

'Tommy John' reconstructive surgeries on the rise among young athletes

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A new study found a dramatic increase in the number of adolescents undergoing "Tommy John" surgery to repair a pitching-related elbow injury in recent years, outstripping growth among major league pitchers.

The study, performed by researchers at Columbia University Medical Center (CUMC), was published in the January online issue of the *American Journal of Sports Medicine*.

"Everybody who follows baseball is worried about the rise in Tommy John procedures in the major leagues, and rightly so," said study leader Christopher S. Ahmad, MD, professor of orthopedic surgery at CUMC, head team physician for the New York Yankees and chief of [sports medicine](#) at NewYork-Presbyterian/Columbia. "But we should also be worried about the 6 million children and young adults in the US who play this game and are at risk for significant pitching-related injuries. We need to determine why these injuries are so common and what can be done to prevent them."

Tommy John surgery, named for the Los Angeles Dodgers pitcher who first had the procedure in 1974, involves replacing a torn or ruptured ligament in the elbow known as the ulnar collateral ligament (UCL) with a tendon from another part of the body.

Analyzing data from the New York Statewide Planning and Research Cooperative System, the researchers found that 444 patients underwent surgery to repair the UCL between 2002 and 2011. The median age of

the patients, mostly male, was 21. During that period, the total volume of UCL surgeries increased nearly 200 percent, while the number of UCL reconstructions per 100,000 people tripled from 0.15 to 0.45. Almost all of the growth occurred in two age groups, 17- to 18-year-olds and 19- to 20-year-olds. Patients who are white and had private insurance were 25 times more likely to undergo UCL construction than blacks and Hispanics with government insurance.

Tommy John surgery has a high success rate, but full recovery can take a year or more. In many cases, UCL injuries can be treated effectively with rest, physical therapy, and nonsteroidal anti-inflammatory medications. While the increase in UCL reconstructions among professional athletes has been well documented, few studies have looked at the incidence among younger, non-professional athletes.

While the study did not address reasons for the increase in UCL reconstructive surgery, Dr. Ahmad suspects a major factor is the fiercely competitive culture of youth baseball, which encourages talented players to throw more frequently, with greater intensity, and at a younger age. "Whatever the cause, we now know for certain that more kids are getting injured," he said. "We should be asking ourselves what we can do to prevent these injuries."

According to Dr. Ahmad and other experts in the field, the solution may be to provide more education about the risks of overuse throwing injuries and the importance of adherence to preventive guidelines, such as pitch-count limits.

In a previous study, Dr. Ahmad found that three-quarters of young players reported having arm pain while throwing, and almost half of all players had been encouraged at least once to continue playing despite having arm pain. Signs of injury include fatigue, pain, taking medicine for pain, and icing excessively.

"If a young player is hurting, he or she should not keep playing or pitching," said Dr. Ahmad.

"Kids, of course, think they're indestructible. Parents and coaches are in a position to tell athletes when it's time to give the arm a rest, and if they need to take a temporary break from baseball."

More information: The study is titled, "Epidemiology of Medial Ulnar Collateral Ligament Reconstruction A 10-Year Study of New York State."

Provided by Columbia University Medical Center

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