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**Different Measuring Techniques May Lead to Incomplete Shoulder Injury Treatment**  
***Stabilization of scapula while measuring shoulder internal rotation proves most reliable***

**ROSEMONT, IL** – Accurate initial assessment of shoulder motion may help prevent future shoulder injury susceptibility, reports a study published in the March/April issue of *Sports Health: A Multidisciplinary Approach*.

Three measuring techniques are generally used during a shoulder motion assessment — stabilization of the humeral head, stabilization of the scapula, and visual inspection. Results from this study illustrated that stabilizing the scapula while rotating the patient's arm provided the most reliable range of motion measurement.

"A decrease in the internal rotation of the shoulder makes an athlete much more susceptible to injury," explains Kevin Wilk, PT, DPT, lead study author from Champion Sports Medicine in Alabama. "Accurately assessing this rotation is key to setting up a rehabilitation or strength program to prevent future injury."

The first group, made up of 20 subjects, was used to assess the intra- and inter-tester reliability of the three methods of measurements for shoulder internal rotation. The second group included measurement of both shoulders of 39 professional baseball players during spring training.

The first group was measured to test the reliability of each individual shoulder motion assessment technique. The second group was used to compare the three techniques. All three methods produced varying measurements, which led researchers to a variety of discrepancies. The authors recommend stabilizing the scapula through the coracoid process, rather than placing the hand over the back part of the glenohumeral joint to maximize reliability. This technique still allows for normal movements of the joint.

"It's well understood that measuring internal rotation is important, but there are differing opinions concerning the best measuring technique," adds Michael M. Reinold, PT, DPT, ATC, CSCS, Rehabilitation Coordinator for the Boston Red Sox. "Our study evaluated these differences in results and found that all three methods had a low reliability to assess injury, but scapula stabilization was the most effective."

"There is no gold standard for internal rotation measurement, making it difficult for clinicians and researchers to accurately compare patient findings and data," Wilk says. "It is our hope that this study brings attention to the importance of adopting a standardized technique to measure shoulder internal rotation to ensure consistency and accuracy with patient care."

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