Electrothermal Therapy for Joint Instability

Description:

Electrothermal therapy, also known as thermal capsulorrhaphy, thermal coagulation of joints, radiofrequency thermal shrinkage (RFTS), electrothermal assisted capsulorrhaphy (ETAC), and laser-assisted capsular shrinkage (LACS), is a minimally invasive arthroscopic procedure to tighten the capsule, tendons and ligaments of a joint. It has been proposed as a way to treat some orthopedic conditions; including, but not limited to, shoulder instability and anterior cruciate ligament (ACL) laxity in the knee.

Tendons and ligaments are primarily composed of collagen, a type of protein. When collagen is heated to the appropriate temperature, it contracts and shrinks. The collagen proteins making up the tendons and ligaments are seemingly altered by the heat and recoil from their normal straight arrangement. The body perceives this as an injury and the tissues rebuild around shorter collagen fibers, with the desired result as a reduction in the laxity of the joint, shrinkage and decrease in capsular volume and, therefore a tighter and theoretically more stable joint.

Shoulder instability may arise from a single traumatic event (i.e., subluxation or dislocation), repeated micro-trauma or congenital ligament laxity, resulting in deformity and/or damage to the shoulder capsule and ligaments.

Initial treatment of shoulder instability is conservative in nature followed by range of motion and strengthening exercises. However, 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. Thermal capsulorrhaphy has been proposed as a technically simpler arthroscopic technique than intra-articular suturing/suturing with absorbable tacks or anchors, for tightening the capsule and ligaments. The technique is based on the observation that the use of low levels of thermal energy can alter the collagen in the ligaments and/or capsule, resulting in their shrinkage and a decrease in capsular volume, both thought to restore capsular tension.

Electrothermal therapy has been used as an arthroscopic treatment for laxity and instability of the knee. Attempts made to shrink and shorten the fibers of the ACL have been made when there has been a partial tear from a traumatic injury or when the ACL has been stretched by reconstructive surgery.

The procedure, which can be used alone or in conjunction with other arthroscopic procedures, most frequently is performed on the shoulder, although it has been performed on other joints, such as the hip, knee, ankle, elbow, and wrist.

Medical Criteria:

Electrothermal therapy for joint instability is considered not medically necessary

Policy:

Electrothermal Therapy is considered not medically necessary as a treatment of ligamentous laxity, ligament injury, or joint instability, including, but not limited to the shoulder, hip, knee, ankle, elbow and wrist.
The long term safety and efficacy of this treatment has not been documented in the peer-reviewed medical literature, with no controlled studies found providing evidence which demonstrates an impact on improved health outcomes.

**Coverage:**

Electrothermal Therapy for Joint Instability is considered not medically necessary.

Benefits may vary between groups/contracts. Please refer to the appropriate benefit booklet/subscriber agreement/Rite Care contract section for limitations of benefits/coverage when services are not medically necessary.

**Coding:**

There are no specific codes available for the use of electrothermal therapy in the ankles, knees, hip, wrist, or elbow. Use of the following CPT code has been suggested:

**CPT:**

29999

Code identified for electrothermal therapy of the shoulder:

**HCPCS:**

S2300.

**Related Topics:**

- Thermal Capsulorrhaphy
- Thermal coagulation of joints
- Radiofrequency thermal shrinkage (RFTS)
- Electrothermal assisted capsulorrhaphy (ETAC)
- Laser-assisted capsular shrinkage (LACS)

**Published:**

- Policy Update, September 2007
- Provider Update, July 2008
- Provider Update, September 2009
- Provider Update, October 2010

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgement in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions.

This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice.