

## Shoulder Pain

What most people call the shoulder is really several joints that combine with tendons and muscles to allow a wide range of motion to the arm - from scratching your back to throwing the perfect pitch. Mobility has its price, however. It may lead to increasing problems with instability or impingement of soft tissue resulting in pain. You may feel pain only when the shoulder is moved, or all of the time. The pain may be temporary and disappear in a short time, or it may continue and require medical diagnosis and treatment.

This brochure explains some of the common causes of and treatments for shoulder pain, and how you can prevent it. Your orthopaedic surgeon, a specialist trained in the workings of the musculoskeletal system, including the diagnosis, treatment and prevention of problems involving muscles, bones, joints, ligaments and tendons.

### *What causes shoulder pain?*

Most shoulder problems involve the soft tissues - muscles, ligaments and tendons - rather than bones, and most of these problems fall into three major categories:

- tendonitis/bursitis
- injury/instability
- arthritis

Other much more rare causes of shoulder pain are tumours, infection and nerve-related problems.

**Tendonitis/Bursitis** - A tendon is a cord which connects muscle to bone or other tissue. Most tendonitis is a result of the wearing process that takes place over a period of years, much like the wearing process on the sole of a shoe which eventually splits from overuse. Generally tendonitis is one of several types:

- Acute tendonitis following some overuse problem such as excessive ball throwing and other sports or work-related activities.
- Chronic tendonitis resulting from degenerative disease or repetitive wear and tear due to age.
- The splitting and tearing of tendons which may result from acute tendon injury or degenerative changes in the tendons due to advancing age.
- Rotator cuff injuries are among the most common of these disorders. The rotator cuff tendons provide shoulder motion and stability.
- The biceps tendon passes between the rotator cuff tendons and into the shoulder joint and may be involved in trauma and wear and tear processes.

Sometimes, excessive use of the shoulder leads to inflammation and swelling of a bursa, a condition known as bursitis. Bursas are fluid filled sacs located around the joints which lessen the friction caused by movement of the shoulder. Bursitis often occurs in association with rotator cuff tendonitis. Another common condition affecting the shoulder is inflammation of the lining of the socket. This condition can be very painful and is associated with progressive loss of motion and is called "Frozen Shoulder". Fortunately with appropriate care the condition resolves by itself. Occasionally more active treatment is needed.

**Injury/Instability** - Sometimes the bones in one of the shoulder joints move (or in an injury are forced) out of their normal position. This condition, instability, can result in dislocation of one of the joints in the shoulder. Recurring dislocations, which may be partial or complete, cause pain and unsteadiness when you raise your arm or move it away from your body. When you lift your arm over your head, the shoulder may feel as if it is slipping out of place or an uncomfortable, unusual feeling that, some people refer to as having a "dead" arm.

**Arthritis** - Shoulder pain can also result from arthritis. There are many types of arthritis, but generally it involves wear and tear changes with inflammation of the joint causing swelling, pain and stiffness. Arthritis may be related to sports or work injuries.

Often people will avoid shoulder movements in an attempt to lessen the pain arising from these conditions. This sometimes leads to a tightening or stiffening of the soft tissue parts of the joint, resulting in a painful restriction of motion.

### *When should you seek medical care?*

Many patients ignore temporary minimal shoulder symptoms with few bad effects. In the case of an acute injury with more severe pain especially if associated with a snap or tearing sensation and subsequent weakness, medical care and an orthopaedic opinion should be sought as soon as possible. Chronic pain and night pain should also prompt medical attention for diagnosis and treatment.

### *Diagnosis of shoulder pain*

Determining the source of the problem in the shoulder is essential to recommend the right method of treatment. Therefore a comprehensive examination will be required to find the cause of your shoulder pain.

The first step is a thorough medical history. Your orthopaedic surgeon may ask how and when the pain started, whether it has occurred before and how it was treated and other questions to help determine your general health as well as the possible causes of your shoulder problem. Because many shoulder conditions are aggravated by specific activities - and relieved by specific activities - a medical history can be a valuable tool in finding the source of and treating your pain.

Next, a physical examination will be performed which may include looking for physical abnormalities - swelling, deformity or muscle weakness - or feeling for tender areas and observing the range of shoulder motion - how far and in which direction you can move your arm.

X-ray studies may be required to obtain a closer look at the bones and joints in your shoulder. Other diagnostic techniques that may be used include:

- **Ultrasound** allows imaging of the shoulder tendons looking for tears or impingement with no

radiation.

- **CT scan**, computerised tomography which gives a more detailed view of the shoulder area.
- **EMG** studies (electromyogram) which can indicate nerve damage.
- **Arthrogram**, an x-ray study in which dye is injected into the shoulder to allow a better view of the joint and its surrounding muscles and tendons.
- **Bone Scan** is useful in localising bone and joint pathology and involves injection of a radioactive isotope and then scanning the shoulder. The radiation dose is very low.
- **MRI** (Magnetic Resonance Imaging) is another valuable diagnostic tool for orthopaedic surgeons because it provides images of the soft tissues without using radiation.

Arthroscopy is a surgical procedure in which the surgeon looks inside the joint with a lighted telescope. It is sometimes used to diagnose causes of shoulder pain. Arthroscopy may indicate soft tissue injuries that are not apparent in the physical examination, x-rays and other tests. Much of the surgical treatment can now be performed arthroscopically.

### *Treatment*

Treatment generally involves altering activities, rest and physical therapy to help you improve shoulder strength and flexibility. Medication may be prescribed to reduce inflammation and reduce pain. If medication is prescribed to relieve pain it should be taken only as directed. Injections of drugs may also be used to treat pain.

Surgery may be required to resolve shoulder problems; however, 90 percent of patients with shoulder pain will respond to simple treatment methods such as altering activities, rest, exercise and medication. Certain types of shoulder problems such as recurring dislocation and some rotator cuff tears may require surgery.

Surgery for rotator cuff disease is mainly done with a telescope. Larger rotator cuff tears however require an open operation. New techniques are evolving for treating recurrent dislocation with the telescope also.

Common sense solutions such as avoiding overexertion or overdoing activities in which you normally do not participate can help to prevent shoulder pain.