



## **Preventing Arm Injury/Pain From Overhead Throwing**

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It's the time of year when some baseball and softball players pick up a ball and start throwing for the first time in many months. Throwing a baseball or softball is not a natural process for the human body. The overhead throwing motion places some amazingly high stresses on the body. For example, the human body may produce enough force (torque) to accelerate a ball from 4 to 85 mph, or faster, in a period of time of less than 0.2 seconds. That is an acceleration rate of 405 mph/sec.

It is important for baseball and softball players to properly prepare their bodies for the repetitive stresses that come with overhead throwing. Failing to do so may result in unnecessary arm pain and/or injury. Nearly 50% of all injuries in baseball and softball occur to a player's shoulder/arm. A majority of these injuries can be classified as muscle strains.

The most common causes of overhead throwing injuries to high school, college, and professional baseball and softball players can be categorized into the following areas:

1. **Overload** – throwing too many pitches during one outing. For pitchers, a pitch count is often used to track the number of pitches being made during a game.
2. **Overuse** – throwing too often and not having an adequate recovery time. It is important to educate players on a good arm maintenance program that includes stretching, running, and strengthening.
3. **Lack of proper conditioning** – throwing involves the entire body. Proper strength and conditioning of the legs and core muscles will increase performance and decrease the chance of injury.
4. **Improper throwing mechanics** – poor throwing techniques lead to a greater chance of early fatigue as well injury. Some common flaws include having the body too far in front of the throwing arm, having the elbow too far in front of the hand, and not following through with the body.

Missed practice and game time due to injury is greatly reduced when players and coaches recognize the causes of overhead throwing related injuries and take measures to avoid them.