

### Shoulder Injuries: Equal Opportunity Offenders

Maybe you're an athlete. Maybe you work construction. Maybe you're a stay-at-home mom or dad. Maybe you stretched a little too far to reach that top shelf. Or maybe you're just getting older...

#### Injury

Shoulder injuries are equal opportunity offenders – they affect adolescents and older adults, men and women, professional athletes and weekend warriors. And one of the most prevalent shoulder injuries is a labrum tear. “The labrum is a rim of cartilage that runs all the way around the edge of the shoulder socket,” says William G. Delong, MD, chief of Orthopaedics for St. Luke's Hospital & Health Network. “That rim isn't as restrictive as bone and the socket is shallow. This allows for more motion than any other joint. But it also allows for more injuries because an impact of sufficient force or too much motion can easily tear the cartilage from the bone. A torn labrum most commonly results from a dislocation of the shoulder.”

The shoulder joint is the most frequently dislocated major joint of the body, says Dr. Delong. In a typical case of a dislocated shoulder, either a strong force pulls the shoulder outward or extreme rotation of the joint pops the ball of the upper arm out of the shoulder socket. This occurs when the muscles are unprepared to resist or when the force overwhelms the muscles.

“When the shoulder dislocates, the arm appears out of position,” he explains. “Other symptoms include pain, swelling, numbness, weakness and bruising. If the dislocation causes a labrum tear, the shoulder will feel unstable and you'll feel pain at the location where the tear occurred.”

#### Diagnosis

According to Dr. Delong, the first step in diagnosing a labrum tear is a physical exam of the shoulder. “The doctor will gently push on the shoulder from different directions. If it moves around in the socket, then the next step is a MRI arthrogram.

A MRI arthrogram is an imaging study that combines magnetic resonance imaging (MRI) with injection of a contrast agent or dye to obtain high quality images of the ligaments, tendons and cartilage that reinforce the shoulder joint. Although MRI without contrast is quite useful in many cases, certain joints and certain problems require injecting contrast into the joint. “We inject the dye directly into the joint,” says Dr. Delong. “If it leaks out, we know we're dealing with a labrum tear. It's that simple.”

## Treatment

“As I said earlier, labrum tears can result from both avocational and vocational activities,” continues Dr. DeLong. “For those who suffer the injury during recreation and who do not put strain on their shoulder joints at work, I recommend physical therapy and a strengthening program. By strengthening the musculature around the shoulder joint, we can often compensate for the torn cartilage. Surgery is a last resort.

“For those who suffer the injury as a result of their job and who must put strain on their shoulders to perform their duties at work, I consider surgical repair of the labrum first. This is typically done arthroscopically, which is very good for the patient.”

An arthroscope is a small fiber-optic instrument that is placed into the joint through a small incision. A camera is attached to the arthroscope and the image is viewed on a TV monitor. The arthroscope allows a complete evaluation the entire shoulder joint. Small instruments are then inserted through additional small incisions so that damaged tissue can be repaired, reconstructed or removed.

“We identify the location of the tear and the labrum is then repaired back to the socket,” says Dr. DeLong. “This is usually performed by using suture anchors placed into the bone and sewing the cartilage back in place. In many cases, anchors that dissolve over time are used, however, sometimes metal anchors are used.” These do not dissolve and are permanent -- they do not need to be removed.

“Surgery of any kind requires a recuperation period, time for healing,” adds Dr. DeLong. “The arthroscopic approach to surgery has many advantages for patients. Three or four small (one-inch) incisions are utilized instead of a large, open incision; there’s less pain involved; and less recovery time.”

Surgery is then followed by physical therapy – motion exercises and safe strengthening exercises. According to Dr. DeLong, 10 – 12 weeks are usually allowed for a return to a normal, full schedule of activities. “With the exception of a traumatic emergency, orthopaedic surgery is usually not performed as a life saving measure,” he says, “but rather as a way to return patients to the quality of life they lost due to injury.”