

## Prevention of Arm Injury in Youth and High School Baseball Pitchers

The incidence of arm injury and corrective surgery (Tommy John surgery) in young baseball pitchers has significantly increased in the past several years. While arm soreness is a normal part of pitcher development, joint pain is not, and is believed to be a warning sign of overuse injury.

Dr. James Andrews and the American Sports Medicine Institute (ASMI) have identified several risk factors for development of arm injury, including that of a high pitch count and pitching through fatigue. It was found that when regularly pitching despite arm fatigue, the risk for injury requiring reparative surgery increased by 3600 % !

According to the ASMI, *“Throwing curveballs has been suggested as a risk factor, but the existing research does not support this concern. However, a youth pitcher may not have enough physical development, neuromuscular control, and proper coaching instruction to throw a curveball with good mechanics. Throwing curveballs too early may be counter-productive, leading to arm fatigue as well as limiting the youth's ability to master fastball mechanics.”*

Several studies have demonstrated that similar mechanics are used by successful pitchers, no matter the age or skill level. Teaching proper pitching mechanics helps reduce the incidence of injury.

The USA Baseball Medical & Safety Advisory Committee has published recommendations to reduce injury risk and maximize a young player's chance for advancement to higher levels of baseball competition. These include limits on pitch count and also rest days after a pitching event. In addition, the Committee recommended avoidance of throwing breaking pitches until puberty, using proper mechanics as early as possible in the development of the pitcher, and year-round physical conditioning.

Dr. Kerut co-authored a paper with a group of doctors including Dr. James Andrews that reached this conclusion: *“The biggest risk factor for subsequent injury appears to be arm fatigue. Pitchers who frequently pitch with arm fatigue are much more likely to develop future injuries requiring surgery. Hence, coaches need to listen to their young pitchers when they complain of arm fatigue or pain.”*

A copy of this medical paper is available online at:

[http://www.heartclinicoflouisiana.com/Kerut/\\_papers/60%20Prevention%20of%20Arm%20Injury%20in%20Youth%20Baseball%20Pitchers.pdf](http://www.heartclinicoflouisiana.com/Kerut/_papers/60%20Prevention%20of%20Arm%20Injury%20in%20Youth%20Baseball%20Pitchers.pdf)

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