

Entering MLB early may increase elbow surgery risk

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The common elbow surgery made famous by Major League Baseball (MLB) pitcher, Tommy John, definitely does its job to return pitchers to the mound, but risks for having the surgery may be able to be recognized earlier in a player's career, say researchers presenting their work at the American Orthopaedic Society for Sports Medicine's (AOSSM) Annual Meeting today. The study was the largest cohort of MLB pitchers, to date, that have undergone UCL reconstruction.

"Our results suggest that UCL reconstructive surgery does a tremendous job in allowing players to return to their same level of sport but it also describes a decline in pitching performance after undergoing reconstruction. We also found that there is a statistically significant decline in pitching performance the year before reconstructive surgery and this decline was found to be a risk factor for requiring surgery. Our study further noted an increased risk of players requiring surgery if they enter the Major Leagues at a younger age," said lead author, Robert A. Keller, MD of Henry Ford Hospital in Detroit, Michigan.

Keller and his team analyzed the statistics for 168 major league pitchers, who threw at least one season at the Major League level and subsequently underwent UCL reconstruction. Statistical data, including earned run average (ERA), walks and hits per innings pitched (WHIP), win percentage, innings pitched, and salary were compared for the three years before and three years after undergoing UCL reconstruction. The data was compared to 178 age matched controlled MLB pitchers. Risk factors for reconstruction were analyzed using a multivariable

generalized estimating equation (GEE) model

Of the pitchers undergoing UCL reconstruction surgery 87 percent returned to the Major League level. Of the pitchers that returned, they had a statistically significant decline in their ERA ($P=0.001$), WHIP ($P=0.011$), Innings Pitched (0.026), compared to pre-reconstruction performance. Reconstructed pitchers also had a statistically significant decline in their pitching performance in the season before their surgery (ERA $p=0.014$, WHIP $p=0.036$, Innings pitched p

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