

## **Wrong Pitching Mechanics Can Force Little Leaguers to Throw Away More Than a Game**

*Physical Therapists Say Correct Throwing is Key to Preventing Arm and Shoulder Injuries*

From the youngsters playing their first game of tee-ball to the last team standing at the Little League World Series in August, spring and summer baseball is a rite of passage in schoolyards and fields everywhere. But in their attempts to throw the farthest and fastest, millions of little leaguers put themselves at major league risk of arm and shoulder injuries.

The **American Physical Therapy Association (APTA)** says that the most coveted position on the team – pitcher - can also be the most dangerous when it comes to arm injuries. Pitchers often throw 100 balls per game, placing substantial stress on a young arm. "Kids sometimes mistake strength for proper pitching mechanics and may be trading six innings of excitement for years of arm problems," says Marty Stajduhar, a physical therapist.

The pitcher runs the greatest risk of injuries resulting from overuse or improper mechanics, leading to a condition known as "little league elbow." Little league elbow is a chronic inflammation of the growth plate in the elbow joint that can feel like tendinitis. In his practice, Stajduhar has seen children under 12 years old experience the inflammation in the medial (inside) part of the elbow and children between 13 and 16 years old are affected on the lateral (outside) part of the elbow. With continued stress, the growth plate may separate from the joint, requiring surgery to re-attach it.

Most little leaguers mistakenly throw with the force coming from the arm instead of the trunk, says Stajduhar. "When a child comes to me with little league elbow, I ask him or her to show me their batting stance. I point out how different the torso is positioned when they're at bat and how much power they get from their trunk by 'stepping in' to the pitch. It surprises them when I say they should have a similar position for pitching." His advice: "Bend at the waist, and direct the front shoulder and hip towards the target. When the front foot lands, get the belly button over the front knee as quickly as possible. Then the trunk supplies the power, not the arm."

Shoulders are also in danger during a pitch. Because the shoulder is the most mobile joint in the body, it is also the most unstable. The four muscles surrounding the shoulder, called the rotator cuff, are stretched during the acceleration and deceleration. Bones can shift, leading to damaged ligaments or pinched structures within the shoulder joint. Torn or strained rotator cuff muscles can result in permanent damage. To reduce the risk of injury, it is important that the muscles of the trunk and shoulder be strong, stable, and flexible.

Because children tend to be less aware of their physical limitations, it is especially important that parents and coaches watch their children carefully for correct throwing mechanics, while advocating proper conditioning and pre- and post-game stretches. "Attentive parents and coaches will maximize their child's chances of having a healthy season," says Stajduhar. "Once kids understand the proper way to throw, they need to concentrate on being in the best condition possible," Stajduhar said.

**Physical Therapist Tips on How to Avoid Injuring Your Arm**  
*And what to do in case you do*

The following exercises are recommended for Little Leaguers...and their coaches.

- Above all, teach young athletes to be mindful of how their bodies feel. Pain is the first sign of a problem, and athletes of all ages need to pay close attention to any type of muscle twinge, tightening, or burning sensation.
- Coaches should carefully observe their pitchers' techniques. Success on the field may be fleeting if the pitches are ultimately damaging a young player's shoulder.
- Conditioning and strengthening exercises are most effective after mechanics are learned and put into action. If possible, begin a conditioning program at least a month before the season begins. A basic stretching regimen should be used before a player even picks up a baseball.
- Players should start with short tosses and gradually work up to throwing the ball a greater distance. Increasing the velocity should be the final step.
- If the arm region is sore or tight, apply ice to the area for 10-15 minutes to help diminish the amount of blood that might otherwise leak into the muscle. When there is microscopic tearing of the muscle tissue, blood is leaking into the surrounding muscular tissue, causing pain and muscle spasm. Using ice will help reduce the pain, spasms, and inflammation associated with this condition.

***For more information, contact the Wisconsin Physical Therapy Association at  
(608)-221-9191.***