Shoulder Fracture
(Proximal Humerus Fracture)

The shoulder is a complex joint that has the largest range of motion of all the joints in the body. When this joint is fractured, it can cause pain and severely limit movement. Read this article to learn how shoulder fractures can be properly treated.

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A shoulder fracture is simply another way to describe a broken shoulder. Shoulder fractures can occur due to a fall, sports injury, motor vehicle accident, or another type of trauma. The muscles, tendons, ligaments, and nerves surrounding the shoulder joint can also be injured at the time of the shoulder fracture.

The shoulder is a ball-and-socket type joint, where the top of the upper arm bone is shaped like a ball and connects with the shoulder socket (glenoid). The shoulder is made up of three bones:

» The humerus (the upper arm bone)
» The scapula (the shoulder blade)
» The clavicle (the collarbone)

In this article, we will be discussing the first type—fractures at the very top of the arm bone, where it meets the shoulder socket. These are also known as proximal humerus fractures, where "proximal" refers to the part of the arm bone closest to the body.

When treating a proximal humerus fracture, Dr. Romeo looks at:

» The location of the fracture
» How far the bones are from their normal position
» The number of pieces the bone is broken into
» Whether there is any injury to the blood vessels
» If there is a shoulder dislocation

Symptoms

Symptoms of a shoulder fracture include:

» Shoulder pain
» Swelling and bruising of the shoulder, chest, and arm
» Inability to move the arm because of severe pain
» A bump or deformity at the fracture site
» A grinding sensation when moving the shoulder
» Neurological symptoms (e.g., weakness, numbness, and tingling)

Causes

Causes of shoulder fractures include:

» Falling from a height (e.g., from a ladder or while rock climbing)
» Contact sports (e.g., football)
» Motor vehicle accidents
» Over the age of 70, falling from a standpoint position

Additionally, osteoporosis (a condition where people experience a thinning and weakening of the bones) can increase the risk of shoulder fractures due to decreased bone mass. In the case of a person with osteoporosis, a fall from standing height can be enough to cause a shoulder fracture. Women are twice as likely as men to experience these fractures. Diabetes and seizure disorders are also risk factors for shoulder fractures.

Diagnosis

Shoulder fractures are diagnosed by a history of the injury, a physical examination, and x-rays. In cases

where surgery is considered, a CT scan is likely to be performed.

Shoulder fractures are classified as either displaced or nondisplaced, which helps surgeons decide on treatment.

Nondisplaced fracture: The majority of shoulder fractures are nondisplaced. In this case, the shoulder bones break, but the pieces do not separate or move far from their normal position. These fractures may not require surgery and can be immobilized in a sling until the bones heal.

Displaced fracture: Here, the bones snap or separate into pieces, moving them out of their proper alignment. Displaced fractures usually require surgery, called an open reduction internal fixation (ORIF) to properly set the bones back in place.

Nonsurgical treatment options

Most shoulder fractures can be successfully treated without surgery. Nondisplaced shoulder fractures can be treated with:

- Ice
- Immobilizing the arm for 3 to 4 weeks in a sling while the bones heal
- Oral medications (pills or tablets) to help with pain
- Occupational therapy for hand, wrist, and elbow range of motion and techniques to reduce swelling (in the first few weeks after injury)
- Physical therapy and range-of-motion exercises (once the fracture is stable at 3 to 4 weeks)

How surgery is performed

For displaced shoulder fractures, surgery is generally required. During surgery, the broken shoulder bones are realigned and set into place with metal plates and screws. The exact surgery varies with the location and severity of fracture.

In some cases, complex fractures are repaired with a partial joint replacement (called hemiarthroplasty). In other cases, where a person has a very severe fracture or has weak bones, a reverse shoulder replacement may be needed to reconstruct the shoulder.

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Recovery time

Each person's recovery time will vary depending on the type and severity of their original injury. After surgery, a person may be required to wear a sling. Pain medications will be prescribed to help with post-op pain management.

During follow-up appointments, Dr. Romeo will perform a physical exam and check x-rays to monitor the healing process.

Most people need help eating, bathing, and dressing for several days after surgery since they're not able to use their surgical arm for these activities. Most people also benefit from a supervised physical therapy program to improve shoulder range of motion and muscle strength.

Those with desk jobs can return to work sooner than those with more physically demanding occupations. However, it can take up to three months to regain the ability to perform your normal daily activities. It can take six months to regain the use of your arm for all of your activities. Dr. Romeo encourages patients to maintain their exercise program for the entire first year after surgery to achieve their best results.

Results

Nondisplaced fractures treated with a sling and physiotherapy generally have very good functional outcomes. For most people, the sooner they start physiotherapy, the faster their shoulder can heal, while longer immobilizations are linked with slower healing.

Displaced fractures often require surgery, not only because the bones are out of their normal alignment, but also because there is often damage to nearby muscles, nerves, and soft tissues. For example, one nerve that is often injured in shoulder fractures is the axillary nerve, which helps move and provides sensation to the upper arm. Displaced shoulder fractures take longer to heal and are more prone to complications.

Want to learn more? Find relevant videos, animations, and research material related to this procedure at **anthonyromeomd.com**. ➔

For more information about causes and treatment of shoulder fractures, please request an appointment with experienced Chicago orthopaedic surgeon Dr. Anthony Romeo. ***Please visit our website to find out how to schedule your appointment.***