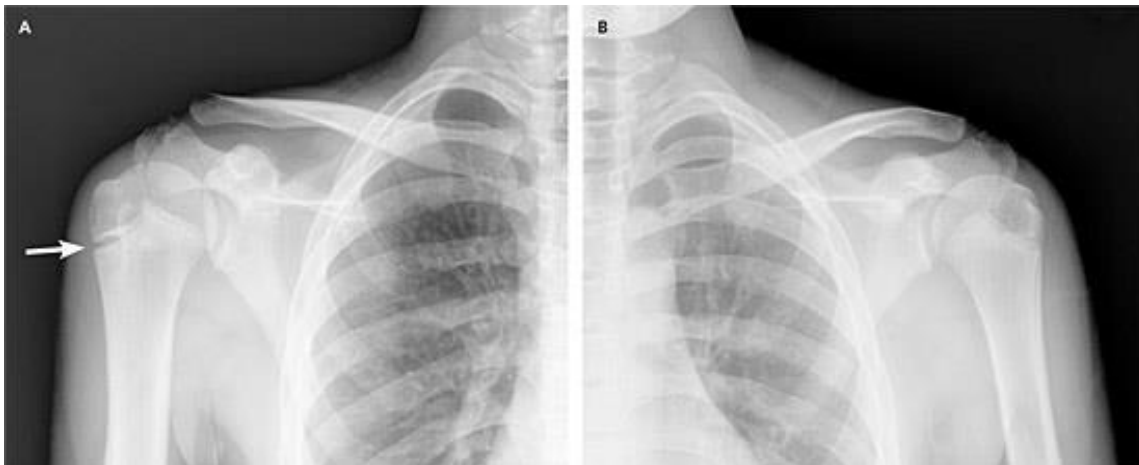


Little Leaguer Shoulder

Shoulder injuries are common in throwing athletes. One injury unique to the shoulder of early adolescents is termed Little Leaguer Shoulder. It is important to recognize this condition early to allow proper healing and safe return to play.

Little Leaguer Shoulder is a stress injury to the growth plate of the upper arm bone (the humerus). The growth plate, known as the physis, is the weakest part of a bone. Overhead throwing creates rotation and traction stresses on the growth plate. Repetitive stress can injure the growth plate resulting in a stress fracture and pain.

Little Leaguer Shoulder usually develops between ages 11-15. It occurs primarily in baseball players, but it has been reported in softball, swimming, tennis, volleyball and gymnastics. Patients complain of pain in the outer shoulder and upper arm when the arm is overhead. Pain increases during practices and games. Eventually pain causes weakness and inability to throw.



X-rays show the right humerus physis (at left) is widened which is typical Little Leaguer Shoulder as compared to the left humerus physis (at right).

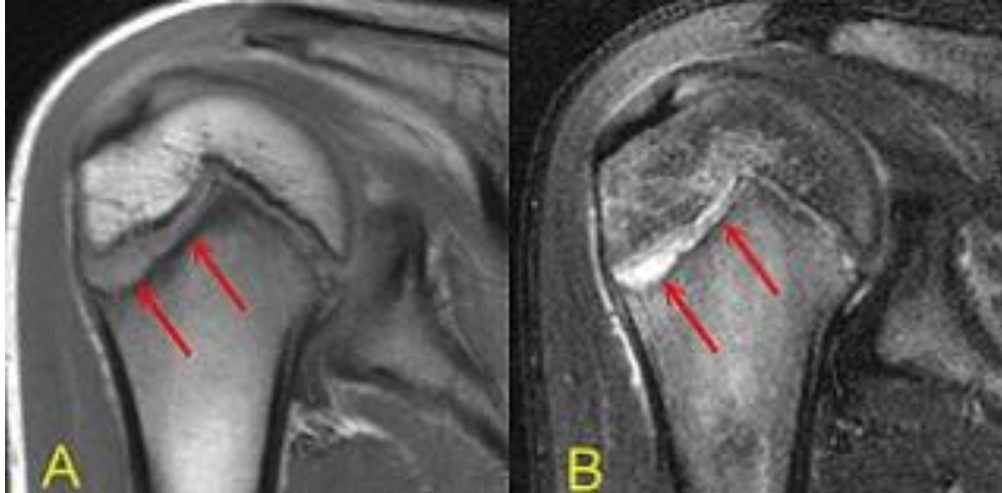
The main cause of Little Leaguer Shoulder is over use with an excessive amount of throwing. Other contributing factors include poor throwing mechanics, weak core and hip muscles and especially scapula stabilizing weakness. Inflexibility of the back, hip and hamstring muscles also are contributing factors.

Little Leaguer Shoulder usually can be diagnosed by a physician taking an injury history and performing a physical examination. Typically, the growth plate is tender to palpitation and pain occurs with cocking the arm as if to throw a ball. A simple X-rays can confirm the diagnosis

Treatment for Little Leaguer Shoulder includes rest from throwing for three weeks to three months depending on the severity and length of time the condition is present, followed by rehabilitation and a **gradual return to throwing** (six weeks or longer). To prevent re-injury or permanent damage, the athlete's throwing mechanics should be carefully evaluated and modified, if necessary.

Continued on next page

Areas of muscle weakness or tightness also should be addressed. Your physician should guide this rehabilitation process and the **gradual return to throwing**. With complete athlete compliance to the throwing restrictions and gradual progressive return to throwing, the condition should not recur or cause permanent problems.



MRI (A) shows widening at the humerus physis. MRI (B) shows inflammation. Both are indicators of Little Leaguer Shoulder

Interval Throwing Programs Prevent Re-Injury

Unfortunately, overuse shoulder injuries such as Little Leaguer's Shoulder, are all too common in young throwing athletes. It is important to recognize and treat this condition early to allow proper healing and safe return to play. Treatment for Little Leaguer Shoulder includes rest from throwing, rehabilitation exercises to increase strength and endurance, evaluation/modification of the athlete's throwing mechanics and a gradual return to throwing, rehabilitation exercises to increase of the athlete's throwing mechanics and a gradual return to throwing program.

An interval throwing program allows the athlete to increase demands on the throwing arm gradually progressing from no throwing to throwing at game volume. Typically, the program consists of four phases:

- Return to throwing
- Intensified pitching
- Return to pitching
- Game situation

Dr. Steven Chudik, board certified orthopaedic surgeon and sports medicine specialist in shoulder and knee injuries, and his health performance team used three data-based interval throwing programs that are age specific and take into account field dimensions, performance restrictions, in vitro biomechanical studies and an understanding of healing tissue physiology. They are:

- Little Leaguers (ages 9-12)
- 13/14 year-olds
- High School, College and Professionals

"Interval throwing programs provide the safest means for progressive training or the graded return of an injured pitcher to the mound," said Dr. Chudik. "Once back, it is critical coaches, parents and the baseball community make player health their number one priority to help prevent and minimize injuries," he added.

Email contactus@chudikmd.com for a free PDF copy of Dr. Chudik's age-specific interval throwing programs. Please provide your email or mailing address and the program title(s) you want.