RAPID RESEARCH

@physicaltherapyresearch

May 2023

Inside This Week:

Accuracy of Shoulder Assessments

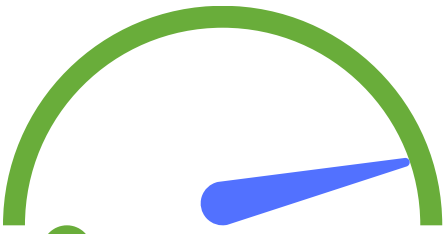
- Exam to Diagnosis Acromioclavicular Joint Pathology
- Diagnosing Pathology of the Long Head of the Biceps
- Diagnostic Exam for Subscapularis Tears

EXAM TO DIAGNOSIS ACROMIO CLAVICULAR JOINT PATHOLOGY

MAY 2023

Click for Full Text (Krill et al. 2019)

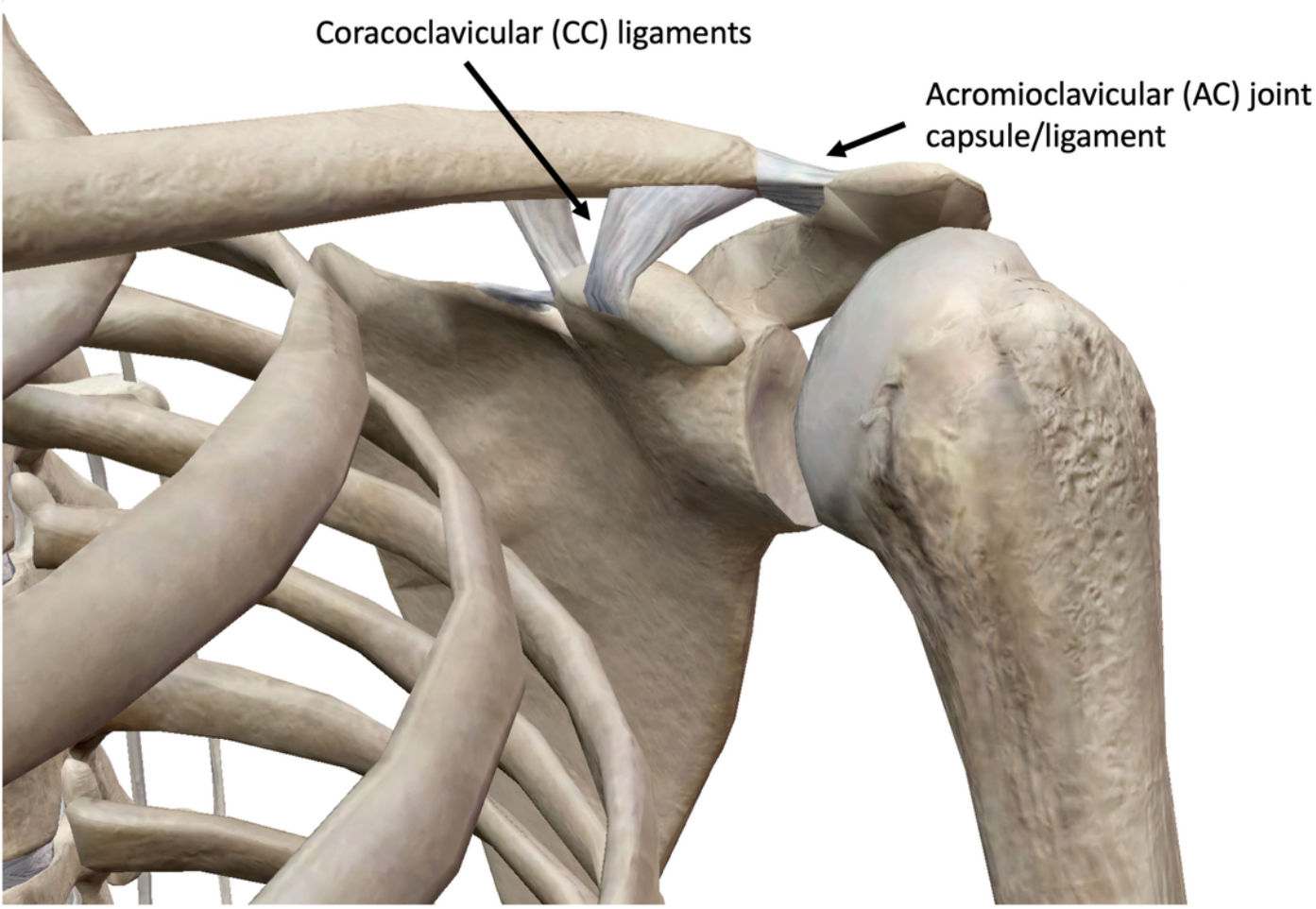
JBI 10/11 [90%]



Quality Check

*see appx

This systematic review created a decision tree analysis enabling simple and accurate diagnosis of AC joint pathology.



KEY FINDINGS

2 studies included

Optimal Combination to Screen & Confirm AC Joint Pathology:

Combined Paxinos sign & O'Brien's Test
[Specificity of 95.8%; In series]
[Liklihood Ratio = 2.71]

Paxinos sign & Hawkins-Kennedy Test
[Sensitivity of 93.7%; in parallel]
[Negative likelihood ratio = 0.35]

MAIN TAKEAWAYS

No combination of special tests performed in series or in parallel creates more than a small impact on post-test probabilities to screen or confirm AC joint pathology.

Paxinos sign and O'Brien's test is the only special test combination that has a small and sometimes important impact when used both in series and in parallel.

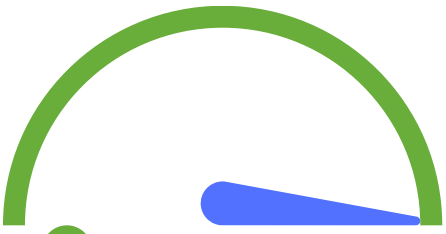
Ultrasound-guided corticosteroid injections are diagnostic and therapeutic and may be an appropriate new standard for treatment and surgical decision-making.

DIAGNOSING PATHOLOGY OF THE LONG HEAD OF THE BICEPS

MAY 2023

Click for Full Text (Rosas et al. 2019)

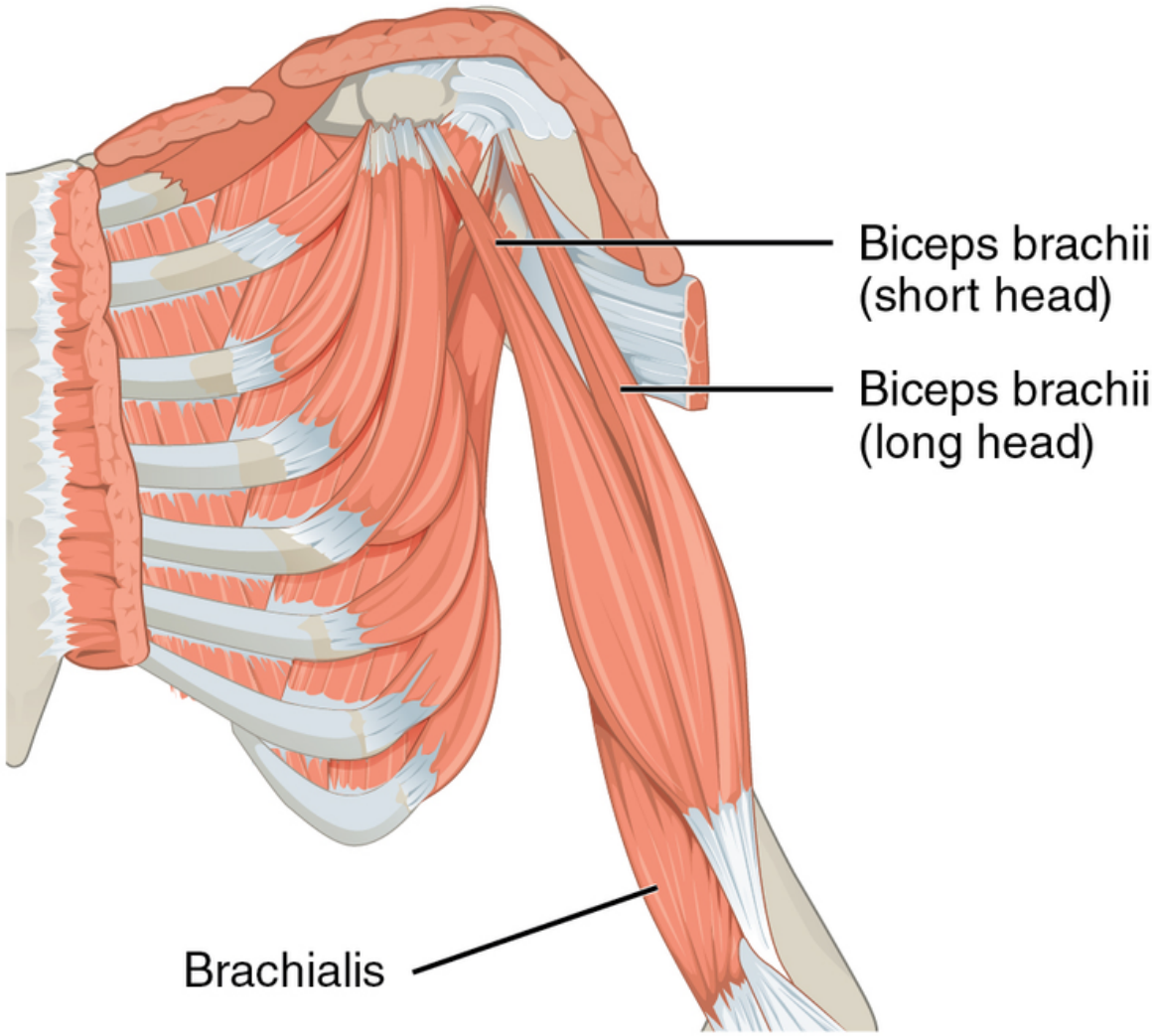
JBI 11/11 [10%]



Quality Check

*see appx

This systematic review created a decision tree analysis that enables the development of a clinical algorithm for diagnosing long head of biceps (LHB) pathology.



KEY FINDINGS

7 studies were included

Optimal Testing for LHB Pathology:

Uppercut test combined w/ Tenderness to Palpation of the biceps tendon test.

[Sensitivity of 88.4%; Parallel tested]
[Specificity of 93.8%; in series]

,These tests used in combination optimize post-test probability accuracy greater than any single individual test.

MAIN TAKEAWAYS

Performing the uppercut test and biceps groove tenderness to palpation test together had the highest sensitivity and specificity of known physical examinations maneuvers to aid in the diagnosis of LHB biceps pathology compared with diagnostic arthroscopy.

A decision tree analysis aides in the PEC examination diagnostic accuracy post-testing based on the ordinal scale pretest probability.

A quick reference guide is provided to use in the clinical setting in the full-text appendix.

DIAGNOSTIC EXAM FOR SUBSCAPULARIS TEARS

MAY 2023

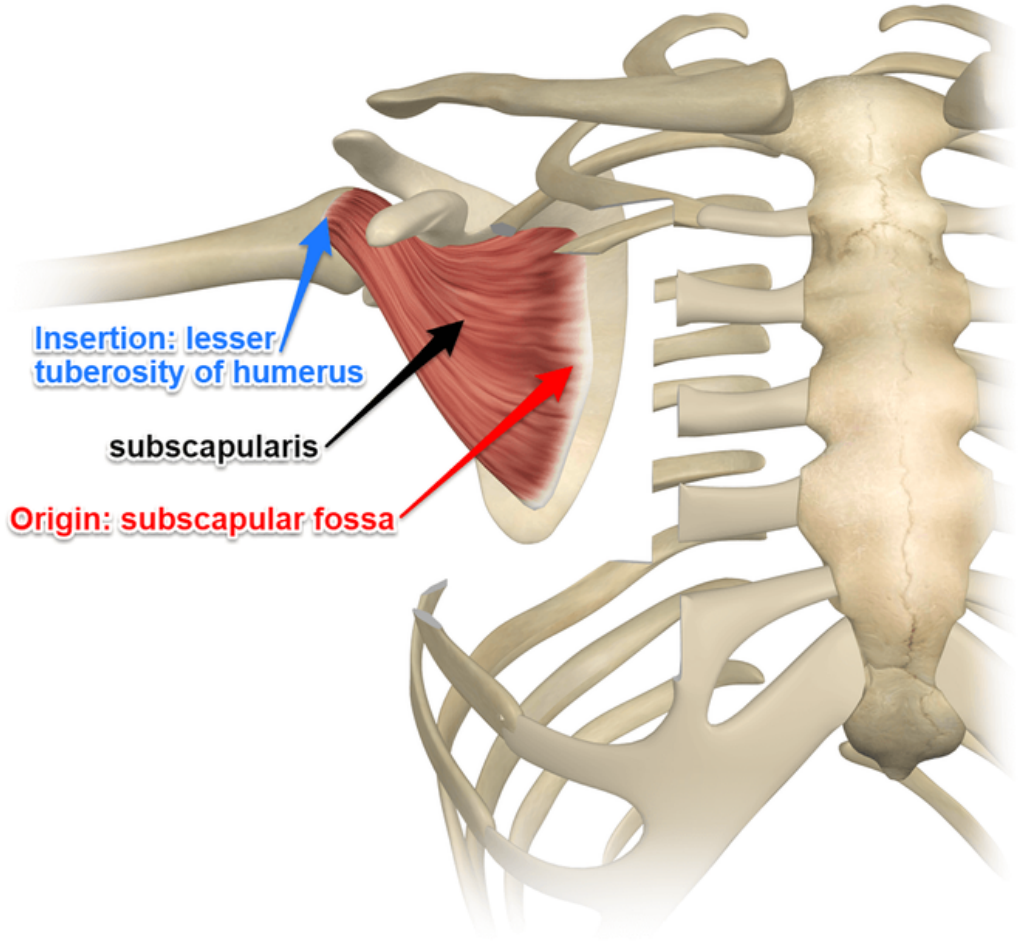
Click for Full Text (Dakkak et al. 2021)

JBI 10/11 [90%]

Quality Check

*see appx

This systematic review evaluated advanced maneuvers and special tests in the diagnosis of subscapularis tears and create a diagnostic algorithm for subscapularis pathology.



KEY FINDINGS

5 studies included

Optimal Testing to Detect Subscapularis Tears:
Bear Hug & Belly Press demonstrated:
Highest positive likelihood ratio [18.29].
Highest sensitivity [84%].
Lowest calculated negative likelihood ratio [0.21].

MAIN TAKEAWAYS

The combined application of the bear hug and belly press physical examination maneuvers is an optimal combination for evaluating subscapularis pathology.

Positive findings using this test combination in series with a likely pretest probability yield a 96% posttest probability, whereas negative findings tested in parallel with an unlikely pretest probability yield a 12% post-test probability.

GIVE US YOUR FEEDBACK!

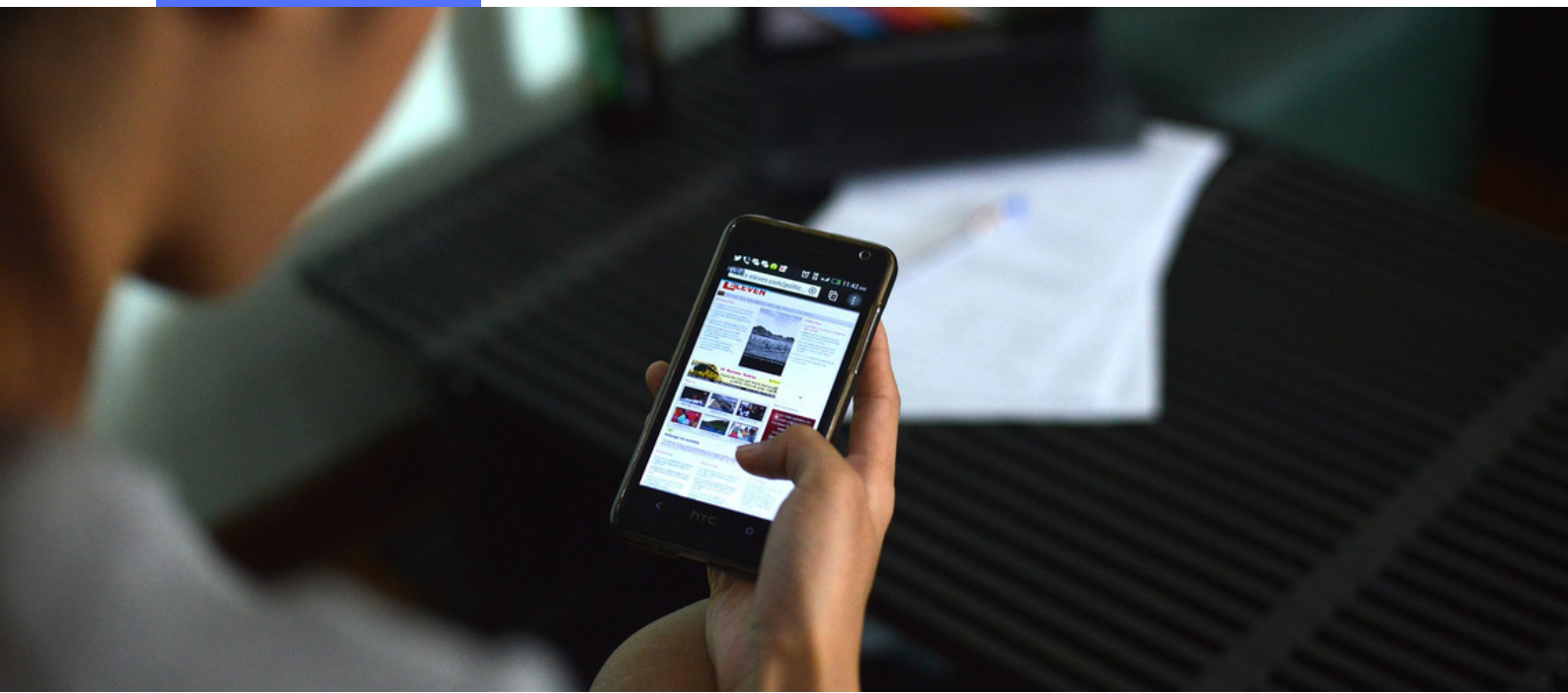
MEMBERS

We are on a mission to make research more accessible, easier to interpret, and quicker to implement.

Help us by giving 1 minute of your time to leave feedback for us.

We would greatly appreciate any feedback you have, as it helps us continually improve!

Leave Review



JBI Critical Appraisal Checklist for systematic reviews and research syntheses

Author: Krill et al. Year: 2019

		Yes	No	Unclear	Not applicable
1.	Is the review question clearly and explicitly stated?	+	☐	☐	☐
2.	Were the inclusion criteria appropriate for the review question?	+	☐	☐	☐
3.	Was the search strategy appropriate?	+	☐	☐	☐
4.	Were the sources and resources used to search for studies adequate?	+	☐	☐	☐
5.	Were the criteria for appraising studies appropriate?	+	☐	☐	☐
6.	Was critical appraisal conducted by two or more reviewers independently?	+	☐	☐	☐
7.	Were there methods to minimize errors in data extraction?	+	☐	☐	☐
8.	Were the methods used to combine studies appropriate?	+	☐	☐	☐
9.	Was the likelihood of publication bias assessed?	☐	X	☐	☐
10.	Were recommendations for policy and/or practice supported by the reported data?	+	☐	☐	☐
11.	Were the specific directives for new research appropriate?	+	☐	☐	☐

Overall appraisal: 10/11 (90%)

LIMITATIONS:

Only articles published in English were evaluated.

Paucity of high-level studies addressing physical examination of the shoulder as it relates to a 'gold standard.'

JBI Critical Appraisal Checklist for systematic reviews and research syntheses

Author: Rosas et al. Year: 2019

		Yes	No	Unclear	Not applicable
1.	Is the review question clearly and explicitly stated?	+	☐	☐	☐
2.	Were the inclusion criteria appropriate for the review question?	+	☐	☐	☐
3.	Was the search strategy appropriate?	+	☐	☐	☐
4.	Were the sources and resources used to search for studies adequate?	+	☐	☐	☐
5.	Were the criteria for appraising studies appropriate?	+	☐	☐	☐
6.	Was critical appraisal conducted by two or more reviewers independently?	+	☐	☐	☐
7.	Were there methods to minimize errors in data extraction?	+	☐	☐	☐
8.	Were the methods used to combine studies appropriate?	+	☐	☐	☐
9.	Was the likelihood of publication bias assessed?	+	☐	☐	☐
10.	Were recommendations for policy and/or practice supported by the reported data?	+	☐	☐	☐
11.	Were the specific directives for new research appropriate?	+	☐	☐	☐

Overall appraisal: 11/11 (100%)

LIMITATIONS:

Most of the studies included in our data collection did not solely focus on LHB pathology.

JBI Critical Appraisal Checklist for systematic reviews and research syntheses

Author: Dakkak et al. Year: 2021

		Yes	No	Unclear	Not applicable
1.	Is the review question clearly and explicitly stated?	+	☐	☐	☐
2.	Were the inclusion criteria appropriate for the review question?	+	☐	☐	☐
3.	Was the search strategy appropriate?	+	☐	☐	☐
4.	Were the sources and resources used to search for studies adequate?	+	☐	☐	☐
5.	Were the criteria for appraising studies appropriate?	+	☐	☐	☐
6.	Was critical appraisal conducted by two or more reviewers independently?	+	☐	☐	☐
7.	Were there methods to minimize errors in data extraction?	+	☐	☐	☐
8.	Were the methods used to combine studies appropriate?	+	☐	☐	☐
9.	Was the likelihood of publication bias assessed?	☐	X	☐	☐
10.	Were recommendations for policy and/or practice supported by the reported data?	+	☐	☐	☐
11.	Were the specific directives for new research appropriate?	+	☐	☐	☐

Overall appraisal: 10/11 (90%)

LIMITATIONS:

Shortage of level 1 & 2 studies addressing physical examination of the subscapularis.

The concept of combining diagnostic values from different studies does not control for variations in patient selection and application of physical examination maneuvers.