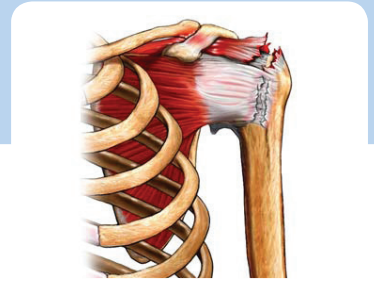


Shoulder Conditions: ROTATOR CUFF TEAR & IMPINGEMENT



A *rotator cuff injury* may include tendinitis, strain, or tear of the rotator cuff. The rotator cuff is made up of muscles and four separate tendons that fuse together to surround the shoulder joint.

Causes

Causes of a rotator cuff injury include:

- Direct blow to the shoulder area
- Falling on an outstretched arm
- Chronic degenerative wear and tear on the tendons:
 - Arthritis may decrease the space for the tendons
 - Chronic instability of the humerus may traumatize the tendons
- Repetitive overhead motion of the arm such as in:
 - Swimming
 - Baseball (mainly pitching)
 - Tennis

Risk Factors

A risk factor is something that increases your chance of getting a disease or condition. Risk factors for a rotator cuff injury include:

- Age: 40 or older
- Heavy lifting
- Abnormalities of the shoulder in rotator cuff anatomy or function
- Activities that involve repetitive overhead arm motion such as throwing or work-related
- Weakened shoulder muscles from inactivity or previous injury

Symptoms

Symptoms may include:

- Recurrent, constant pain, particularly when reaching overhead
- Pain at night that prevents you from sleeping
- Shoulder muscle weakness, especially when lifting the arm
- Popping or clicking sounds when the shoulder is moved
- Limited range of motion in the shoulder joint

Diagnosis

The doctor will ask about your symptoms and medical history. A physical exam will be done. The doctor will carefully examine your shoulder. You will be asked to move your shoulder in several directions. Tests may include:

- Ultrasound
- Arthrogram
- MRI
- Arthroscopy

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Treatment

The normal course of a POST-SURGICAL rotator cuff protocol has been described as having five stages:

STAGE 1: IMMOBILIZATION: There is a mandatory period of rest for the arm following a rotator cuff surgery. The tendons have been repaired but need to wait through the biological healing phase in order to be able to accept the strain of moving the arm. This period may last 4-6 weeks and may be intermittent with the therapist being able to do slight motions to the arm to keep the joint from getting stiff.

STAGE 2: PASSIVE MOTION: During and after the immobilization phase, you'll begin performing passive motion exercises. At first, the therapist will provide the muscle to move the arm, but over time, you'll be educated in use of pulleys, stretch straps and table stretches to allow the joint to move while keeping the muscles fully relaxed.

STAGE 3: ACTIVE-ASSISTED MOTION: Once the shoulder has achieved full expected passive motion, and with the permission of the surgeon, your therapist will begin active-assisted motion. This type of exercise uses less than 100% of the surgical shoulder's power to move the arm. The therapist may instruct you in pendulum exercises that employ gravity and momentum. Self-ranging exercises use the uninvolved arm to move the involved arm, either against the weight of gravity or lying down so that the weight of gravity is minimized. The surgical arm's responsibility will slowly increase up to 100% of the weight of the arm. Then, you'll be ready for active motion.

STAGE 4: ACTIVE MOTION: The active motion phase begins when the arm is able to carry its own weight against gravity but is not yet ready to lift, push or pull objects. During this phase, your therapist will demonstrate safe motion patterns of the shoulder and shoulder blade. They will monitor the coordination of movement between the muscles to check for specific weakness that could put strain on the repair. Once you can achieve full expected active range of motion against the weight of gravity, and with your physician's approval, you'll be ready to add weight.

STAGE 5: STRENGTHENING: The strengthening program may start out slowly. Be patient! The muscles are relearning how to work together so inflammation of the tendons and bursae are still a risk in this phase. Your therapist will recommend exercises that you can do at home in order to improve the arm's tolerance for strength and to reduce the strain on the arm when you come into therapy. Over time, the therapist will demonstrate ways that you can safely use the arm for pushing up from a chair, pulling a door open, reaching into a cabinet and other activities of daily living.

NON-SURGICAL rotator cuff tear:

In the shoulder that does not require surgery it is important to determine the cause of the pain and inflammation and work to reduce both. The therapist will likely recommend home modality use to reduce symptoms and the physician may recommend oral or injectable anti-inflammatory medications. Once the arm has responded well to these measures, it is time to begin lightly strengthening the uninvolved muscles so they can support the injured ones. Shoulder blade mobility can play a large role in reducing the pinch of tendons between the acromion (front part of the shoulder blade) and the top of the humerus (the long arm bone). By improving the mechanics of motion between the shoulder blade and the humerus, the therapist can help you reduce pain, inflammation, and the potential for more tearing.

Prevention

To reduce your chances of getting a rotator cuff injury:

- Avoid overhead repetitive motion
- Limit duration of work that involves
 - Moving hands above shoulders
 - Using shoulder in extreme outward rotation
 - Vibrating tools
- Avoid heavy lifting
- Exercise regularly to strengthen the muscles around the shoulder joint

references provided online