

Majority of parents, caregivers of youth baseball pitchers unaware of safe pitching practices designed to prevent overuse injuries

LAS VEGAS - A new study presented today at the [2015 Annual Meeting of the American Academy of Orthopaedic Surgeons](#) (AAOS) found that 53 percent of the parents/caregivers of youth baseball pitchers are unaware of safe pitching practices designed to prevent overuse injuries—common tears or damage, most often to the elbow (ulnar collateral ligament) or shoulder—which can cause pain, lost play time and, if not treated appropriately, arthritis, deformity and disability.

Between 2 and 8 percent of youth pitchers will suffer an overuse injury from throwing too hard, too often, too young, and/or without appropriate rest once pain begins in the shoulder or elbow. One recent study found that approximately 38 percent of pitchers will miss at least one game because of arm pain, with 34 percent experiencing pain severe enough to warrant a doctor's visit.

As the number of overuse injuries continues to rise in young baseball players, safe pitching guidelines—which focus on proper warm up exercises; maximum play time and pitch counts; recommended rest periods; appropriate ages for learning various types of pitches; and not playing on multiple teams, year round or on consecutive days—are being integrated into play at many of the nation's 200,000 youth baseball teams, ideally with a firm, cooperative commitment from coaches, parents/caregivers and players.

"Ensuring the safety of all athletes through injury prevention is absolutely necessary, especially when it comes to youth competitors," said University of Florida orthopaedic surgeon and lead study author Andrew Waligora, MD.

In the study, researchers distributed and analyzed results from a 22-question survey completed by the parents of 60 youth baseball players. The content of the survey was based on recommendations provided by the USA Baseball and Medical Safety Advisory, Little League Baseball and the American Sports Medicine Institute. Sixty-one percent of the respondents identified themselves as the child's mother. Ninety-three percent of the respondents were white, 41 percent were 41 to 50 years old, and 44 percent were the parent of a pitcher between the ages of 13 and 16.

Fifty-three percent of the parents or caregivers said they were unaware of the existence of safe pitching guidelines, 54 percent stated that they did not actively participate in monitoring their child's pitch count, and 20 percent were unaware of how many pitches their child threw in a typical game. Among the other findings:

- **49 percent of pitchers threw in more than one league at a time**, and 25 percent pitched in a league more than nine months out of the year.
- **Sixteen percent of the parents or caregivers surveyed did not know what kind of pitches their children threw.**
- **Seventy-five percent of parents or caregivers of 11- to 12-year-old players said their child threw "curveballs," and 17 percent, "sliders."** Of those who were aware of their child throwing "breaking pitches"—curveballs, sliders, slurve or screwballs (all more advanced pitches)—18 percent reported that they learned how to throw these pitches from a parent.
- **Sixty-four percent of parents or caregivers recalled their child having upper extremity pain as a direct result of pitching**, 38 percent had to miss either a game or pitching because of discomfort, and 34 percent experienced pain concerning enough to be evaluated by a medical

professional.

There were no significant correlations between the number of pitches typically thrown in a game, the child's position when not pitching, number of months pitched during the year, who keeps track of pitch count, and arm pain.

"This research emphasizes the importance of caregiver participation in ensuring compliance with youth safe pitching practices," said Dr. Waligora. "Despite the implementation and easy accessibility of safe pitching guidelines, a large portion of caregivers surveyed were unaware and/or noncompliant with these established recommendations. Given the results of this study, further measures need to be taken to improve both education and compliance. Injury prevention should be a multi-disciplinary approach that includes informing coaches, parents and youth pitchers about safe pitching practices. Future directions may include establishing outreach programs for the youth baseball community."

More information on youth baseball safety is available at [STOP Sports Injuries](#) and the [American Orthopaedic Society for Sports Medicine \(AOSSM\)](#).

[Study abstract](#)

#

Related research, also presented at the [AAOS 2015 Annual Meeting](#), found that a majority of "healthy," actively competing youth baseball players report at least some baseline arm pain and fatigue, and that many players suffer adverse psychosocial effects from this pain. In "[Arm Pain in Youth Baseball Players: A Survey of 'Healthy' Players](#)," 203 players were surveyed on arm pain and injury. Twenty-six percent of players reported that their arm never hurt when throwing, 20 percent said that their arm hurt the day after throwing, 30 percent of players reported that arm pain at least sometimes caused them to have less fun playing, and 46 percent of players reported at least once being encouraged to keep playing despite arm pain. The study, which first appeared in the November 2014 online issue of the *American Journal of Sports Medicine*, also found that pitchers were more likely to report arm pain while throwing the day after throwing, and that arm pain held them back from being better players.

[View 2015 AAOS Annual Meeting disclosure statements](#)

[About AAOS](#)

Follow us on [Facebook.com/AAOS1](#) and [Twitter.com/AAOS1](#)

[Orthopaedic surgeons](#) restore mobility, reduce pain and provide [value](#); they help people get back to work and to independent, productive lives. Visit [ANationInMotion.org](#) to read successful orthopaedic stories.

For more information on bone and joint health, visit [Orthoinfo.org](#).

Contact(s):

Kristina Goel

phone: 847-384-4034

email: goel@aaos.org

Lauren Pearson Riley

phone: 847-384-4031

email: pearson@aaos.org