

# Preventing and Treating Shoulder Injuries in Overhead Throwing

## Physical Therapy in our clinic for Shoulder

Are you an athlete who is required to throw something in an overhand motion? This article is concerned with the conc and prevention of shoulder injury in athletes who throw overhand. Because of the vulnerability of these athletes to ove recommended that they seek advice fro their Physical Therapist at "client\_company" for specific training exercises de and control overuse shoulder injuries.

In this 15-page review of overhead throwing sports, Physical Therapists provide insight and depth into the prevention shoulder injuries. These athletes move the throwing arm through a wide range of motion over and over and over every practice or in competition and sometimes both on the same day.

Despite being in top shape, there is a risk of microtrauma for these athletes from repetitive throwing. The soft tissues c aren't invincible -- they do have their limit. When the athlete's physical actions exceed the physiologic or tensile streng injuries can occur.

The sports Physical Therapist's job is to help athletes prevent injuries. Once an injury has occurred, then the therapist through a rehab program to recovery and return-to-sport. The principles of injury prevention and treatment programs a rehabilitation progression are the two main topics of this review.

The first order of business on the prevention side is to make sure the athlete has the right kind of shoulder and arm mo throwing. Most of these athletes have more motion than you or I. They have to be able to cock the hand way back beh order to get enough speed to shoot the ball forward fast. Any loss of shoulder motion increases the risk of injury. Gent exercises are used to keep the arm limber throughout the season.

You won't be surprised to know that strengthening the muscles of the entire upper extremity (arm) including muscles scapula, shoulder joint, upper arm, elbow, forearm, wrist, and hand is the second order of the day. What you probably how complex the muscle activity is when throwing a ball. Besides contracting and releasing, these muscles must also decelerate (slow down) at just the right moment. Each muscle has its own unique jobs that require different types of ex strengthen and train them.

Together, the muscles, tendons, and ligaments of the shoulder complex do two things: stabilize (hold the joint firmly i mobilize (allow movement). These two functions require fine-tuning called motor control or neuromuscular control.

Improving motor control actually requires a whole different set of activities and exercises. The therapist uses terms lik stabilization, closed kinetic chain exercises, and plyometrics to describe this portion of the prevention and rehabilitation might have heard about plyometrics if you listen to any of the sports radio shows or watch sports TV. This is a fairly r designed to help increase the speed and power of muscle contraction and movement.

On the prevention side of the equation, core training and lower body strengthening are keys to off-season training and maintenance. Anything that happens in the lower body is going to affect the upper body and especially that important entire body must be tuned, strong, flexible, stable, and hold up under strenuous conditions (a sign of endurance). Ther that addresses all of these functions. That's why the sports therapist's job is both so challenging and rewarding.

But that's not the end -- there's the other side of the prevention-rehab equation: injuries requiring attention both during and chronic (long-term) phases. The goals of treatment and methods used will vary depending on the degree of injury, athlete has had surgery, and whether the athlete is dealing with an acute or chronic situation.

The authors provide many color photos of the prescribed exercises along with helpful tables to guide treatment from the beginning through the intermediate phase to the advanced strengthening phase and return-to-sport completion of the program. Goals are provided for each phase along with specific exercises and activities for each one. Sports specific exercises become the focus of the program as the athlete returns to the field, first in practice sessions and then in competition.

Sports Physical Therapists are instructed to see the athlete as a whole person, not just an overhead throwing machine. The authors provide fine details to pay attention to such as posture, position of the scapula (shoulder blade), areas of muscular tightness or weakness anywhere in the body, areas of incoordination, loss of proprioception (joint sense of position), and kinesthesia (body awareness). A few. Specific exercises and drills to restore these features and functions are discussed in detail.

And finally, the most common shoulder injuries in overhead throwing athletes are reviewed. These include shoulder instability (injury to the labrum (rim of fibrous cartilage around the shoulder socket), impingement (pinching of soft tissues inside the joint).

Most of these injuries require a special look at throwing mechanics to identify the cause(s) and risk factors. Treating the symptoms may not be enough -- the therapist has to figure out what the athlete is doing (or not doing) in order to keep that same injury from happening again. And often there isn't just one problem area. Any change or imbalance in joint motion, flexibility, strength, posture, or core stabilization can be a contributing factor.

The authors do a very good job showing how challenging it can be to work with overhead throwing athletes. Every aspect of the activity, physical condition, and individual differences must be considered when trying to avoid injuries or treat them. The detailed description of the proper treatment program and reminder to progress slowly but surely through each phase is a valuable tool for the sports therapist.

**Reference:** Michael M. Reinhold, PT, DPT, SCS, ATC, CSCS, et al. Current Concepts in the Evaluation and Treatment of Injuries in Overhead Throwing Athletes Part 2: Injury Prevention and Treatment. In Sports Health. March 2010. Vol. 2. No. 2.