Little Leaguer's Shoulder can be prevented

By Geoffrey S. Kuhlman, MD, and Steven Chudik, MD

Shoulder injuries are common in throwing athletes. One injury unique to the shoulder of early adolescents is termed Little Leaguer's Shoulder. It is important to recognize this condition early to allow proper healing and safe return to play. Little Leaguer's 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's Shoulder primarily develops in baseball players age 11 to 15, but I 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 an inability to throw.

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

Little Leaguer's Shoulder usually is diagnosed by a physician taking an injury history and performing a physical examination of the shoulder and arm. Typically, the growth plate is tender to palpitation and pain occurs with cocking the arm as if to throw a ball. Sometimes, a simple X-ray can confirm the diagnosis (see Figure 1). Initial X-rays are often normal so magnetic resonance imaging (MRI) may be ordered. It is more sensitive in detecting the condition, but it is not always necessary (see Figure 2).

Treatment for Little Leaguer's 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** (an additional six weeks or longer). To prevent re-injury or permanent damage, the athlete's throwing mechanics should be carefully evaluated and modified, if necessary. Areas of muscle weakness or tightness also should be addressed.

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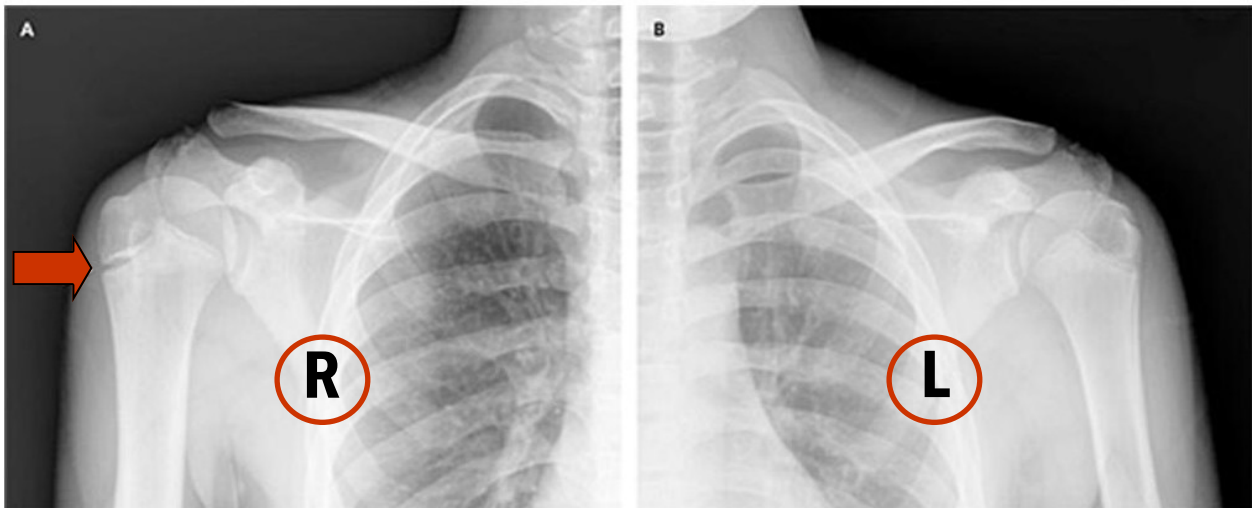
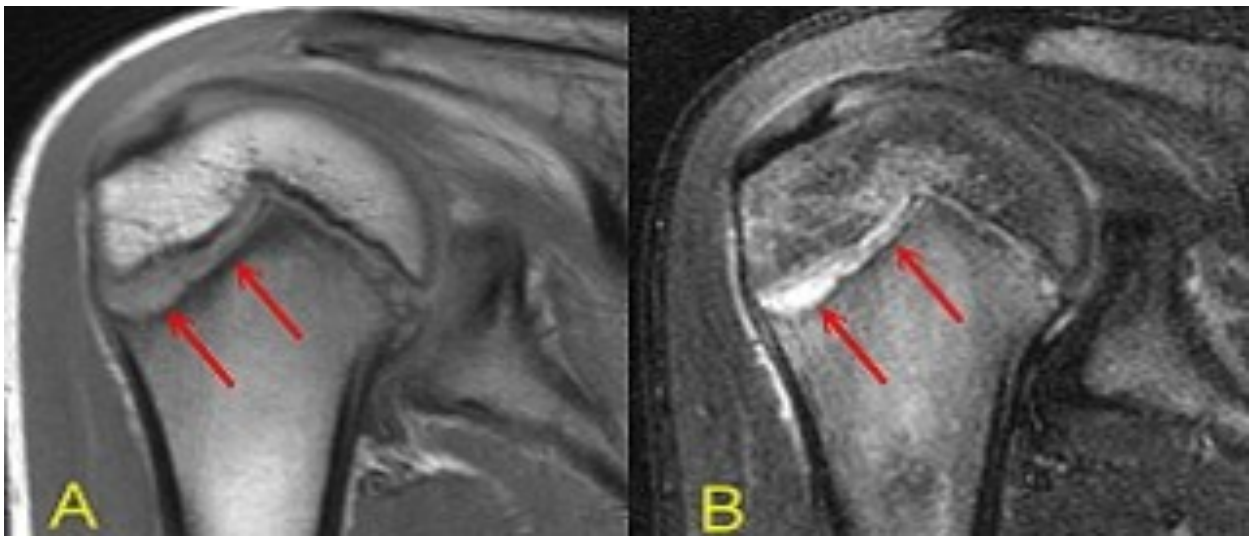
Your physician should guide this rehabilitation process and the **gradual return to throwing**. With complete athlete compliance to the throwing restrictions and gradual progressive return to throwing, the condition should not recur or cause permanent problems.

Figure 1



X-rays show the right humeral physis (shown on the left) reveals a widening consistent with Little Leaguer's Shoulder as compared to the left humerus physis (shown on the right).

Figure 2



MRI (A) above shows widening of the humeral physis. MRI B shows inflammation. Both are indicators of Little Leaguer's Shoulder.