

Risk factors identified for elbow and shoulder injuries in professional baseball pitchers

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Increasing numbers of elbow-related injuries in professional baseball pitchers has led to research studying risk factors, especially those that can be modified and adjusted to help prevent lost playing time.

Decreased shoulder flexion and external rotation were identified as key predictors of injuries to pitchers during the season, according to a study presented today at the American Orthopaedic Society for Sports Medicine's Annual Meeting in Toronto, Ontario, Canada.

"Our research showed that in pitchers studied, the most significant factors associated with elbow injury rates included the presence of shoulder external rotation deficit and shoulder flexion deficit greater than five degrees during Spring Training," noted corresponding author Christopher L. Camp, MD, Hospital for Special Surgery in New York. "Internal rotation deficits did not demonstrate a similar risk for injury during the season."

The study examined pitchers of one Major League Baseball (MLB) team over the course of six seasons (2010-2015), beginning with a preseason assessment of range of motion (ROM). Throughout 132 pitcher seasons, 53 shoulder and 28 elbow injuries occurred, with the most common elbow injury being UCL tears. The risk of elbow injury increased 1.09 times for every one degree decrease in shoulder flexion, and 1.07 times for every one degree increase in external rotation deficit, and 2.83 times with a greater than five-degree flexion [deficit](#) compared to the non-

dominant side.

"Identifying these predictors of [injury](#) can hopefully help medical staff work with pitchers," commented Camp, "and ultimately help prevent lost playing time in the future."

The group's research adds to previous studies which have shown glenohumeral internal rotation deficits (GIRD) are a risk factor for shoulder and [elbow injuries](#).

Provided by American Orthopaedic Society for Sports Medicine

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