

Little League Elbow

What is it?

Little League Elbow is characterized by inflammation of the growth plate of the inner elbow. This is due to repetitive, stressful muscular contractions that are pulling on the growing bones in that area. The the growth plate is much weaker than the muscles and ligaments that attach to it. Once the growth plates begin to fuse athletes are more likely to injury the ligaments and tendons instead. This growth plate is usually one of the last to close, approximately around age 16-18.

What are the Signs and Symptoms?

Little leaguer's elbow typically presents as a gradual onset of inside elbow pain sometimes without a specific injury. This injury can produce sharp pain, slight swelling and a warm and tender bump on the inner elbow. Pain typically gets worse with activity. In more severe cases, pain during less vigorous activity can occur. Other signs and symptoms can include:

- Inability to throw at full speed
- Inability to fully straighten the elbow
- Locking of the elbow joint

Causes & Risk Factors

Little leaguer's elbow is caused by stress or injury to the medial epicondyle growth plate, which is still developing through adolescence, from overuse or falls. Repeated stress or injury interferes with normal development of the growth plate resulting in inflammation. The risk for this injury increases with repetitive overhand throwing sports, such as baseball. In baseball, this injury is most commonly seen in pitchers especially those who throw breaking pitches (i.e. curveball & slider). These types of pitches tend to put more stress on the immature elbow and should be limited until they are older.



PITCH RECOMMENDATIONS	
AGE	PITCH
8 ± 2	FASTBALL
16 ± 2	SLIDER
10 ± 3	CHANGE UP
16 ± 2	FORKBALL
14 ± 2	CURVEBALL
15 ± 3	KNUCKLEBALL
17 ± 2	SCREWBALL

Treatment & Outcomes

Initial treatment may consist of non-steroidal anti-inflammatory medications (i.e. ibuprofen) and ice to relieve pain, stretching and strengthening exercises, and modification of activities. If symptoms persist its imperative to see a physician for further evaluation and treatment. Occasionally the affected elbow may need to be immobilized (brace, cast, or splint) for a few weeks. Surgery is rarely needed; however it may be necessary if conservative treatment fails and the growth plate separates completely and moves away from its proper location. Mild cases can resolve with slight reduction of activity level, whereas moderate to severe cases may require significantly reduced activity for 3-4 months.

Injury Prevention

Some basic precautions can go a long way in preventing this type of overuse injury. Consider the following:

- Appropriately warm up by running, stretching and an easy gradual throwing progression.
- Pitchers rotate to other positions that don't require hard throwing. (ie: 1st /2nd base)
- Maintain appropriate conditioning of the arm, forearm, wrist strength, flexibility, and endurance through year round fitness
- Maintain appropriate core strength and lower extremity flexibility (especially the hip flexor)
- Follow recommended pitch counts for pitchers (see below)
- Take active rest days to perform physical activities other than throwing (see below)
- Avoid throwing and pitching through discomfort and pain
- Avoid pitching on multiple teams with overlapping season
- Use proper throwing and pitching techniques – emphasize control, accuracy and good mechanics
- Never use a radar gun

MAXIMUM PITCHING LIMITS				
AGE	PER DAY	PER WEEK	PER SEASON	PER YEAR
7-8	50	75	1000	2000
9-10	75	100	1000	3000
11-12	85	125	1000	3000
13-16	95	*	*	*
17-18	105	*	*	*

DAYS OF REST REQUIRED FOR PITCHES THROWN IN A DAY					
AGE	0 DAY REST	1 DAY REST	2 DAYS REST	3 DAYS REST	4 DAYS REST
14 & Under	1-20	21-35	36-50	51-65	66+
15-18	1-30	31-45	46-60	61-75	76+

Information and Guidelines adapted from the following:

1. *Little League*® Baseball & Softball, 2010
2. Policy Statement for Baseball & Softball, *American Academy of Pediatrics*, 2012
3. Position Statement for Youth Baseball Pitchers, *American Sports Medicine Institute*, 2013

Children's Hospital & Medical Center's Sports Medicine Program has partnered with the American Orthopaedic Society for Sports Medicine's STOP Sports Injuries to help educate parents, coaches, and athletes about how to prevent injuries. For more information go to www.childsoma.org/sportsmedicine or www.STOPSportsInjuries.org.

Resources and for more information visit:

American College of Sports Medicine (ACSM) www.ACSM.org

American Academy of Pediatrics (AAP) www.AAP.org