

# Progression to glenohumeral arthritis after arthroscopic posterior stabilization

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Approximately 12 percent of patients who underwent shoulder stabilization surgery experience arthritis in the shoulder joint within a seven-year period, according to research presented today at the American Orthopedic Society for Sports Medicine-Arthroscopy Association of North America Combined 2021 Annual Meeting.

"While arthroscopic stabilization for posterior glenohumeral instability has shown excellent success preventing recurrent instability and allowing return to sport, eventual progression to glenohumeral arthritis remains a concern in these patients," said Bobby Yow, MD, of Walter Reed National Military Medical Center, Bethesda, Md. Yow and colleagues sought to evaluate the rate of progression to glenohumeral arthritis and identify potential [risk factors](#) after arthroscopic posterior stabilization in a young and high demand population.

Yow and fellow researchers enrolled 110 patients who were active duty servicemembers identified in the Military Health System (MHS) with posterior shoulder instability who underwent primary arthroscopic surgical stabilization and had postoperative imaging or medical records available over a twelve-year period between January 2004 and September 2016.

Among the 110 patients with posterior shoulder instability that underwent arthroscopic stabilization, 12.7% (14/110) developed glenohumeral arthritis. The mean age of all patients was 23.9 years (SD 6.71). The median time to diagnosis of arthritis was seven years and the

median follow-up time was 8.1 years (IQR 5.8). Among all diagnosed with posterior shoulder instability requiring surgical fixation, 12.7% (14/110) developed glenohumeral arthritis during the study period. The overall incidence of GH arthritis was 1.7 per 100 person-years (95% CI 0.92, 2.81). Ten-year GHOA-free survival was 84.0% (95% CI 75.3, 93.8). Hazard ratios (95% CIs) estimated from separate Cox regression models of the development of glenohumeral arthritis were 1.45 (0.76, 2.74) or age in years (per SD) and 0.87 (0.74 to 1.03) for glenoid bone loss.

"No previous study has reported the incidence and risk factors for glenohumeral [arthritis](#) after arthroscopic surgical stabilization for posterior shoulder instability," Yow reported. "Though no risk factors were found amongst the cohort, the hypothesized higher risk with increasing age at index procedure and near significant confidence interval for glenoid bone loss warrants further evaluation in larger cohorts not limited to active-duty service members."

Yow said that their findings may help guide clinical decision making and chronicity of treatment for patients presenting with posterior [shoulder instability](#).

Provided by American Orthopaedic Society for Sports Medicine

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