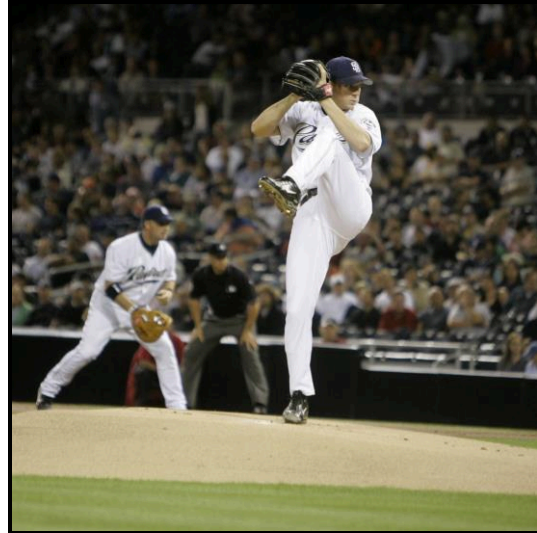


It's spring so... **PLAY BALL** and do it **SAFELY!!!**

With the return of green leaves, spring flowers and warmer temperatures one of America's favorite past-times returns and with it young and old aspiring amateur athletes will take to the baseball diamond to play under the lights. Baseball and softball are among the most popular as well as safe sporting activities in the United States. While injuries are relatively uncommon, the shoulder and elbow are the two most vulnerable joints in the throwing athlete. The two primary reasons for this include repetitive throwing and poor throwing mechanics.

For younger players aspiring to someday make it to "The Show", the amount of playing time and subsequent exposure has become a significant factor in injury suffrage. This in part is due to parents, coaches and athletes themselves wanting to work during the off season to improve their skills. Furthermore, better players tend to play on multiple squads from the local team, to all-stars, to the

traveling team. The number of innings pitched and throws performed can quickly add up. To prevent overuse injuries, league specific limits are currently used in baseball. For example, 11-12 year old Little League pitchers are restricted to 3 innings per game and a maximum of 6 innings of pitching each week.



Ligaments & Growth Plates

Excessive throwing, particularly in the growing child, with inadequate muscular strength and poor mechanics, results in excessive stress on the shoulder and elbow. The mature pitcher is more likely to sustain an injury to the rotator cuff of the shoulder and the medial ligament of the elbow. The growing athlete on the other hand will injure the growth plates of the shoulder and elbow. Repetitive stress of the growth plate may result in inflammation or even a fracture, both of which can lead to abnormal growth or even complete arrest of the growing bone. When this scenario occurs the young athlete will usually complain of stiffness and pain in the shoulder or elbow. The tell-tale-sign for concern in the young aspiring pitcher is a change in his throwing mechanics, i.e. dropping of the elbow or lack of complete follow through. Additionally he or she may spend more time "working on their pitching" which subsequently leads to more joint stress and increased pain. When this occurs the treatment is arm rest for a number of weeks. A specific rehabilitation program, followed by a gradual return to pitching is usually quite successful. When an inappropriately accelerated program is tried the player's recovery is placed in jeopardy and the likelihood of an extended period of disability increases.

Preventative Steps

Preparation is the best approach for prevention. When it comes to overuse injuries two critical components are recognized. They are to improve pitching and throwing mechanics and to limit the number of pitches thrown per week. These numbers should be based on the athlete's age as outlined in the table below (*adapted from Prevention and emergency management of youth baseball and softball injuries, AOSSM 2006*). Coaches and parents should observe these guidelines. This is particularly important for the better players who may find themselves on several different squads and playing throughout the entire year as noted above.

TABLE 3 Maximum Number of Pitches Recommended		
Age	Maximum Pitches/Game	Maximum Games/Week
8-10	52 ± 15	2 ± 0.6
11-12	68 ± 18	2 ± 0.5
13-14	76 ± 16	2 ± 0.4
15-16	91 ± 16	2 ± 0.4
17-18	106 ± 16	2 ± 0.6

Additional preventative measures to ensure a safe season include a pre-participation health screening exam to be done on an annual basis. Athletes should be educated with respects to proper nutrition and hydration in order to maximize their athletic conditioning and overall growth as a player. The playing facilities should be regularly inspected and maintained appropriately. Close coaching supervision is also a must so that techniques can be mastered and performed correctly while making sure that the consistent and proper use of all protective gear is followed. Following these guidelines will help to keep your young baseball & softball players in the game for many years to come.

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