

MEDICAL POLICY

POLICY TITLE	THERMAL CAPSULORRHAPHY AS A TREATMENT OF JOINT INSTABILITY
POLICY NUMBER	MP 1.086

CLINICAL BENEFIT	<input type="checkbox"/> MINIMIZE SAFETY RISK OR CONCERN. <input checked="" type="checkbox"/> MINIMIZE HARMFUL OR INEFFECTIVE INTERVENTIONS. <input type="checkbox"/> ASSURE APPROPRIATE LEVEL OF CARE. <input type="checkbox"/> ASSURE APPROPRIATE DURATION OF SERVICE FOR INTERVENTIONS. <input type="checkbox"/> ASSURE THAT RECOMMENDED MEDICAL PREREQUISITES HAVE BEEN MET. <input type="checkbox"/> ASSURE APPROPRIATE SITE OF TREATMENT OR SERVICE.
Effective date:	7/1/2026

POLICY

Thermal capsulorrhaphy is considered **investigational** as a treatment of joint instability. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

PRODUCT VARIATIONS

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations. Please see additional information below.

FEP PPO - Refer to FEP Medical Policy Manual. The FEP Medical Policy manual can be found at: <https://www.fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies>.

DESCRIPTION/BACKGROUND

Thermal capsulorrhaphy uses thermal energy to restructure collagen in the capsule or ligaments to reduce the capsule size. This procedure has primarily been evaluated for shoulder joint instability but may also be proposed to treat capsular laxity in other joints.

Shoulder instability is a common occurrence, reported in between 2% and 8% of the population. The condition may arise from a single traumatic event (i.e., subluxation or dislocation), repeated microtrauma or constitutional ligamentous laxity, resulting in deformation and/or damage in the glenohumeral capsule and ligaments. Shoulder instability may be categorized according to the movement of the humeral head: anterior, posterior, inferior, or multidirectional instability.

Surgery consists of inspection of the shoulder joint with repair, reattachment, or tightening of the labrum, ligaments, or capsule, performed either with sutures or sutures attached to absorbable tacks or anchors. While arthroscopic approaches have been investigated over the past decade, their success has been controversial due to a higher rate of recurrent instability compared with open technique. This is thought to be related in part to the lack of restoration of capsular tension. Reports of arthroscopic techniques have described various suturing techniques for tightening the capsule, which require mastery of technically difficult arthroscopic intra-articular knot tying.

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Thermal capsulorrhaphy has been proposed as a simpler arthroscopic technique for tightening the capsule and ligaments. This technique utilizes non-ablative levels of radiofrequency thermal energy to alter the collagen in the glenohumeral ligaments and/or capsule, resulting in their shrinkage and a decrease in capsular volume, both thought to restore capsular tension. Thermal capsulorrhaphy may be used in conjunction with arthroscopic repair of torn ligaments or other structures (i.e., repair of Bankart or superior labrum anterior and posterior lesion). It has also been considered in patients with congenital ligamentous laxity, such as Ehlers-Danlos or Marfan’s syndrome.

Thermal capsulorrhaphy has also been investigated as treatment for instability of the hip, ankle, hand, and wrist.

While thermal capsulorrhaphy was initially investigated using laser energy, the use of radiofrequency probes is now more commonly used. Devices include Oratec ORA-50 Monopolar RF Generator (Oratec Interventions, Menlo Park, CA) and Arthrocare (Arthrocare Corporation, Sunnyvale, CA).

RATIONALE

Summary of Evidence

The literature does not support use of thermal capsulorrhaphy. The few available comparative studies do not support that this procedure is an efficacious treatment for shoulder instability. The case series report a high rate of unsatisfactory results and complications, raising the potential for net harm. Reported complications have included capsular necrosis, loss of capsular and glenohumeral ligament integrity, chondrolysis, nerve damage, and failure leading to recurrent instability. The evidence does not demonstrate positive health outcomes.

DEFINITIONS

GLENOHUMERAL pertains to the humerus and the glenoid cavity.

RADIOFREQUENCY refers to radiant energy of a certain frequency range.

SUBLUXATION refers to a partial or incomplete dislocation.

DISCLAIMER

Capital Blue Cross’ medical policies are used to determine coverage for specific medical technologies, procedures, equipment, and services. These medical policies do not constitute medical advice and are subject to change as permitted by law or applicable clinical evidence from independent treatment guidelines. Treating providers are solely responsible for medical advice and treatment of members. These policies are not a guarantee of coverage or payment. Payment of claims is subject to a determination regarding the member’s benefit program and eligibility on the date of service, and a determination that the services are medically necessary and appropriate. Final processing of a claim is based upon the terms of contract that applies to the members’ benefit program, including benefit limitations and

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exclusions. If a provider or a member has a question concerning this medical policy, please contact Capital Blue Cross' Provider Services or Member Services.

CODING INFORMATION

Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement.

Thermal capsulorrhaphy is considered **investigational** as a treatment of joint instability, including, but not limited to the shoulder, knee, and elbow; therefore, not covered:

Procedure Codes							
29999	S2300						

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POLICY HISTORY

MP 1.086	07/13/2020 Consensus Review. Policy statement unchanged. Product and Benefit variations as well as Disclaimer updated. FEP policy reference removed as no longer effective. References updated.
	05/21/2021 Consensus Review. Product Variations updated. No change to

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	policy statement. References updated.
	01/05/2022 Consensus Review. No change to policy statement. References updated.
	01/12/2024 Minor Review. Updated statement from NMN to INV. Updated background. New references.
	01/07/2025 Consensus Review. No change to policy statement. Updated references.
	03/11/2026 Consensus Review. No changes to policy statement. Removed benefit variations. Updated policy formatting, product variations, definitions, disclaimer, and references. No coding changes.

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