



Kaiser Foundation Health Plan of Washington

Clinical Review Criteria Thermal Capsulorrhaphy for Shoulder Instability

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Criteria

For Medicare Members

Source	Policy
CMS Coverage Manuals	None
National Coverage Determinations (NCD)	None
Local Coverage Determinations (LCD)	None
Local Coverage Article	None
Kaiser Permanente Medical Policy	Due to the absence of an active NCD, LCD, or other coverage guidance, Kaiser Permanente has chosen to use their own Clinical Review Criteria, "Thermal Capsulorrhaphy," for medical necessity determinations. Use the Non-Medicare criteria below.

For Non-Medicare Members

There is insufficient evidence in the published medical literature to show that this service/therapy is as safe as standard services/therapies and/or provides better long-term outcomes than current standard services/therapies.

The following information was used in the development of this document and is provided as background only. It is provided for historical purposes and does not necessarily reflect the most current published literature. When significant new articles are published that impact treatment option, Kaiser Permanente will review as needed. This information is not to be used as coverage criteria. Please only refer to the criteria listed above for coverage determinations.

Background

Shoulder instability is a common orthopedic problem particularly in the young active population. It can occur from multiple minor traumatic events that result in stretching rather than detaching or tearing ligaments. Certain individuals may have a genetic predisposition that is complicated by repetitive overuse activities. Treatment is directed at reducing capsular volume. Most patients are suitable candidates for a trial of shoulder rehabilitation. Those who fail non-operative treatment may be candidates for surgical intervention.

A variety of surgical techniques are available to reliably prevent recurrent instability. There has been a recent trend towards arthroscopic stabilization and techniques for performing arthroscopic surgery have substantially developed in the past 20 years. Open surgical reconstruction used to be the traditional approach. Now it is reserved for patients with pathology inappropriate for arthroscopic techniques, and in cases where arthroscopic suturing is found to be inadequate intraoperatively.

Thermal capsulorrhaphy is a new treatment modality for shoulder instability, where the joint capsule is heated and reduced in length by laser or radiofrequency energy to regain shoulder stability. The use of heat can alter collagen within the glenohumeral capsule resulting in its contracture. It may be an alternative or an additional way to restore capsule tension and increase thickness of deficient tissues in shoulders with multidirectional and posterior instability.

Experimental studies showed that thermal energy might cause immediate deleterious effects such as loss of mechanical properties, collagen denaturation, and cell necrosis. Over-treatment can lead to severe immediate and permanent damage.

Medical Technology Assessment Committee (MTAC)

Thermal Capsulorrhaphy

08/12/2002: MTAC REVIEW

Evidence Conclusion: The literature reviewed does not provide enough evidence to support the use of thermal capsulorrhaphy for the treatment of shoulder instability.

Articles: The search yielded 21 articles. The majority were reviews, tutorials, and opinion pieces. There was only one cohort study with historical control, and one case series with 30 patients. Savoie FH, and Field LD. Thermal versus suture treatment of symptomatic capsular laxity. *Clin Sports Med* 2000; 19:63-75. See [Evidence Table](#). Fitzgerald BT, Watson T, and Lapoint JM. The use of thermal capsulorrhaphy in the treatment of multidirectional instability. *L Shoulder Elbow Surg* 2002; 11:108-113. See [Evidence Table](#).

The use of Thermal Capsulorrhaphy in the treatment of shoulder instability does not meet the *Kaiser Permanente Medical Technology Assessment Criteria*.

04/03/2006: MTAC REVIEW

Thermal Capsulorrhaphy

Evidence Conclusion: The case series published after the last MTAC review of thermal capsulorrhaphy for shoulder instability in 2004 do not provide any new or additional evidence to support the use of procedure for the treatment of shoulder instability. The ongoing multicenter RCT comparing capsulorrhaphy with open inferior capsular shift for patients with shoulder instability might provide evidence on the efficacy of the intervention.

Articles: The search yielded 28 articles. The majority were reviews, tutorials, and experimental studies. All studies published after the last update was small prospective, or retrospective case series. The search also identified an ongoing RCT comparing electrothermal arthroscopic capsulorrhaphy versus open inferior capsular shift for patients with shoulder instability (Mohtadi NG et al, 2006).

The use of Thermal Capsulorrhaphy in the treatment of shoulder instability does not meet the *Kaiser Permanente Medical Technology Assessment Criteria*.

Applicable Codes

Considered Not Medically Necessary:

CPT® or HCPC Codes	Description
S2300	Arthroscopy, shoulder, surgical; with thermally-induced capsulorrhaphy

***Note:** Codes may not be all-inclusive. Deleted codes and codes not in effect at the time of service may not be covered.

**To verify authorization requirements for a specific code by plan type, please use the [Pre-authorization Code Check](#).

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Date Created	Date Reviewed	Date Last Revised
08/12/2002	04/04/2011 ^{MDCRPC} , 02/07/2012 ^{MDCRPC} , 12/04/2012 ^{MDCRPC} , 10/01/2013 ^{MPC} , 08/05/2014 ^{MPC} , 06/02/2015 ^{MPC} , 05/03/2016 ^{MPC} , 03/08/2017 ^{MPC} , 01/09/2018 ^{MPC} , 12/04/2018 ^{MPC} , 12/03/2019 ^{MPC} , 12/01/2020 ^{MPC} , 12/07/2021 ^{MPC} , 12/06/2022 ^{MPC}	01/09/2018

^{MDCRPC} Medical Director Clinical Review and Policy Committee

^{MPC} Medical Policy Committee

Revision History	Description
01/09/2018	Adopted Kaiser Permanente criteria for Medicare Advantage members

