

# Don't Throw Out Your Shoulder

IF YOU DISCOVER YOUR SHOULDER HURTS REGULARLY OR YOU HAVE LOST STRENGTH, HAVE YOUR SHOULDER EXAMINED BY A SPORTS PHYSICIAN. YOU CAN AVOID PERMANENT DAMAGE WITH PROPER TREATMENT.

By Andrew DeGruccio, MD

**A**thletes that use a throwing motion are particularly susceptible to shoulder injuries. This includes the obvious baseball and softball throwers, but also tennis players and volleyball players. The tennis serve and overhead slam are mechanically very similar to throwing. In volleyball, the spike and overhead serve also use the same mechanics.

The anatomy of the shoulder is what makes it susceptible to repetitive overuse injuries. It is a ball-in-socket joint, but has been more appropriately described as a golf ball-on-tee joint. The relatively large ball on such a small cup makes for a highly mobile joint, and inherently unstable joint. The stability of the joint actually is imparted by the surrounding soft tissues, which include a complex array of ligaments, a cartilage ring called the labrum, and the dynamic stabilizers known as the rotator cuff. The rotator cuff is actually comprised of four muscular tendons, including the supraspinatus, infraspinatus, subscapularis, and teres minor. During adolescence, the addition of cartilaginous growth plates about the ball of the humerus bone increases the opportunity for injury, as the cartilage is weaker than the bone.

Most injuries occur when the delicate balance of these stabilizing structures is disturbed. The clearest example of this would be repetitively overusing the shoulder to the extent that the dynamic stabilizers fatigue. Once the rotator cuff is fatigued the mechanics of the joint can be affected to the point that real damage can be imparted to the ligaments, labrum, and even the bone. Evidence of this mechanical breakdown shows up as loss of control, loss of power, and/or loss of velocity. Pain will often follow.

Prevention of this should be relatively self-evident. The

rotator cuff should not be taken to the point of irrecoverable fatigue. This means tight control of pitch counts and practice time, more time for recuperation, and pre-participatory strengthening programs that target the rotator cuff.

Once pain develops, it should be taken very seriously, as problems can escalate quickly. Coaches and parents should regularly ask their young athletes about shoulder pain, as prevention is the best course of treatment. If pain becomes consistent, the athlete should see a physician. Shoulders are not that well understood in the medical community, so a sports medicine specialist should be involved. Initial evaluation involves a thorough history of the development of the pain, an examination of the shoulder and plain x-rays. Sometimes MRIs will be necessary. If it is determined that the growth plate is involved in the adolescent, an average of three months rest will be required with a slow return to throwing sports. Sometimes a course of formal physical therapy can alleviate the pain and restore strength to the rotator cuff, restoring normal mechanics to the shoulder. If the player receives inadequate therapy, then the mechanics will not be restored and the athlete will more than likely have recurring problems.

Young athletes rarely require surgery. Rotator cuff tears simply do not occur in this age group. The more common surgery required in this age group is for instability created by previous dislocations. Dislocations of the shoulder in younger individuals usually result in tears of the ligaments and the cartilage labrum. These tears rarely heal themselves, rendering the shoulder permanently less stable.

To avoid long, drawn-out treatments, protect your shoulders by monitoring early signs of problems closely. Contact a sports medicine specialist immediately if pain in your shoulders becomes persistent. •

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