



## MASSACHUSETTS

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### Medical Policy

## Thermal Capsulorrhaphy as a Treatment of Joint Instability

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### Policy Number: 591

BCBSA Reference Number: 7.01.82A

NCD/LCD: N/A

### Related Policies

None

### Policy

#### Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue<sup>SM</sup> and Medicare PPO Blue<sup>SM</sup> Members

Thermal capsulorrhaphy as a treatment of joint instability, including but not limited to the shoulder, knee, and elbow, is **NOT MEDICALLY NECESSARY**.

### Prior Authorization Information

#### Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

#### Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

|                                       | Outpatient                            |
|---------------------------------------|---------------------------------------|
| Commercial Managed Care (HMO and POS) | This is <b>not</b> a covered service. |
| Commercial PPO and Indemnity          | This is <b>not</b> a covered service. |
| Medicare HMO Blue <sup>SM</sup>       | This is <b>not</b> a covered service. |
| Medicare PPO Blue <sup>SM</sup>       | This is <b>not</b> a covered service. |

### CPT Codes / HCPCS Codes / ICD Codes

*Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.*

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.  
The following codes are included below for informational purposes only; this is not an all-inclusive list.

**The following HCPCS code is considered investigational for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:**

### HCPCS Codes

| HCPCS codes: | Code Description   |
|--------------|--|
| S2300        | Arthroscopy, shoulder, surgical; with thermally induced capsulorrhaphy |

### Description

Shoulder instability 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. If instability persists, either activity modifications or surgical treatment may be considered. 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 techniques, thought to be related in part to the lack of restoration of capsular tension.

Thermal capsulorrhaphy has been proposed as a technically simpler arthroscopic technique for tightening the capsule and ligaments. The technique is based on the observation that the use of nonablative levels of radiofrequency thermal energy can 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. In addition, thermal capsulorrhaphy has also been investigated as an arthroscopic treatment of glenohumeral laxity, as a sole arthroscopic treatment, and in patients with congenital ligamentous laxity, such as Ehlers-Danlos or Marfan's syndrome.

Examples of thermal capsulorrhaphy devices for the treatment of joint instability include Oratec ORA-50 Monopolar RF Generator and Arthrocare. All thermal capsulorrhaphy devices for the treatment of joint instability are considered not medically necessary regardless of the commercial name, the manufacturer or FDA approval status.

### Summary

The literature on thermal capsulorrhaphy either alone or in combination or in combination with other arthroscopic procedures, for shoulder instability is limited to small studies with conflicting findings. Literature on thermal capsulorrhaphy for joints other than the shoulder is limited.

Since the literature does not support use of thermal capsulorrhaphy alone, or in combination with other arthroscopic procedures, this procedure is considered not medically necessary.

### Policy History

| Date           | Action   |
|----------------|--|
| 3/2020         | Policy updated with literature review through March 1, 2020, no references added. Policy statements unchanged. |
| 8/2016         | Clarified coding information.  |
| 7/2014         | Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.                            |
| 8/2013         | New references from BCBSA National medical policy.   |
| 11/2011-4/2012 | Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.    |
| 6/2011         | Reviewed - Medical Policy Group – Orthopedics, Rehabilitation and Rheumatology.                                |

|           |   |
|-----------|---|
|           | No changes to policy statements.                                |
| 11/1/2010 | New policy effective 11/1/2010 describing ongoing non-coverage. |

## Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

## References

1. Abrams JS. Thermal capsulorrhaphy for instability of the shoulder: concerns and applications of the heat probe. *Instr Course Lect* 2001; 50:29-36.
2. Gryler EC, Greis PE, Burks RT et al. Axillary nerve temperatures during radiofrequency capsulorrhaphy of the shoulder. *Arthroscopy* 2001; 17(6):567-72.
3. Mohtadi NG, Hollinshead RM, Ceponis PJ et al. A multi-centre randomized controlled trial comparing electrothermal arthroscopic capsulorrhaphy versus open inferior capsular shift for patients with shoulder instability: protocol implementation and interim performance: lessons learned from conducting a multi-centre RCT [ISRCTN68224911; NCT00251160]. *Trials* 2006; 7:4.
4. ClinicalTrials.gov. Electrothermal Arthroscopic Capsulorrhaphy (ETAC) and Open Inferior Capsular Shift in Patients With Shoulder Instability (NCT00251160). Available online at: <http://clinicaltrials.gov/ct2/show/NCT00251160?term=NCT00251160&rank=1>. Last accessed May 2012.
5. Levitz CL, Dugas J, Andrews JR. The use of arthroscopic thermal capsulorrhaphy to treat internal impingement in baseball players. *Arthroscopy* 2001; 17(6):573-7.
6. Savoie FH, 3rd, Field LD. Thermal versus suture treatment of symptomatic capsular laxity. *Clin Sports Med* 2000; 19(1):63-75, vi.
7. Chen S, Haen PS, Walton J et al. The effects of thermal capsular shrinkage on the outcomes of arthroscopic stabilization for primary anterior shoulder instability. *Am J Sports Med* 2005; 33(5):705-11.
8. Levy O, Wilson M, Williams H et al. Thermal capsular shrinkage for shoulder instability. Mid-term longitudinal outcome study. *J Bone Joint Surg Br* 2001; 83(5):640-5.
9. D'Alessandro DF, Bradley JP, Fleischli JE et al. Prospective evaluation of thermal capsulorrhaphy for shoulder instability: indications and results, two- to five-year follow-up. *Am J Sports Med* 2004; 32(1):21-33.
10. Levine WN, Bigliani LU, Ahmad CS. Thermal capsulorrhaphy. *Orthopedics* 2004; 27(8):823-6.
11. Hawkins RJ, Krishnan SG, Karas SG et al. Electrothermal arthroscopic shoulder capsulorrhaphy: a minimum 2-year follow-up. *Am J Sports Med* 2007; 35(9):1484-8.
12. Jansen N, Van Riet RP, Meermans G et al. Thermal capsulorrhaphy in internal shoulder impingement: a 7-year follow-up study. *Acta Orthop Belg* 2012; 78(3):304-8.
13. Mason WT, Hargreaves DG. Arthroscopic thermal capsulorrhaphy for palmar midcarpal instability. *J Hand Surg Eur Vol* 2007; 32(4):411-6.
14. Zheng N, Davis BR, Andrews JR. The effects of thermal capsulorrhaphy of medial parapatellar capsule on patellar lateral displacement. *J Orthop Surg Res* 2008; 3:45.
15. Good CR, Shindle MK, Kelly BT et al. Glenohumeral chondrolysis after shoulder arthroscopy with thermal capsulorrhaphy. *Arthroscopy* 2007; 23(7):797 e1-5.
16. Lubowitz JH, Poehling GG. Glenohumeral thermal capsulorrhaphy is not recommended--shoulder chondrolysis requires additional research. *Arthroscopy* 2007; 23(7):687.
17. Johnson SM, Robinson CM. Shoulder instability in patients with joint hyperlaxity. *J Bone Joint Surg Am* 2010; 92(6):1545-57.
18. Virk SS, Kocher MS. Adoption of new technology in sports medicine: case studies of the Gore-Tex prosthetic ligament and of thermal capsulorrhaphy. *Arthroscopy* 2011; 27(1):113-21.