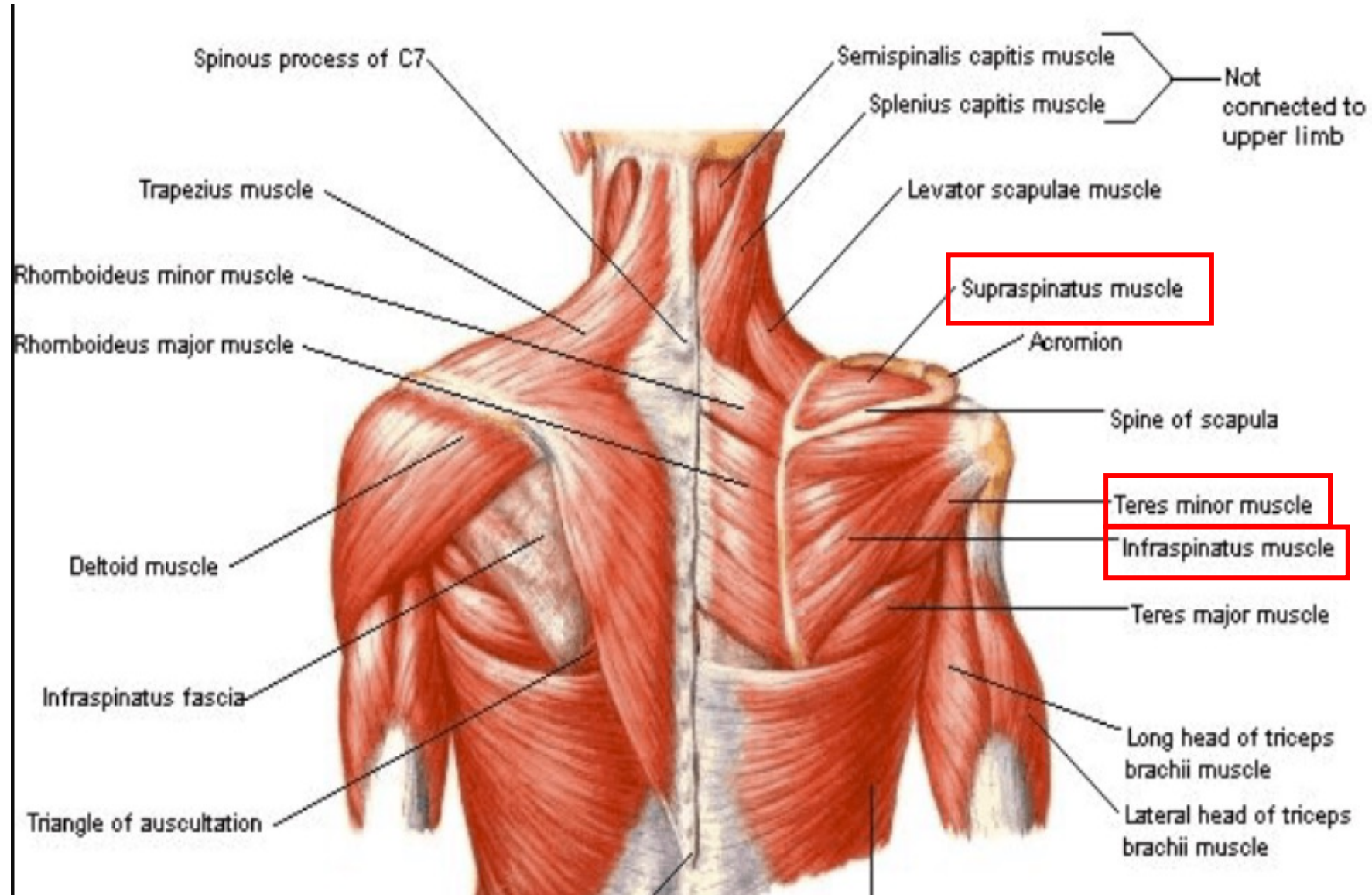
- Ball and socket joint
 - Humeral head
 - Glenoid
- Most mobile joint in body
- Very important surrounding musculature



Shoulder Muscle Anatomy: Front (aka Anterior)

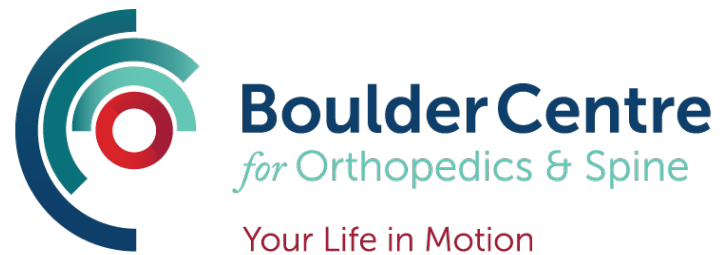


Shoulder Muscle Anatomy: Back (aka Posterior)

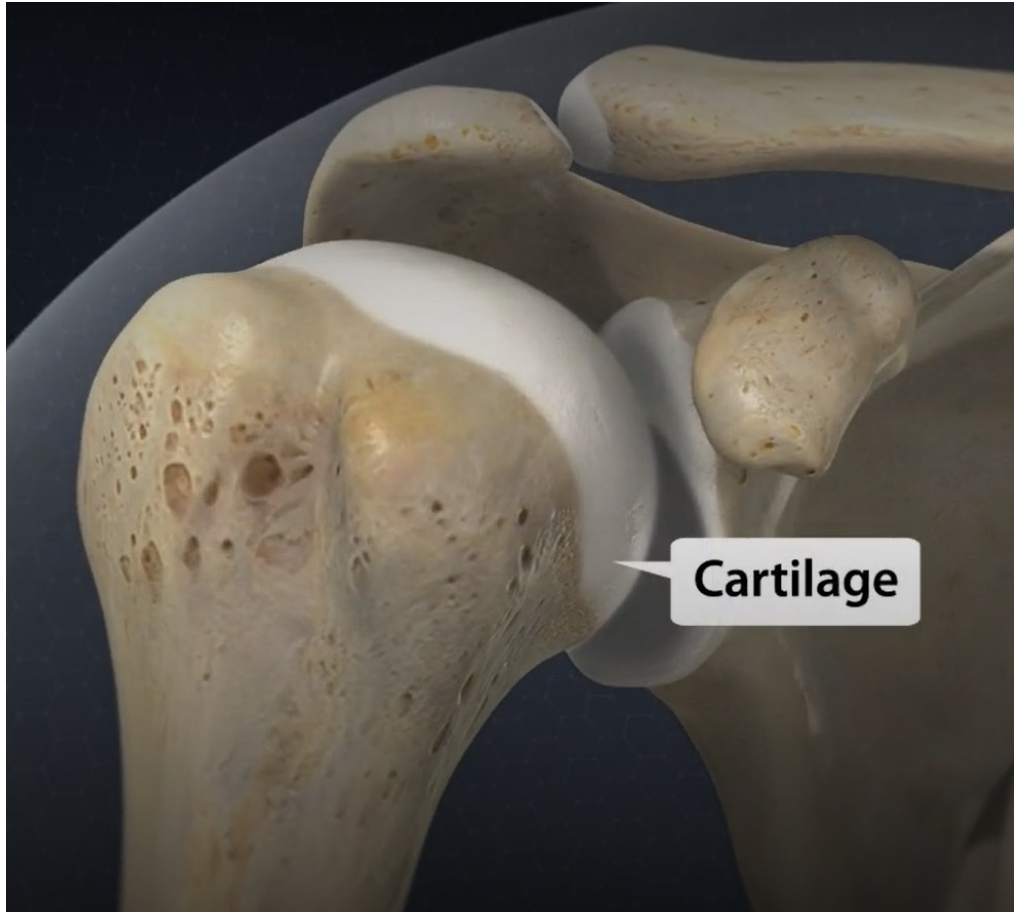


Part I

What is Arthritis?



What is Arthritis?



- Breakdown of normal joint lining (cartilage) resulting in abnormal force transfer across bones

Primary Osteoarthritis

- Wear and tear arthritis

Post-Traumatic Arthritis

- Following a dislocation or broken arm

Inflammatory Arthritis

- Rheumatoid arthritis, gout, autoimmune diseases

Avascular Necrosis

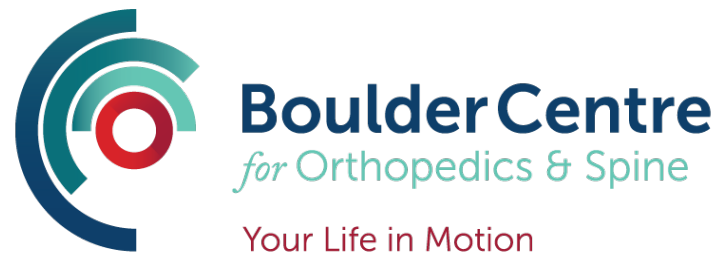
- Loss of blood flow to the top of the humerus

Rotator Cuff Arthropathy

- Specific wear pattern found in chronic rotator cuff failure

Part II

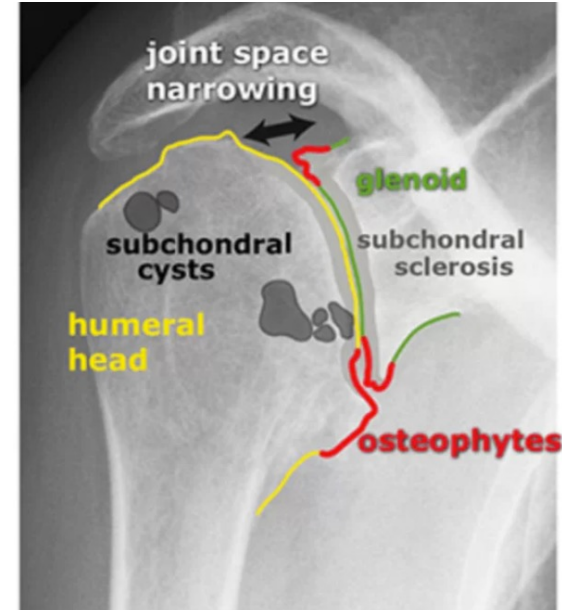
How Does Arthritis Impact the Shoulder?



Measuring Shoulder Arthritis

- **Severity:**

- Joint space narrowing
- Osteophytes (bone spur)
- Sclerosis (hardening of bone)
- Cysts



- **Deformity:**

- Glenoid (socket)



- Proximal migration



History of Symptoms:

- Deep, constant shoulder pain
- Night pain
- Loss of range of motion

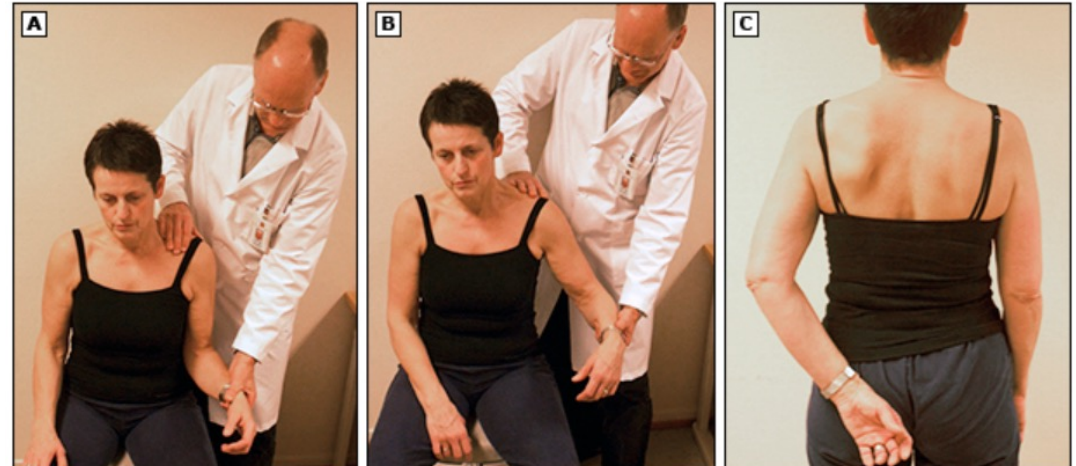


Pattern of Symptoms:

- Slow onset
- Related to overuse OR profession
- Activity dependent
- Development after prior injury

Physical Exam:

- Loss of range of motion
- Often normal strength
- Compensatory pain along scapula (shoulder blade)



X-Ray Findings:

- Loss of joint space, bone spurs, deformity

Unique presentation!!

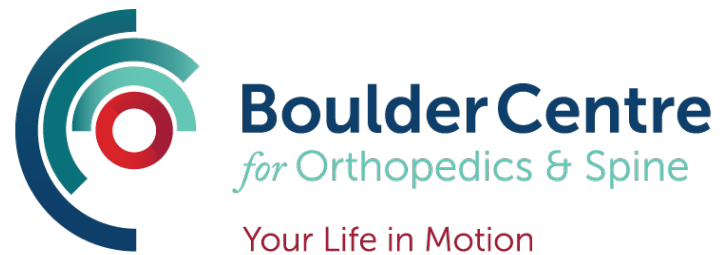
Exam:

- Motion limited in all planes
 - True inability to move arm
- Muscular wasting
- Bony prominence



Part III

Conservative Treatment



Physical Therapy:

- *Best for mild to moderate arthritis*
- Goals:
 - Improve range of motion
 - Decrease pain/ dysfunction of scapular muscles
 - Optimize strength



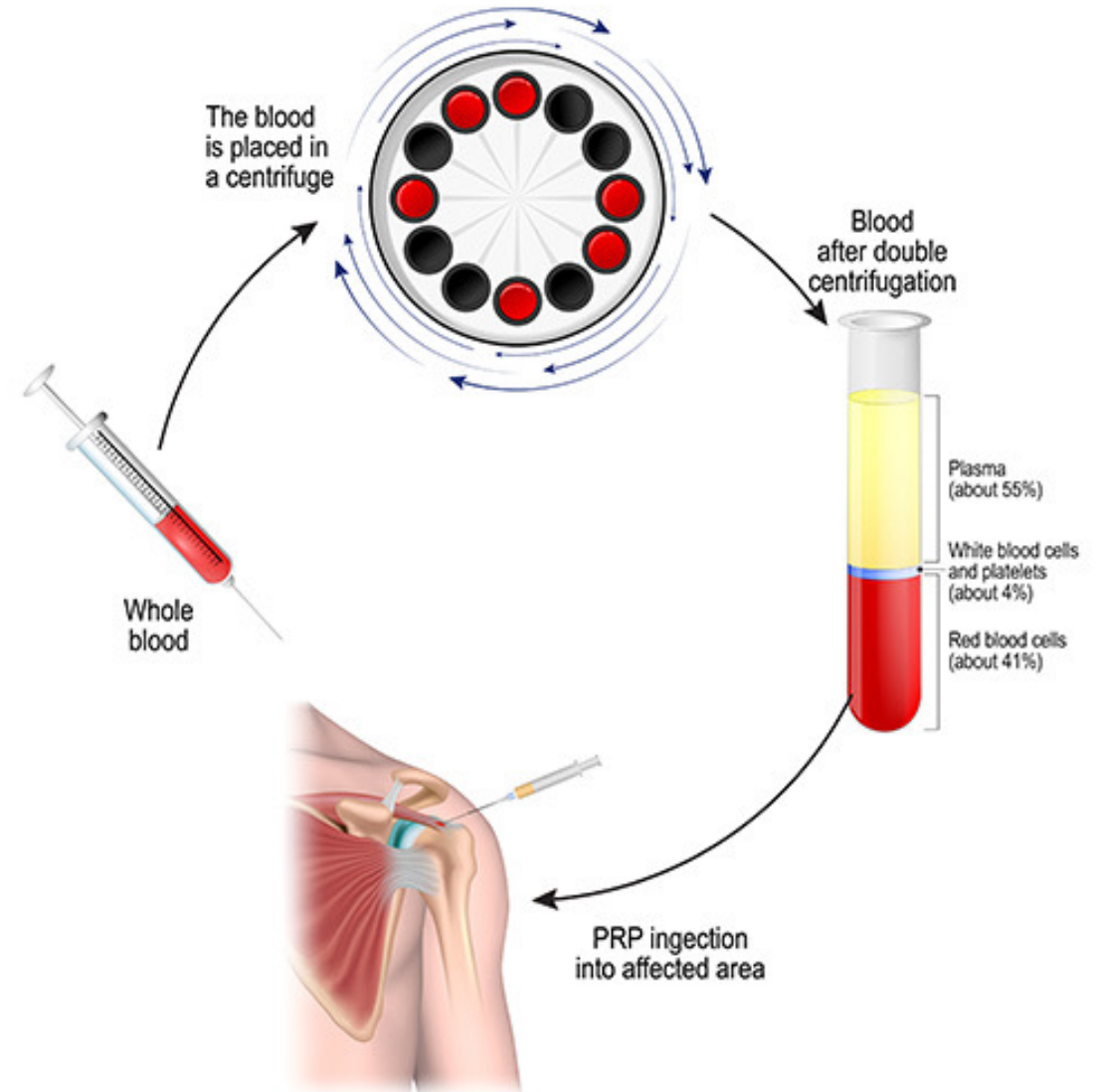
Medications:

- *Best for mild to moderate arthritis*
- Goals
 - Decrease inflammatory pain
 - Non-Steroidal Anti-Inflammatory
 - Over-the-counter and/or prescription
 - Improve sleep
 - Muscle relaxant



Injections:

- *Potentially beneficial for arthritis of all severities*
- Corticosteroid
 - Anti-inflammatory
- Hyaluronic Acid
 - Mechanical lubricant
- Platelet Rich Plasma
 - Regenerative biologic

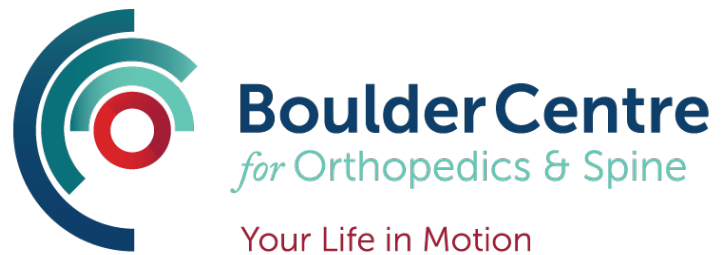


“When Do I Need to Do More?”

- *Persistent pain without improvement from conservative therapy*
- Decline in function
 - Worsening motion
 - Worsening sleep due to night pain
 - Inability to perform daily tasks

Part IV

Procedural Options



CAM Procedure: Comprehensive Arthroscopic Management



A minimally invasive, arthroscopic procedure to address mechanical and inflammatory pain produced from arthritis.

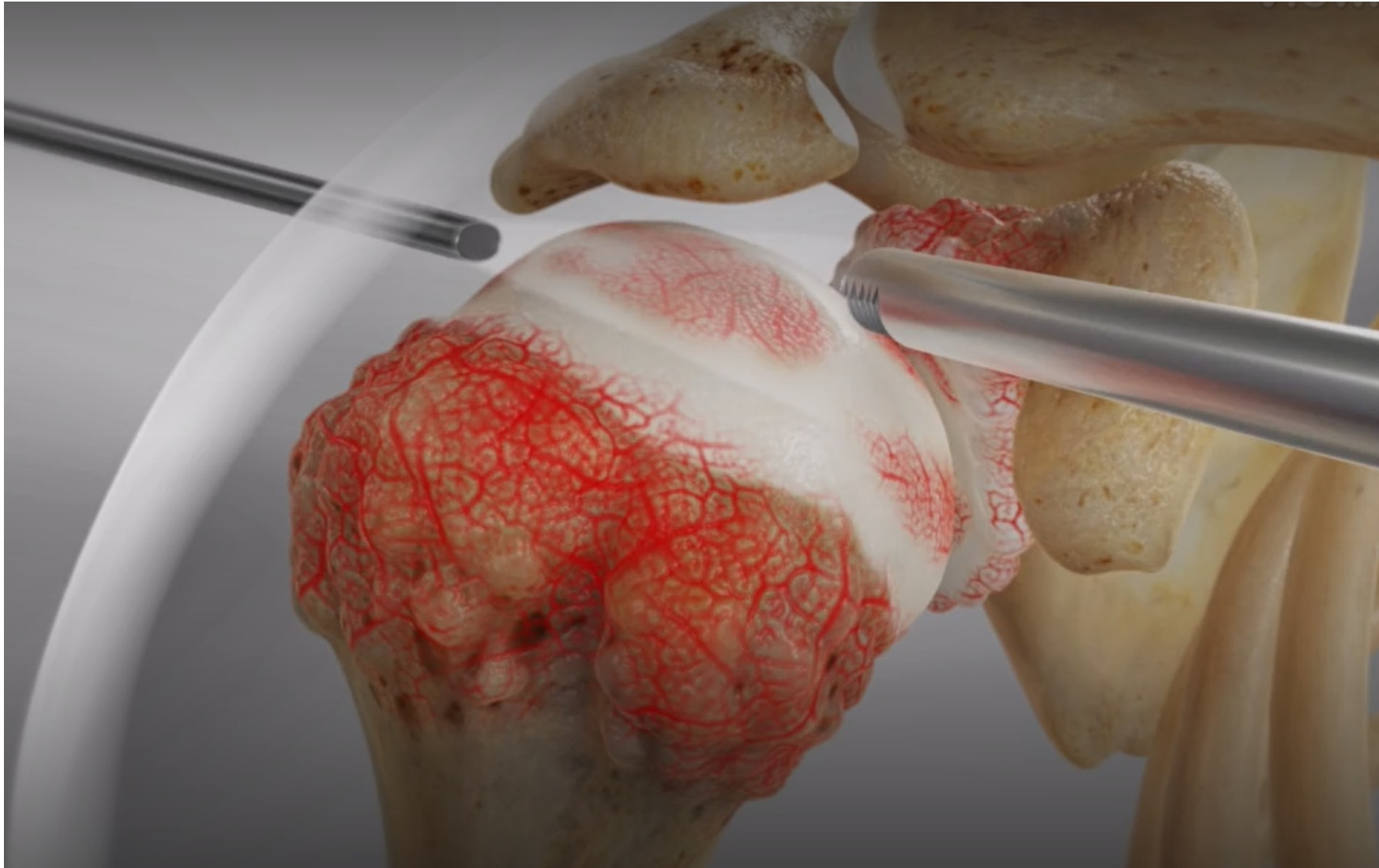
“What does this surgery do?”

- Removes inflammatory tissue, loose pieces of bone or cartilage, some bone spur formation
- Releases the joint capsule and nerve pressure
- Can address bicep tendon pain

“What are the goals?”

- Prevent the need for joint replacement for up to five years
- Provide young patients improved function
- Surgical option with minimal downtime

CAM Procedure



Post-operative course:

- Sling as needed
- Range of motion and activity as tolerated
- Physical Therapy beginning two weeks after surgery
- Full recovery ~ 3-6 months

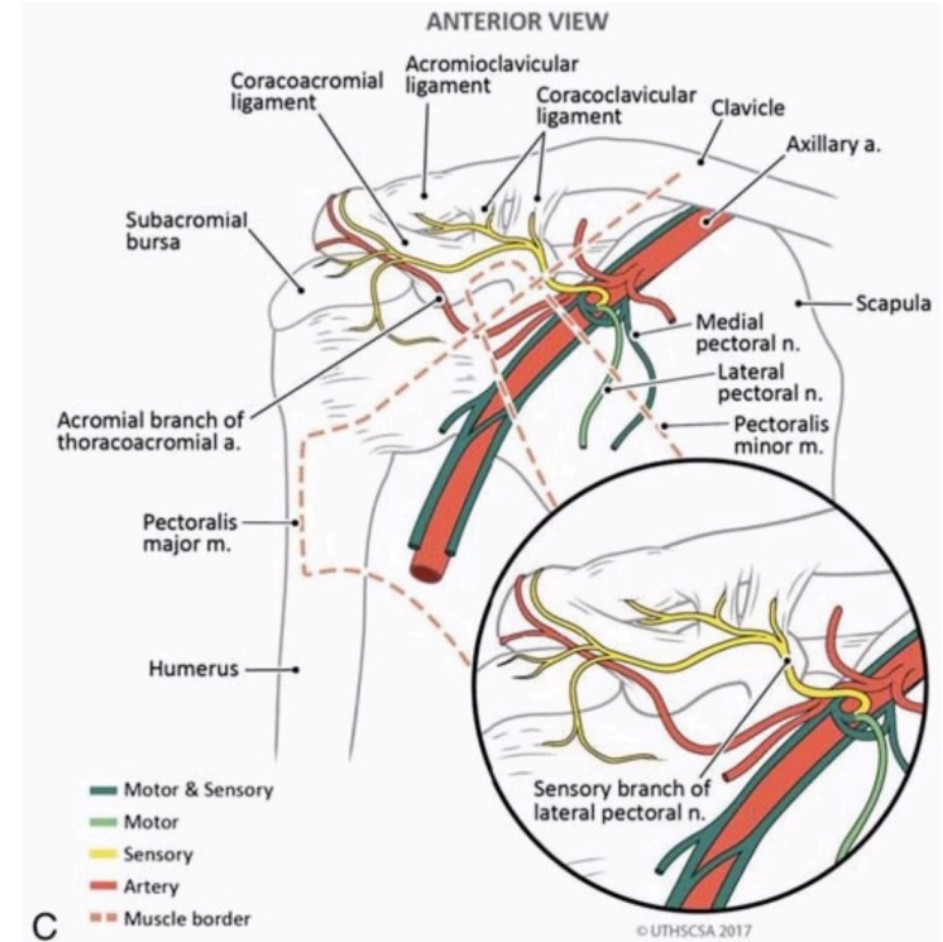


“What is this procedure?”

It includes ablating, or stopping, the sensory nerve branches of the shoulder joint from sending pain signals to your brain. The primary goal is to reduce pain to allow improved function.

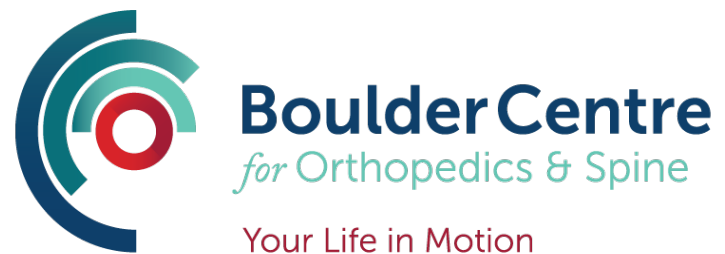
“When is this the right option?”

1. Arthritic pain despite all conservative treatment.
2. When medical conditions prevent surgery from being a safe option.
3. Inability to take downtime from shoulder replacement.



Part V

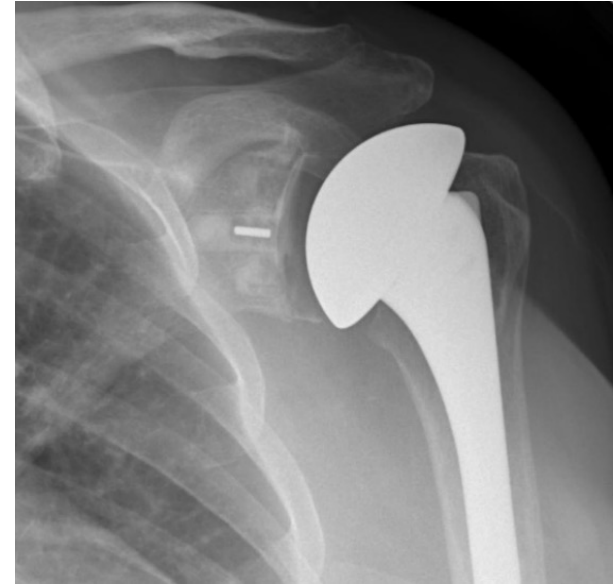
Total Shoulder Replacement (TSR)



Appropriate option for most patients with moderate to severe osteoarthritis with lack of improvement from conservative treatment and less invasive procedures.

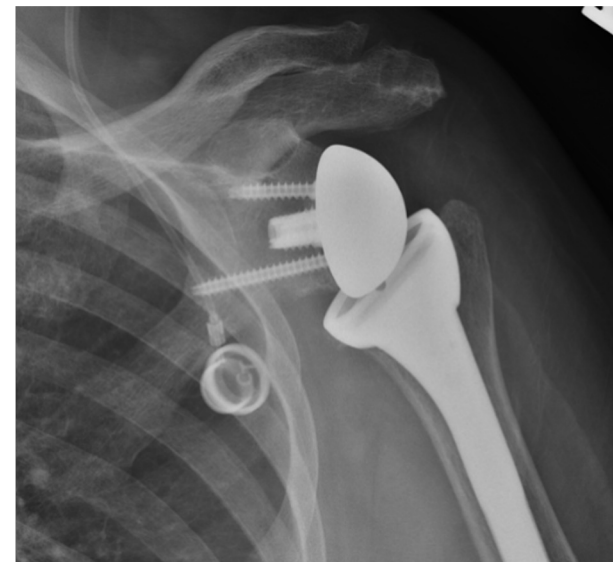
Anatomic TSR

- MUST have intact rotator cuff



Reverse TSR

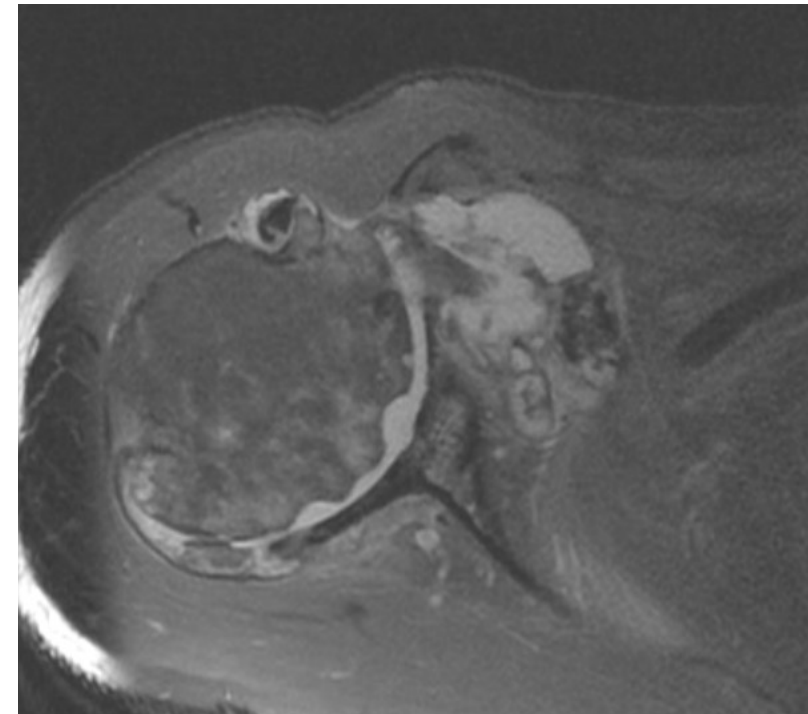
- Option for **rotator cuff arthropathy**
- Utilized for severe deformity or fracture



- **X-Ray:** 2D bone information about arthritis obtained during your office visit



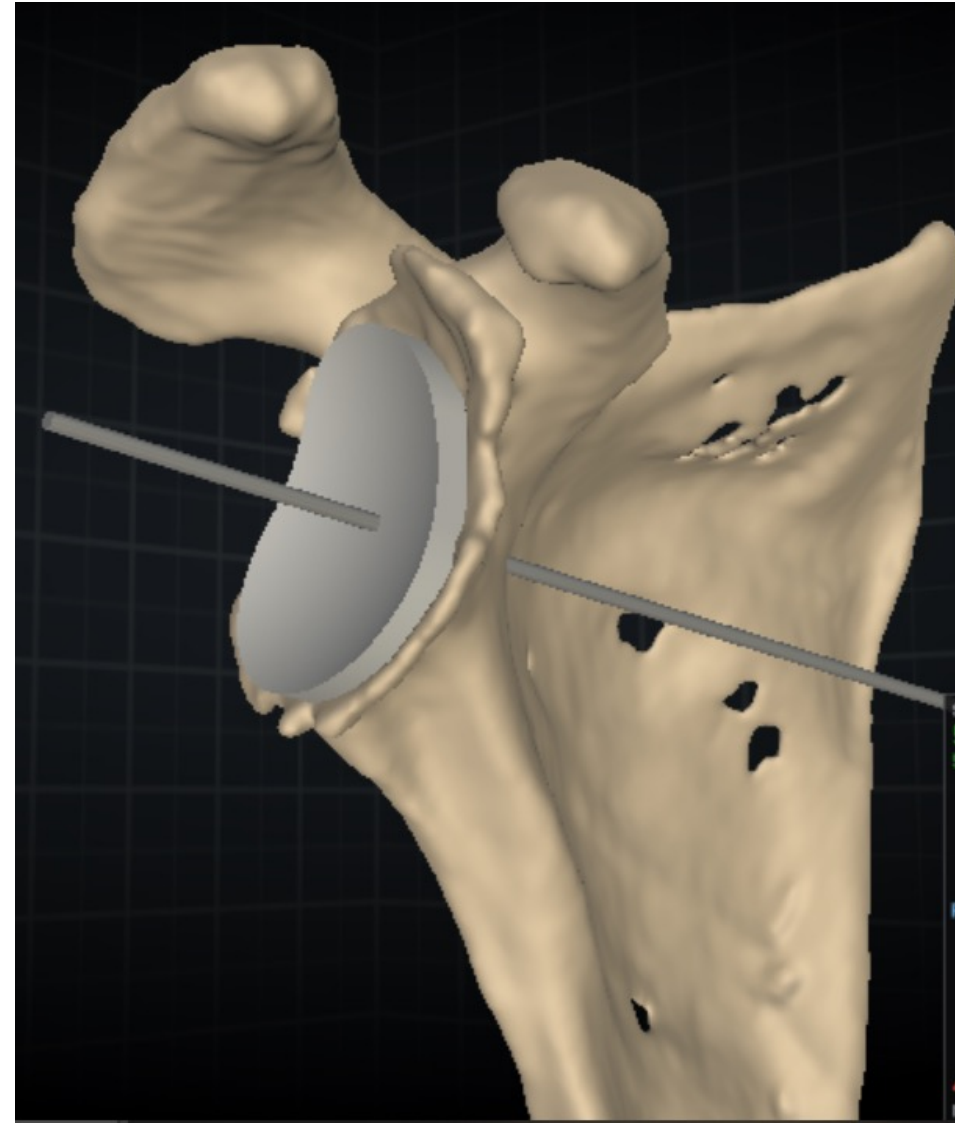
- **MRI:** 3D information about surrounding soft tissue structures, i.e., rotator cuff



- **CT:** 3D bony information that allows implant planning

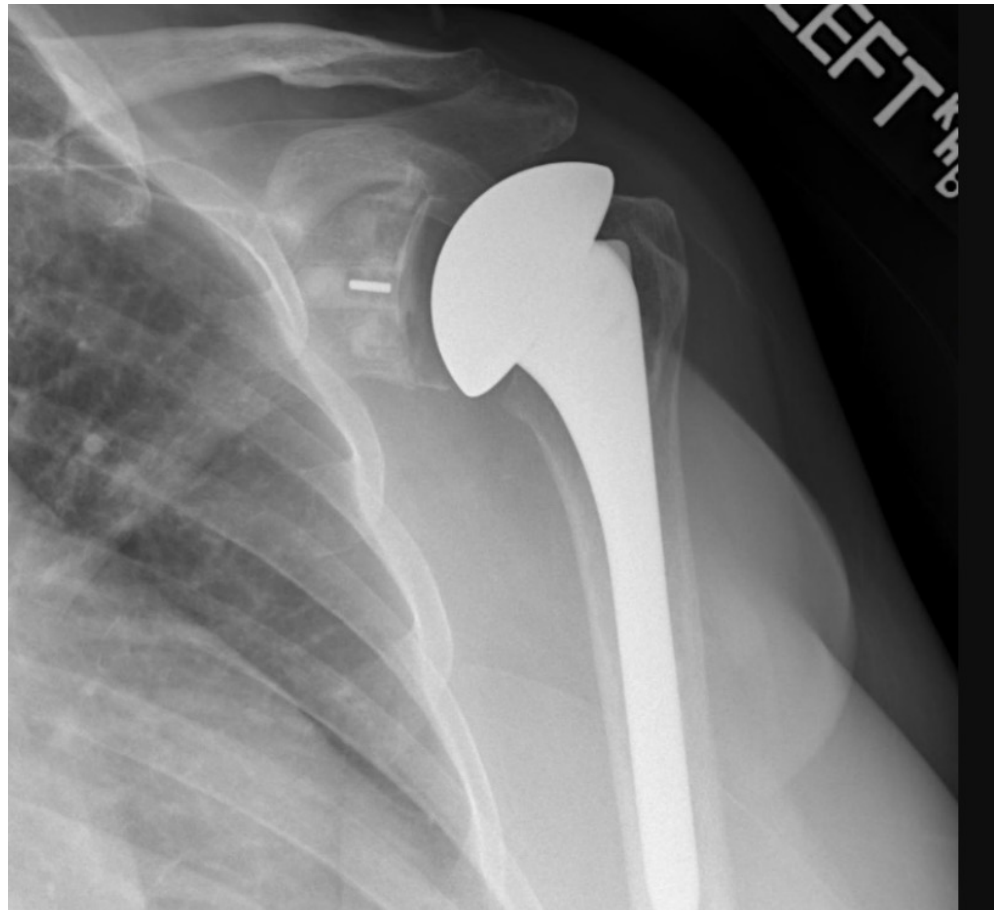


- **CT Modeling:** Allows planning of implant sizes *before* surgery



Anatomic TSR: Humeral Stem

Appropriate option for all TSR patients.

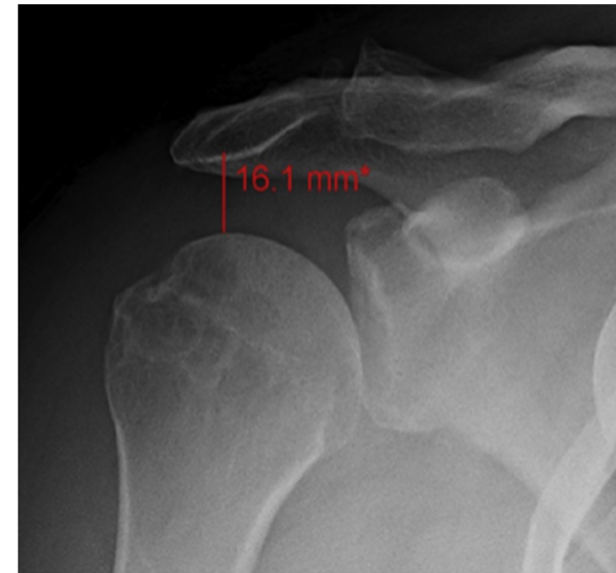
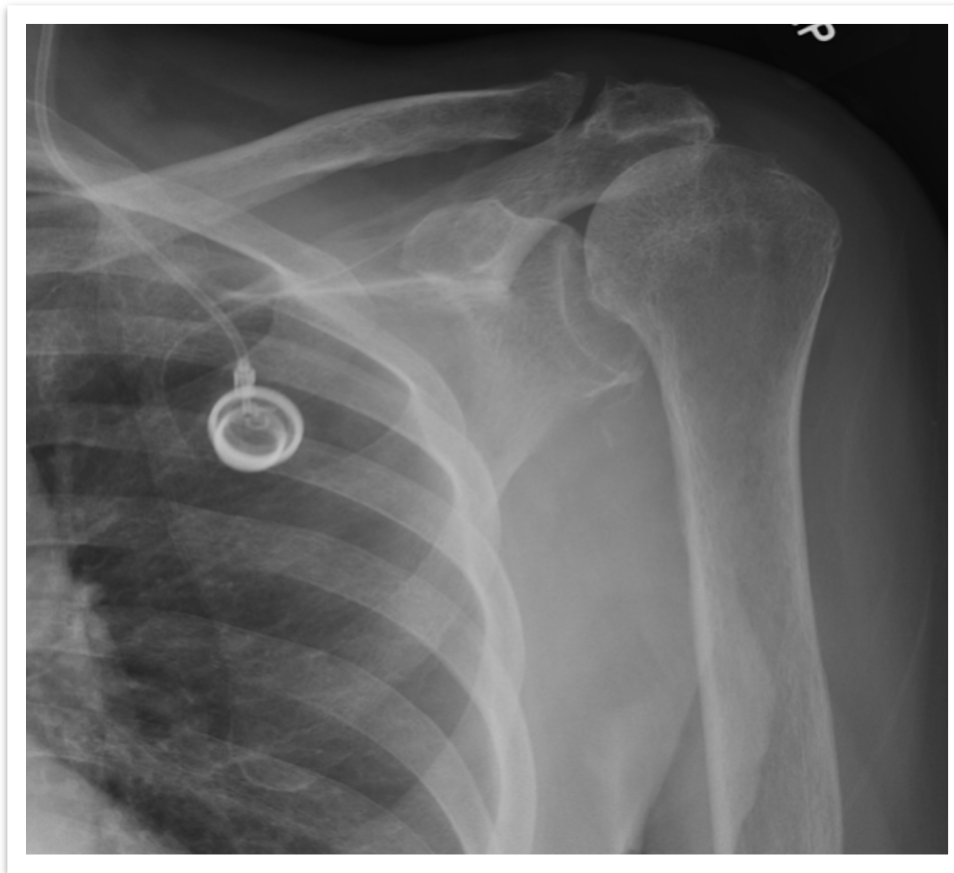


Anatomic TSR: Stemless

Appropriate option for often younger patients with excellent bone quality.



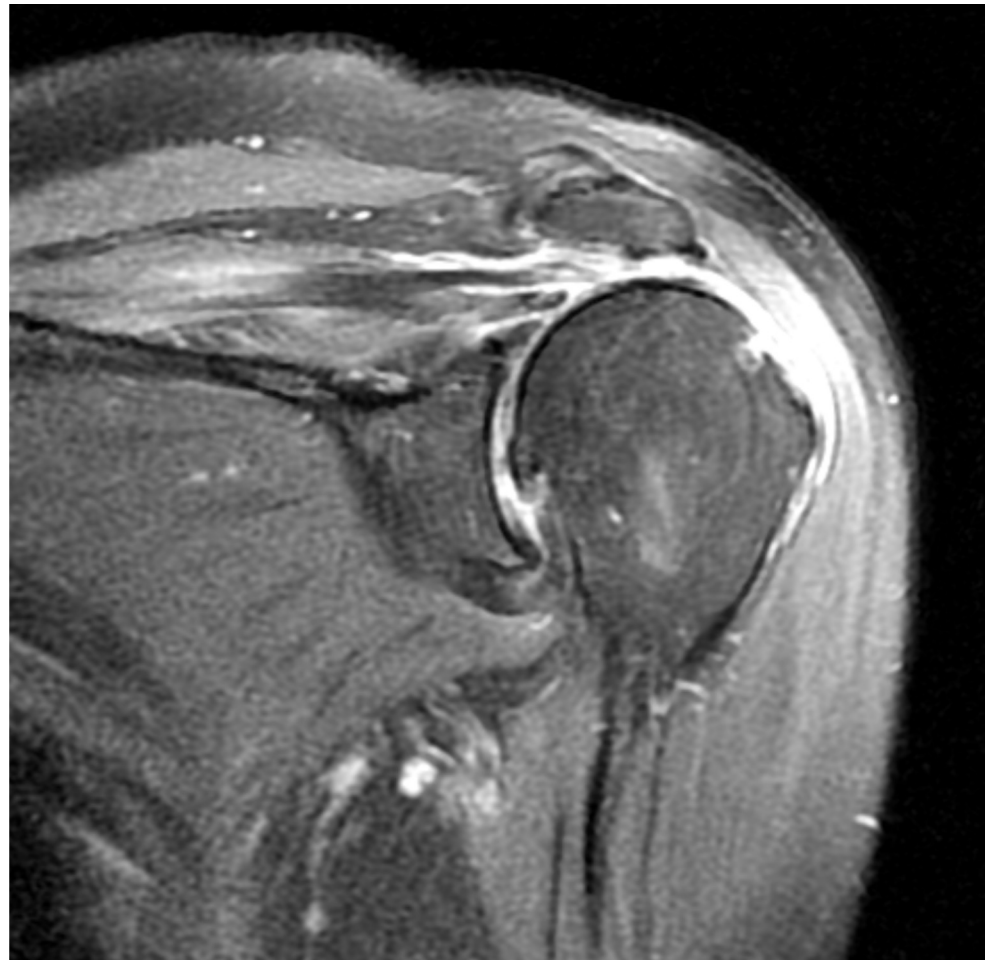
- **X-Ray:** proximal migration of the humeral head



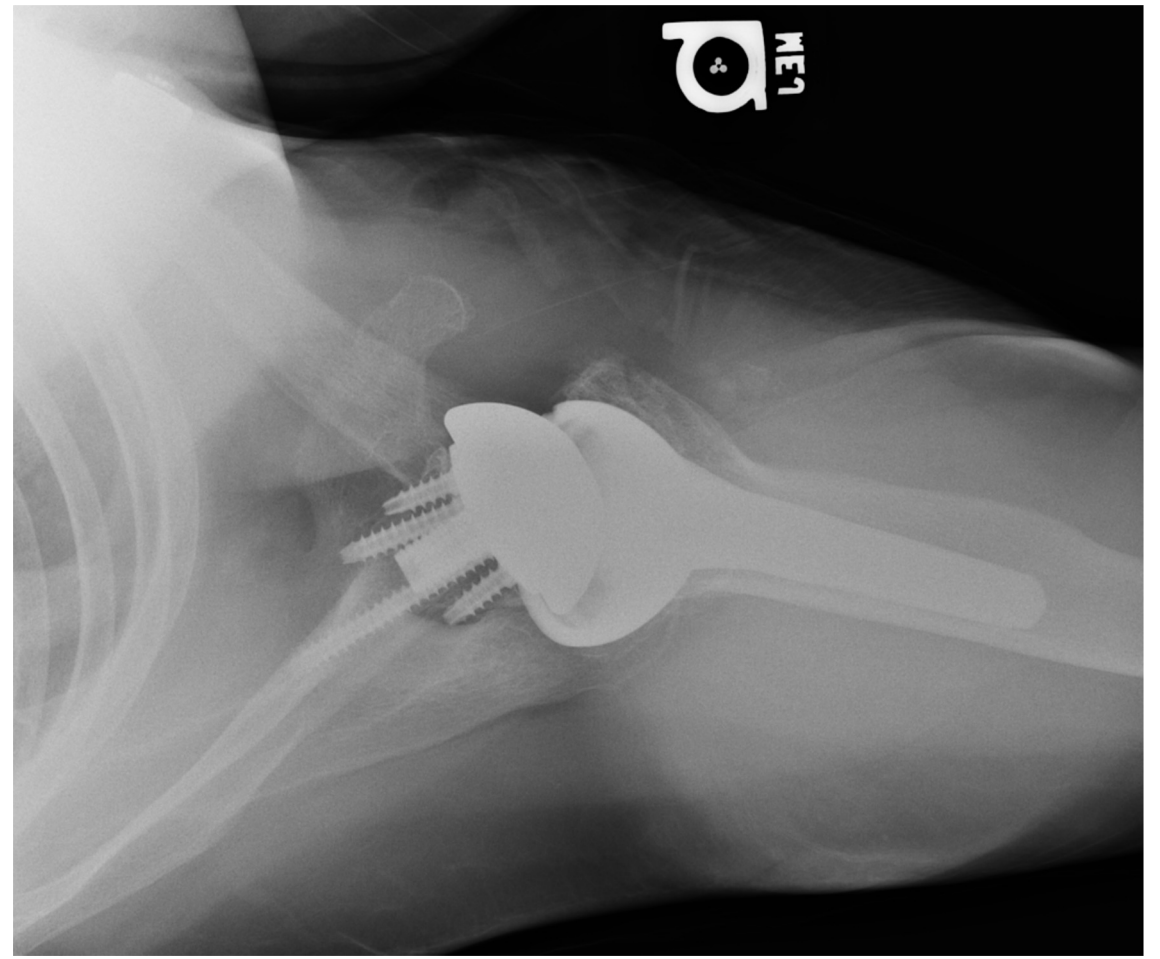
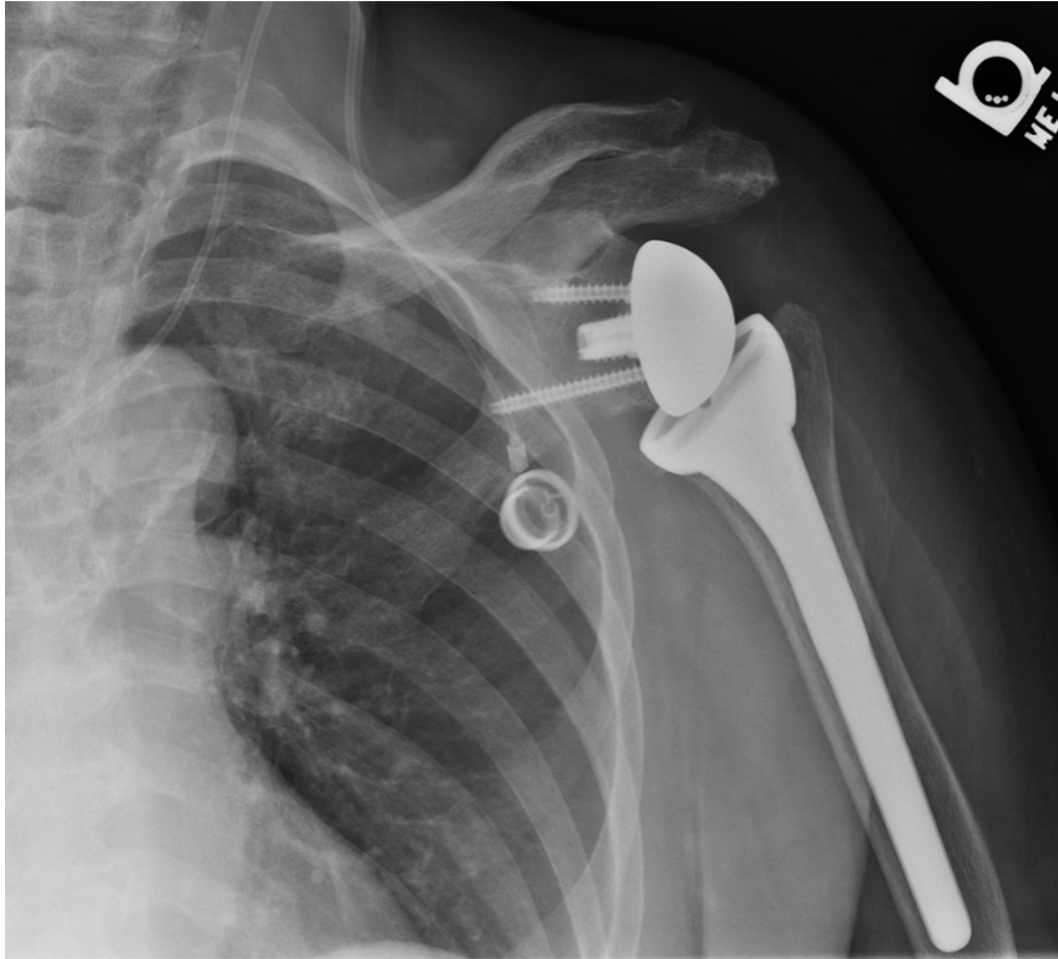
Normal acromial distance

Reverse TSR Imaging Findings

MRI: reveals retracted and irreparable rotator cuff



Reverse TSR



Post-operative course:

- Sling for 4-6 weeks
- No lifting >1lb for 12 weeks
- Range of motion and activity progress incrementally
- Physical Therapy beginning two weeks after surgery
- Full recovery ~ 6-12 months



- No restrictions
 - historically, limited to lifting 25 lbs
- Lifespan: on average, there is a 1% failure rate per year.
 - 10% need a second surgery at 10 years
 - 20% need a second surgery at 20 years



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Thank you!



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