What You Need to Know About Rotator Cuff Impingement and Tendonitis
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Before discussing specific conditions of the shoulder it is important to understand how the shoulder works. The shoulder is a multi-axial joint connected by a series of muscles and tendons that allow for a wide range of movements while maintaining stability. In describing the shoulder joint it is best to picture a golf ball sitting on a tee, where the ball is the head of the humerus and the tee is the socket or glenoid. The scapula or shoulder blade assists the arm with movement. All components of the shoulder complex must move together smoothly to perform specific movements. The picture below shows the large amount of movement that is possible at the shoulder.

With this freedom of movement comes increased risk for injury. One of the most common conditions of the shoulder is impingement. Shoulder impingement is closely related to tendonitis and bursitis. We will look at each of these conditions and list signs and symptoms as well as treatment options for recovery.
Impingement/Bursitis

Impingement is when the supraspinatus muscle is pinched between the acromion process and the head of the humerus and becomes irritated and swollen. This “pinching” can occur with many movements including flexion, abduction, and internal rotation. A bursa is a lubricated sac that protects the muscle from rubbing against a bone. The bursa may become inflamed when it rubs against the acromion. This inflammation is termed bursitis.

Tendonitis

Tendonitis is often caused by overuse activities such as throwing or lifting. Many times it occurs in individuals who overtrain, do a lot of overhead work, and whose muscles need strengthening.
What Causes It?

These conditions typically occur in physically active individuals who perform repeated overhead arm motions as seen as in throwing, tennis, and golf, or in professions requiring repeated overhead lifting. They can also be associated with weakening of the shoulder’s scapular stabilizing and rotator cuff musculature and can be a result of shoulder instability.

Signs and Symptoms
You may experience shoulder pain that can extend from the tip of the shoulder down to the upper third of the arm, pain in the shoulder when the arm is lifted away from the body and overhead, and pain while sleeping due to pressure on the shoulder. Your range of motion may be limited, and you may experience muscle weakness. Painful popping is often associated with this condition.

Diagnosis
To properly diagnose your condition, the doctor will take a thorough history focusing on activities in which you use your shoulder. He/she will palpate or feel the shoulder to locate the area of your pain. The doctor will then perform some special tests that will isolate specific muscles to further pinpoint the problem. Diagnostic tests such as x-rays will be taken to see the bony structures of the shoulder. An MRI may be necessary to determine if the soft tissue (tendons and muscles) around the shoulder is injured.
Your Initial Physical Therapy Visit

Your first physical therapy visit will be for an evaluation with a physical therapist (PT). The PT will ask you information about your past medical history as well as your present injury. After taking your history, the PT will take measurements of the range of motion and strength of your shoulder. Once these measurements are taken, the PT will explain and demonstrate exercises for your shoulder that you will be performing at home and when you come to therapy. The therapist will let you know how often to perform your exercises at home and how many times per week you will need to come to therapy.

Your Second Physical Therapy Visit

Your second visit to physical therapy may be with a physical therapist and/ or an athletic trainer. Your athletic trainer, or physical therapist will guide you through the proper stages of your rehabilitation process by advancing your exercise program until you are released from physical therapy by your physician.

Treatment

Treatment will begin with the physical therapist or athletic trainer trying to control your pain. This may include resting your shoulder by limiting your motion, using ice packs, and taking an anti-inflammatory medication. The next step is to strengthen the rotator cuff and scapular stabilizing muscles by performing specific exercises that will be provided by your physical therapist. Most patients see improvement in 6 to 8 weeks. If you have not improved within this time frame, your physician may consider injecting your shoulder with a corticosteroid to help reduce the inflammation.

Precautions/Limitations

You may need to modify your activities during your recovery process.

- Avoid moving your arm into ranges of motion that cause pain.
- Limit overhead motions.
- Avoid lifting heavy objects that increase your pain.
Stages of Rehabilitation

Stage 1 Goals:
- Decrease pain
- Decrease inflammation
- Increase strength of scapular stabilizers

Stage 2 Goals:
- Increase range of motion
- Increase strength of scapular stabilizers
- Increase strength of rotator cuff

Stage 3 Goals:
- Increase muscular endurance of scapular stabilizers
- Increase muscular endurance of rotator cuff
- Sport-specific exercises
- Work-specific exercises

The time frame for moving through the stages of rehabilitation will not be the same for everyone. We all heal at different rates and not every injury is the same. Once you have attained your rehab goals, you will be discharged from physical therapy. When you leave physical therapy, your therapist will provide you with a home exercise program (HEP) that will help you maintain the strength that you gained while in rehabilitation. It is important for you to be involved in some form of orthopaedic fitness to insure good physical health. You should consider a lifestyle of organized physical activity to help prevent future injuries.
For more information on this and other injuries see our website: www.vanderbiltorthopaedics.com

This information is intended for education of the reader about medical conditions and current treatments. It is not a substitute for examination, diagnosis, and care provided by your physician or a licensed healthcare provider. If you believe that you, your child, or someone you know has the condition described herein, please see your healthcare provider. Do not attempt to treat yourself or anyone else without proper medical attention. All rights reserved 2009, Vanderbilt University, Vanderbilt University Medical Center, Vanderbilt Children's Hospital.