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## **The Clicking Shoulder**

By Warren Hammer, MS, DC, DABCO

Often patients complain of a clicking shoulder. The age at which the clicking began, whether they eventually became aware of it after an injury, and whether it's a painful click are factors to consider.

Under 25, clicking is probably more related to an instability problem than in later years in which loose bodies and a thickened bursa are frequent causes. A painful click represents some type of pathology. A painless click rarely indicates internal derangement.<sup>1</sup> Neer's<sup>2</sup> second stage of the impingement syndrome describes a thickened, scarred bursa in patients 25 to 40 years of age. Loose bodies are usually visualized by radiography. The above causes of a painful click may also cause a palpable and audible crepitus at the same time.

A tear in the glenoid labrum is the most frequent cause of the clicking shoulder. The labrum is a fibrous structure joined to the glenoid fossa. Its function is to deepen the concavity of the glenoid fossa, act as the origin for the glenohumeral ligaments, and has a role in resisting anterior translation of the humeral head.

Some causes of tears in the labrum are: repetitive overhead sports activities causing fatigue of the stabilizing dynamic rotator cuff muscles allowing excessive humeral head translation over the glenoid labrum;<sup>3</sup> falling on an outstretched arm entrapping the superior labrum under the humeral head; and forceful eccentric contraction of the biceps during the acceleration phase of throwing in which the biceps is attempting to decelerate the rapidly extending elbow.<sup>4</sup> The biceps is confluent with the superior labrum where it originates off the superior glenoid tubercle. These injuries do not necessarily always result in instability.

The tear in the labrum and detachment of the labrum from the glenoid rim may be responsible for true glenohumeral instability resulting in recurrent dislocation or subluxation. Instability results because the main barrier to anterior instability is the loss of attachment of the inferior glenohumeral ligament which originates off the anterior-inferior glenoid labrum. These cases will exhibit pain or apprehension on passive lateral rotation and excessive motion on the load and shift test.

Pappas et al.,<sup>5</sup> has shown that labrum tears may occur without instability. He calls this a "functional instability" in which there is no excessive glenohumeral motion but only mechanical symptoms resulting in clicking, catching or locking due to partially torn or bucket-handle labral tears. This is similar to a meniscus knee tear without instability. The glenoid tear interferes with motion between the glenoid and humeral head. In this situation there may or may not be a complaint of clicking or catching. The "clunk test" is used to express the mechanical interference caused by an anterior labral tear. The patient is supine; the examiner puts one hand behind the shoulder and pushes the humeral head anterior while bringing the arm into a full overhead, abducted position. While in the above position, the examiner circumducts the shoulder attempting to elicit a clunk or grind.

The conservative treatment for instability is a progressive program of rotator cuff strengthening.<sup>6</sup>

#### *References*

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*Warren Hammer, M.S., D.C., D.A.B.C.O.*

*Norwalk, Connecticut*

Editor's Note:

Dr. Hammer will conduct his next soft tissue seminar on March 28-29, 1992 in Cincinnati, Ohio, and April 11-12, 1992 in Indianapolis, Indiana. You may call 1-800-327-2289 to register.

Dr. Hammer's new book, Functional Soft Tissue Examination and Treatment by Manual Methods: The Extremities, is now available. Please see the Preferred Reading and Viewing list on page xx, Part #T126 to order your copy.

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