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Dr. Myeroff's Rotator Cuff Tear Information Sheet

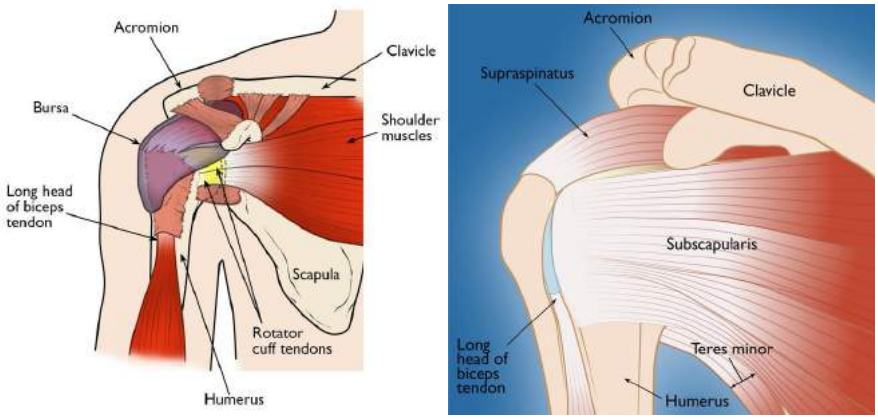

Figure 1https://orthoinfo.aaos.org/en/diseases--conditions/rotator-cuff-tears/

What is the rotator cuff?

- The rotator cuff consists of 4 relatively small, highly synchronized muscle-tendon units that have a significant role in shoulder motion and strength. They make small coordinated changes that allow your big muscles (deltoid and latissimus) to provide efficient strength.
    - 4 Tendons: Supraspinatus, Infraspinatus, Teres Minor, Subscapularis.
- How do tears occur?
    - They can occur as a result of trauma: A dislocation, fall, car crash, sports injury…
    - More often, they occur from a combination of age and wear and tear.
- Types of tears:
    - Partial Thickness – All of the tendons are still attached, but some are thinned at the attachment site. These can much more painful than you would expect. I liken it to a hangnail: it's not mechanically detrimental, but the pain can be debilitating until it finally fully tears off of the bone or the inflammation subsides.
        - Can be on the joint side (articular) or top side (bursal).
    - Full Thickness – at least one area of the rotator cuff is completely pulled off of the humerus bone.
        - They can be anywhere from 'small' to 'massive' depending on the number of tendons torn from the bone.
- Even small rotator cuff tears have the ability to severely compromise this well-orchestrated function. Large and massive tears almost always result in weakness.
- Not all rotator cuff tears are symptomatic.

    - 60% of people over the age of 60, and 80% of people over the age of 80 have rotator cuff tears. This means most patients with these tears do not have symptoms.
- For various reasons, some rotator cuff tears are incredibly symptomatic. Typically patients have these classic complaints:
    - Shoulder pain that can radiate into the mid upper arm
    - Pain is worse reaching overhead
    - Night pain that can be profound and can interfere with sleep
    - Shoulder weakness, especially reaching out and overhead
    - Most patients do report some stiffness but usually this can be overcome by using the other hand to lift the arm (passive (elevation).
- Progression and degeneration
    - Rotator cuff tears **DO NOT HEAL on their own.**
    - Data shows that rotator cuff tears tend to progress in size and symptoms over a period of years-decades.
        - There is a lot of variation from patient to patient.
    - As tears progress, the tendon becomes more "retracted". This means it scars in farther and farther from the humerus bone. If it goes too far, it becomes irreparable. This is why surgery can be a time sensitive issue.
    - Like anything in our bodies, if the rotator cuff is not used (like after a tear), the muscle degenerates (atrophy). If enough time passes, the muscle becomes irreparable.
        - Even if your tear cannot be repaired, there are still options

How is a rotator cuff tear diagnosed?

- We listen to your story, which usually includes a period of increasing overhead pain, night pain, as well as weakness.
- We are interested in your response to previous injections and therapy as this will help guide further treatment.
- **Exam:** a thorough physical exam of your shoulder is performed looking at the strength of each of the muscles in the shoulder, your range of motion, areas of inflammation and other possible causes of your pain. This can be quite intricate but it is imperative in order to obtain the right diagnosis and treatment plan. Forgive me if I 'talk shop' with my trainer, PA or the residents/fellows during this process. I promise I will explain everything to you.
- **Imaging:**
    - X-rays: If you haven't had them recently, we will obtain X-rays which help rule out things like a fracture and arthritis. These can tell us a lot about your bones
    - MRI: If it hasn't been completed, an MRI will be ordered
        - This test involves several hours of your time and provides a wealth of information about your soft tissues (tendon, ligament, muscle, cartilage) and helps me to zero in on your diagnosis and what your options are.
        - The quality is best if you obtain this at Health Partners, CDI or St. Paul radiology.
            - Preferably at Health Partners / TRIA so I can access the images.
            - I know these are of very high quality

- Please avoid the 'open' MRI as the quality of these images are poor.

Treatment options?
The goal is to help improve your pain and function, the best and safest way possible.

- **Ice, anti-inflammatories and activity modification**
  - If tolerated by your kidneys and stomach, I recommend 600mg Ibuprofen up to three times per day as needed for a few weeks to decrease inflammation.
  - Modification of your activities - avoiding activities that provoke the pain. Temporary work restrictions will be provided if appropriate.

- **Physical Therapy**
  - Therapy is the first-line treatment for many rotator cuff tears.
    - Especially for partial thickness and very small rotator cuff tears.
    - In patients <50 years-old with an acute, full thickness tear, it may be best to skip therapy and go straight to surgery since these are less likely to do well with PT alone.
  - The goal is to maintain your motion and strengthen the muscles around the rotator cuff to offload them.
  - Typically, you will go to formal physical therapy 1-2x per week and build a self-driven home exercise program.
    - **You will do your exercises 2-3x per day, every day at home.**
    - **Remember "Therapy is not a place you go, it's a thing <u>you do</u>"!**

- **Steroid Injections**
  - For smaller rotator cuff tears, partial thickness tears, and "degenerative" or chronic tears, steroid injections can be provided in the clinic. If it is more convenient, we will place an order for injections to be performed by one of our radiologists or non-operative providers with image guidance
  - Injections can provide anywhere from 0-3 months of pain relief. The goal is to decrease your pain in order to allow you to do your therapy more comfortably
    - For rotator cuff tears, I do not recommend more than 2 injections as they can weaken your remaining tendons over time.
  - A repeat injection may be performed depending on how beneficial they are.
  - The Procedure
    - The skin is sterilized and the use of a cold spray that can decrease the pain.
    - Use two 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.
        - You may experience a 2-day gap where your pain <u>may</u> be worse.
  - Please keep a log for your next appointment:

        - How long did the injection help?
        - What % relief did you have?

- **What are the risks?**
    - Injections can buy you months or even years of pain relief but do tend to be less and less helpful over time.
    - While it is slightly uncomfortable, most 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.
    - Rarely they can cause depigmentation of the skin.
    - Repeated steroid injections can weaken your tendons and ligaments.
    - 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.

Arthroscopic rotator cuff repair

Many studies have shown that rotator cuff repair offers the most predictable and long-lasting improvement in pain, range of motion and function. The time and effort commitment is by far the biggest patient concern going into surgery. It's important to consider the tradeoff between 6 months of recovery versus continuing on your current trajectory lifelong. Repair is never emergent or mandatory. Some tears are more likely to progress and continue to cause pain and weakness – these variants are less likely to do well without surgery. In these instances, it may be best to proceed earlier with surgery. I will do my best to guide you on the time sensitivity of your particular tear and together we will form a plan that works best for you!

- **Indications for surgery**
    - When non-operative treatment is ineffective
    - Persistent pain and weakness
    - Acute, large full thickness tears
- **Reasons to not pursue surgical repair**
    - Poorly controlled diabetes (A1c >10)
    - Due to issues with healing, you will need to work with your doctor to improve your glucose control before undergoing surgery.
    - Unable to abide by the post-operative restrictions and therapy
- **What is an arthroscopic rotator cuff repair?**
    - It is minimally invasive surgery using 1cm incisions
    - Smaller incisions decrease pain and scarring
    - A camera the size of a pencil is used to look into the shoulder and identify all areas of injury, clean out inflamed tissue, and repair the tendons to the bone where it belongs.
    - Other procedures: It is common to fix other areas of injury. This will be discussed with you before surgery if I think you may benefit:
        - Subacromial Decompression
            - As part of the rotator cuff repair I remove inflamed tissue from the top of the rotator cuff (bursitis) and smooth the spur on your shoulder blade (acromioplasty).
        - Biceps Tenodesis (or tenotomy)

- Used to treat biceps tendon inflammation or SLAP tears commonly seen with rotator cuff tears.
- The biceps tendon is moved from where it is torn and inflamed on the labrum inside your shoulder, to a new location outside the shoulder on the humerus bone.
- This does not result in noticable weakness
    - There can be temporary cramping or a slight change in the contour of the arm.

- Distal Clavicle Excision
    - If you have ongoing pain at your Acromioclavicular (AC) joint from bone-on-bone arthritis, you and I may decide to clean off end of the collar bone. This will open up the space (joint) between the two bones and will decrease your pain there.
        - Very rarely this can lead to some instability

- Surgery takes 1-2 hours and is done outpatient meaning you will go home the day of surgery.

- **Rotator Cuff Repair Risks**
    - Risks are relatively low for this surgery (in decreasing order).
    - Stiffness
    - Re-tear
    - Symptomatic implants
    - Nerve or vascular injury
    - Bone fracture
    - Blood loss or blood clot
    - Infection
- **Post-repair Recovery:**
    - The biggest complaint patients have is an insufficient pre-operative understanding of the time, discomfort and rehab associated with the recovery.
    - Tendon healing to bone takes about 3 months
        - Prior to that, it is only the suture holding the tendon to bone. This is not nearly as strong as a healed tendon.
        - For this period of time you will have restrictions to protect the repair.
    - How can you help?
        - Stop smoking
        - Close diabetes control
        - Avoid NSAIDs for 6 weeks
        - Abide by your post-op restrictions with 2 main early goals
            - **Avoid re-tear**: You must avoid active motion (using your own muscles) of the shoulder. This includes no reaching, lifting, pulling with the <u>shoulder</u> to prevent re-tearing the tendon before it heals.
            - **Avoid stiffness:** You <u>should</u> move your fingers, wrist and elbow You will work with therapy and at home on passive shoulder motion (without using your own shoulder muscles).
    - 0-6 weeks: You will wear your sling full time except for basic therapy for passive motion. You can return to desk work

- 6-12 weeks: You will wean out of your sling, I will advance your therapy, I will usually clear you to drive. You may be returned 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.
- When will I approximately be fully recovered?
  - 6 months for small tears
  - 12 months for large tears

Want more information?

- Please visit:
  - twincitiesshoulderandelbow.com
  - https://orthoinfo.aaos.org/en/diseases--conditions/rotator-cuff-tears/
- 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.