

# Health

## Safe Youth Baseball Pitching and Playing Guidelines

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The popularity of youth baseball continues to increase in the United States and worldwide. It is estimated that approximately nine million children ages 6 to 17 participate in youth baseball in the United States.

An unfortunate byproduct of this popularity has been an increased incidence of injuries to the throwing elbow. Most of these appear to be misuse/overuse injuries, including osteochondritis dissecans, medial epicondylar avulsion, and injuries to the ulnar collateral ligament.

Why are these injuries being seen with increasing frequency in the pre-adolescent and adolescent pitcher? While some of this increase can be accounted for by improved recognition resulting from recent advancements in diagnosis, elbow overuse and misuse appear to be primarily responsible.



Brandon Wilson lines up a pitch for the Region 3 team at the State Games of North Carolina in Charlotte on June 19. Wilson is senior at Cary Academy where he pitches for his Chargers baseball team (Photo by www.laynebailey.com).

### How To Estimate Elbow Overuse or Misuse

A parent or coach can estimate overuse of the adolescent pitcher's elbow by quantifying pitching volume (pitch counts per game, innings per week and weeks of play per year). Overuse appears to be on the increase in youth baseball. Misuse is the result of poor pitching mechanics, but also occurs with the premature use among youth of the breaking ball (curve ball or slider). Breaking balls produce more stress on the elbow than a fastball.

The main concern with breaking pitches in youth baseball is that pitchers do not learn to throw them correctly. They experiment with various deliveries before finding one that actually makes the ball "move a bit" and allows them to be successful. Buoyed by this success, the young pitcher will throw more and more breaking pitches, sometimes as often as 50 percent of the time.

This retards development for several reasons. First, if a young pitcher favors breaking pitches, he or she tends to throw fewer fastballs. Throwing fastballs is key to developing arm strength

and diminishing the risk of injury as one matures. Second, by throwing so many curveballs "the wrong way," the young pitcher risks severe damage to his or her elbow.

### What Young Pitchers Should Focus On

Young pitchers should focus on fastball control and repetition and then work to develop a consistent change-up. Fastballs should be used at least 90 percent of the time. This will develop the necessary arm strength both in the short and long term.

Once pitchers are physically and emotionally ready to start throwing breaking pitches, and they have learned the proper mechanics, they should practice throwing breaking pitches from a shortened distance until throwing motion is sound and repeatable. Then, and only then, should they be permitted to throw breaking balls from the regulation pitching distance in a practice setting. Finally, when the pitcher has shown the ability to throw the pitch properly for a strike, he or she can be allowed to throw breaking balls in a game setting.

It is imperative that coaches of young players monitor the number of curveballs that their pitchers throw—a limit of one or two per inning or one per every 10 pitches is recommended. Again, even if a young pitcher throws a breaking pitch correctly, if he or she relies on it too much, the player's arm strength will suffer, which in turn could hinder his or her ability to pitch successfully (and injury-free) in the future.

### Protecting The Health of Our Young Athletes

The Little League Baseball governing body restricts the number of innings per week a player may pitch; however, its leaders have not defined the maximum pitches per game or the ages at which breaking balls may be thrown, or made other recommendations regarding coaching practices to protect the health of young athletes. The emphasis on overuse injuries in youth baseball must be on prevention rather than treatment, and it is incumbent on youth baseball governing bodies to formulate and enforce sensible and safe youth pitching and playing guidelines.

Coaches, parents and participants must be educated and willing to sacrifice short-term success for long-term health and optimal development of the young athlete. Our children are not pitching in the World Series—it is important to realize that proper development outweighs the competitive nature of youth baseball. Until then, governing bodies of youth baseball organizations must take leading roles in the education of players, parents and coaches, and in promulgating regulations that will ensure the long-term health of these athletes.

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