

Little League Shoulder/Elbow

Baseball has been played and loved for many generations and as with any sport, injuries are bound to happen. Over the years, however, a couple of trends in youth sports have led to an increase in certain injuries. Sport specialization at an early age has become more common, in part due to the increased competitive nature of today's sports culture. Also, due to the increased demand and business nature of youth sports, each sport is offered year round versus seasonally. With these trends, more kids are now playing and training with higher intensities/volume and with decreased rest/recovery than in the past. In baseball, this leads to more stress and strain to the developing arm which increases the potential for overuse syndromes or injuries. One of the more common throwing arm injuries seen in the pediatric orthopedic offices are Little League shoulder and Little League elbow.

What is Little League shoulder/elbow?

Little League shoulder and elbow are overuse injuries to the throwing shoulder and elbow at the growth plates of skeletally immature kids. Growth plates are found at the end of long bones and is where new bone growth occurs in children and teens.

They are made of cartilage and are susceptible to injury due to their relative weakness compared to the surrounding tissue/structures. The injury occurs mostly in young pitchers due to the repeated stress and strain of overhead throwing. Pitching produces high torque and traction forces in the arm which can lead injury/widening of the growth plate which in turn causes pain, inflammation and loss of function of the throwing arm. If it goes untreated, the condition can get worse and lead to further pain, increased injury and longer overall recovery time. The good news is that this will heal with proper rest, recovery and rehab allowing your child to become pain free and get back to playing!!

Growth plates

What are the common factors that can lead to this injury?

- Repeated overhead throwing without adequate rest or recovery (NOT following proper pitch counts/rest days)
- Poor throwing mechanics
- Lack of muscular strength or proper flexibility needed for the level of throwing

How do I know if my child may have this injury?

- Repeated pain in the shoulder or elbow with throwing/pitching
- Loss of throwing velocity
- May change the way he/she throws (alter mechanics) to avoid pain

- May visibly guard the arm
- May have pain with daily activities using the arm (lifting, pushing, raising arm, etc...)

What do I do if I suspect my child has this injury?

The first thing to do is restrict your child from throwing and doing activities that cause pain to minimize further injury. Generally, ice is recommended to ease pain/inflammation in the acute phase. If the problem continues, it would be advisable to see a Pediatric Orthopedic Specialist who would perform an exam including x-rays, in order to tell you what is going on and to create a treatment plan. If needed, the doctor may then refer your child to a Pediatric Orthopedic Physical Therapist who would perform an evaluation as well as provide a rehab plan and education based on each child's need. Most kids have some degree of limited flexibility, range of motion, and/or strength due to the injury or was lacking prior to the injury. The PT can design a program to address these impairments in the arm, upper body, core and lower body to guide recovery and prevent future injury. As your child progresses, he/she would be given a gradual return to throwing program to lead them back to throwing over a specific time frame. This is an important component of appropriate return to play that is often overlooked!!

How can I have my child prevent this from happening in the first place?

There are many recommendations for prevention made by the sports medicine world including:

- Proper warm up involving total body stretching, jogging and easy/gradual throwing
- Play at age appropriate and talent appropriate levels
- Rotate positions to relieve stress on the arm/elbow and don't play catcher and pitcher in the same game/series
- Follow age appropriate pitch counts and rest recommendations – see table (guidelines can be found at www.mlb.com/pitch-smart)
- Stop if you experience pain in shoulder/elbow
- Don't play year-round or on multiple teams at one time

AGE	DAILT MAX (PITCHES)	REGOIRED REST (FITCHES)				
		O Days	1 Days	2 Days	3 Days	4 Days
7-8	50	1-20	21-35	36-50	N/A	N/A
9-10	75	1-20	21-35	36-50	51-65	66+
11-12	85	1-20	21-35	36-50	51-65	66+
13-14	95	1-20	21-35	36-50	51-65	66+
15-16	95	1-30	31-45	46-60	61-75	76+
17-18	105	1-30	31-45	46-60	61-75	76+

- Don't use a radar gun as this leads to overthrowing/overuse
- Emphasis on mechanics, accuracy and overall control versus velocity
- Play multiple sports vs specialization to give relative rest to the throwing arm and improve overall athleticism and coordination
- Listen to warning signs and do not throw through pain and communicate to a parent/coach if pain occurs

^{***} To make an appointment with one of our Doctors or Physical Therapists, please contact us at 512.478.8116 or visit our website at www.ctpomd.com.

