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Original Research

Association of Generalized Joint Hypermobility With a History of Glenohumeral Joint Instability

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Abstract

Context: Little is known about the relationship among sex, generalized joint hypermobility, and glenohumeral joint instability.

Objective: To examine the relationship among sex, generalized joint hypermobility scores, and a history of glenohumeral joint instability within a young, physically active cohort and to describe the incidence of generalized joint hypermobility within this population.

Design: Cross-sectional cohort study.

Setting: United States Military Academy at West Point, New York.

Patients or Other Participants: Of the 1311 members of the entering freshman class of 2010, 1050 (80%) agreed to participate.

Main Outcome Measure(s): Generalized joint hypermobility was assessed using the Beighton Scale. A history of glenohumeral joint instability was identified via a baseline questionnaire.

Results: Most participants (78%) had no signs of generalized joint hypermobility. Only 11 volunteers (1.5%) had Beighton Scale scores of 4 or greater. Logistic regression analysis revealed a relationship between generalized joint hypermobility and a history of glenohumeral joint instability ($P = .023$). When sex and race were controlled, those with a total Beighton Scale score of ≥ 2 were nearly 2.5 times as likely (odds ratio = 2.48, 95% confidence interval = 1.19, 5.20, $P = .016$) to have reported a history of glenohumeral joint instability. A relationship was

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[◀ Previous](#) [Next ▶](#)



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observed between sex and nearly all individual Beighton Scale items. Although women had higher total Beighton Scale scores than men, sex ($P = .658$) and race ($P = .410$) were not related to a history of glenohumeral joint instability when other variables in the model were controlled.

Conclusions: In these participants, generalized joint hypermobility and a history of glenohumeral joint instability were associated.

Keywords: [military athletes](#), [sex differences](#), [joint injuries](#), [shoulder injuries](#)

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[top](#) ▲

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