

## Implementation of New Little League Pitch Counts Helps to Decrease Injuries in Youth Baseball Players

Throwing injuries in baseball are becoming more prominent in recent years. Many of these injuries are being seen at the youth and high school levels, in addition to college and professional players. With the increasing involvement of our youth in year-round play, showcases, and traveling leagues, these young players are much more prone to overuse throwing injuries. Youth baseball players may pitch or throw several games in a row over multiple days making the throwing arm painful and precipitating overuse injuries. Many of these injuries can affect the youth for the rest of his/her life.

Sports medicine authorities have seen a drastic increase in overhead throwing injuries involving little league baseball players over the past decade. Youth pitchers in particular are involved in an alarming number of overuse injuries in the shoulder and elbow of their throwing arm. Some pitchers may pitch daily with little rest between pitching days during their regular season, and the chances of injury increase even more in areas where there is “year round” play.

A one-year study by Whiteside and Andrews reviewed 172 pitchers between the ages of 9-12 years and found that 40% of these pitchers had elbow injuries. An American Academy of Pediatrics’ study showed that 50% of the 15-18 million youth injuries requiring medical attention were related to overuse. It was recently believed that throwing curve balls, change ups, and slides at too early of an age was the main precipitating factor in injuries seen in the throwing arms of younger players. Now, authorities agree that overuse of the throwing arm, in addition to throwing these types of pitches at too young of an age, are the main precipitating factors in throwing injuries in younger players.

Authorities still agree that throwing curve balls, change ups, and sliders at too young of an age contributes to throwing injuries and adds a higher percentage of injury to the throwing arm. CE Silberstein, MD (team physician for the Baltimore Orioles Baseball Team) recommends that coaches and parents prevent youth from throwing change ups until 11-12 years, curve balls until 14-15 years, and sliders until 18 years of age. The types of pitches thrown have been shown to increase the chance for injury. Types of pitches and the number of pitches thrown need to be understood in order to decrease the chance for injury in youth players.

Injuries to the throwing shoulder and elbow occurring in players at a young age can plague the player for the rest of their life. Continuation of throwing after pain begins in the arm indicates overuse in most cases. Coaches need to be aware of the number of pitches thrown as well as the type of pitches his player is throwing. Little League Baseball in association with the American Sports Medicine Institute have developed a **Little League Pitch Count Regulation Guide** to assist parents and coaches in keeping the number of pitches thrown to a safe limit. James Andrews, MD, Medical Director of

the American Sports Institute in Birmingham, Alabama is considered the authority by Little League baseball on pitching injuries. He has assisted Little League Baseball in developing the guide. Examples of the pitch counts are as follows:

Pitch counts per day	17-18 years	105 pitches per day
	13-16 years	95 pitches per day
	11-12 years	85 pitches per day
	10 and under	75 pitches per day
Rest recommendations (16 years and younger)	61 pitches or more in a day	3 days rest
	41-60 pitches in a day	2 days rest
	21-40 pitches in a day	1 day rest
	1-20 pitches in a day	0 days rest
17-18 years	76 or more pitches in a day	3 days rest
	51-75 pitches in a day	2 days rest
	26-60 pitches in a day	1 day rest
	1-25 pitches in a day	0 days rest

The full guide can be found at: [www.Littleleague.org/media/pitch\\_count\\_publication.pdf](http://www.Littleleague.org/media/pitch_count_publication.pdf)

Most overuse injuries in adolescent and youth players are asymptomatic according to Orr Limpisvasti, which leads to damage to the elbow and shoulder without warning. As coaches and parents urge their children to play in more and more innings, pitching more and more pitches, and continuing to throw when the player is having pain in the throwing arm, there will be damage to the throwing arm. Enough repetitive throwing has been shown to cause permanent damage. The American Sports Medicine Institute data showed ulnar collateral ligament (Tommy John) surgeries are two times more prevalent for major league pitchers, four times more for collegiate pitchers, and six times more for high school pitchers.

According to Stephen D. Keener, president and chief executive officer of Little League Baseball and Softball, "Little League has rich history of pioneering baseball safety innovations. As the world's largest youth sports program, Little League is proud to take leadership position in youth sports safety." Jamie Reed, Athletic Trainer for the Texas Rangers and President of the Professional Baseball Athletic Society (PBATS) states that he feels that the new pitch count implemented by Little League Baseball is "definitely a step in the right direction, and will certainly help protect young arms."

#### References:

1. Whiteside J.A., Andrews J.R., Elbow Injuries in Young Baseball players, The Physician and Sports Medicine, Vol. 27 No.6, June 1999.
2. American Academy of Pediatrics "Strength Training by Children and Adolescents", Pediatrics Vol. 107, No..6, June 2001.

3. Limpisvasti, Orr, Preventing Injuries in Youth Baseball, PBATS, Baseball Medicine Conference, San Diego, California, January 5, 2007.
4. Silberstein C.E., Associate Professor of Orthopedics Surgery, Team Physician for Baltimore Orioles, Adolescent Baseball Injuries, Injury Prevention and Treatment Techniques, Baseball Medicine Conference, Baltimore, Maryland, January 9, 2004.
5. Reed, J. "Top Major League Baseball Athletic Trainer Sees Merit in Little League's Pitch Count", Little League Online, November 22, 2006.
6. [ASML.org/asmiweb/research/youthbaseball.htm](http://ASML.org/asmiweb/research/youthbaseball.htm)"Epidemiology".