

Evidence Based Guideline

TENS (Transcutaneous Electrical Nerve Stimulator)

File Name: tens_(transcutaneous_electrical_nerve_stimulator)
Origination: 7/1982
Last CAP Review: 11/2010
Next CAP Review: 11/2012
Last Review: 11/2011

Description of Procedure or Service

Transcutaneous electrical nerve stimulation (TENS) describes the application of electrical stimulation to the surface of the skin at the site of pain. TENS may be applied in a variety of settings (in the patient's home, a physician's office, or in an outpatient clinic).

TENS has been used to treat chronic intractable pain, post-surgical pain, and pain associated with active or post-trauma injury unresponsive to other standard pain therapies. It has been proposed that TENS may provide pain relief through release of endorphins in addition to potential blockade of local pain pathways. TENS has also been used to treat dementia by altering neurotransmitter activity and increasing brain activity that is thought to reduce neural degeneration and stimulate regenerative processes. Percutaneous electrical nerve stimulation is similar to TENS, but uses microneedles that penetrate the skin instead of surface electrodes. Interferential stimulation uses a modulated waveform for deeper tissue stimulation, and is believed to improve blood flow to the affected area.

Regulatory Status

TENS devices consist of an electrical pulse generator, usually battery operated, connected by wire to 2 or more electrodes, which are applied to the surface of the skin at the site of the pain. Since 1977, a large number of devices have received marketing clearance through the U.S. Food and Drug Administration (FDA) 510(k) process. Marketing clearance via the 510(k) process does not require data regarding clinical efficacy; these devices are considered substantially equivalent to predicate devices marketed in interstate commerce prior to May 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified and do not require approval of a premarket approval application (PMA).

Note: TENS devices may be delivered through a practitioner and requires a prescription, or obtained without a prescription. It is possible that prescribed devices provide higher intensity stimulation than units sold directly to the public.

Related Policies:

Interferential Stimulation
Percutaneous Electrical Nerve Stimulation (PENS) or Percutaneous Neuromodulation Therapy (PNT)

*****Note: This Evidence Based Guideline is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

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Evidence Based Guideline for TENS (Transcutaneous Electrical Nerve Stimulation)

A trial of transcutaneous electrical nerve stimulation (TENS) of at least 30 days may be appropriate when the following conditions have been met:

- The pain is chronic musculoskeletal or neuropathic pain; AND
- The pain is unresponsive to at least 3 months of conservative medical therapy; AND
- The pain causes significant disruption of function; AND
- The trial is monitored by a physician.

Conservative therapy should include nonsteroidal anti-inflammatory medications, ice, rest and/or physical therapy.

Continued use of transcutaneous electrical nerve stimulation (TENS) may be appropriate when efficacy has been demonstrated in an initial therapeutic trial.

Clinical summary of the trial to determine efficacy should include:

- Perceived Intensity of pain with and without TENS (e.g., 2 point or 30% improvement in visual analog scale [VAS]);
- Ongoing medication requirements for pain relief (if any);
- Other modalities (if any) in use for pain control;
- Actual use of TENS on a daily or near daily basis (frequency and duration of application).

Overall, evidence for the use of TENS from high quality trials remains inconclusive. However, clinical input indicates that the use of TENS for the relief of chronic intractable pain has been beneficial in some patients.

Medical Evidence regarding TENS (Transcutaneous Electrical Nerve Stimulation) indicates it is not recommended in the following situations

TENS is not recommended for the management of acute pain (e.g., postoperative or during labor and delivery).

The use of TENS for any other condition, including the treatment of dementia, is not recommended.

Benefits Application

This evidence based guideline relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this guideline.

Billing/Coding/Physician Documentation Information

This guideline may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbssc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: A4595, E0720, E0730, 64550, 0278T

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Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual - 11/96

Medical Policy Advisory Group - 1/99

Specialty Matched Consultant Advisory Panel - 9/2000

Specialty Matched Consultant Advisory Panel - 10/2000

Medical Policy Advisory Group - 10/2000

BCBSA Medical Policy Reference Manual - 2/15/2002; 1.04.03

Specialty Matched Consultant Advisory Panel - 7/2002

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.09, 12/18/2002

Specialty Matched Consultant Advisory Panel - 6/2004

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.09, 12/14/2005

Specialty Matched Consultant Advisory Panel - 5/2006

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.09, 7/9/2009

Senior Medical Director - 5/2010

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.09, 8/12/2010

Specialty Matched Consultant Advisory Panel – 11/2010

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.09, 8/11/2011

Specialty Matched Consultant Advisory Panel – 11/2011

Policy Implementation/Update Information

7/82	Original Policy: Generally accepted medical practice for acute postoperative pain and chronic intractable pain
8/83	Reaffirmed
6/84	Reaffirmed
8/88	Reviewed: Eligible for coverage for acute postoperative pain and chronic intractable pain; use for pain of labor and vaginal delivery consideration is investigational
2/97	Reaffirmed - National Association reviewed 11/30/96

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- 1/99 Reaffirmed. Medical Policy Advisory Group. Added E0720 and E0730
- 8/99 Reformatted, Medical Term Definitions added.
- 10/00 Specialty Matched Consultant Advisory Panel (two). No change recommended in criteria. Medical Policy Advisory Group review. No change in criteria. Approve.
- 6/01 Added the following statement under the noncovered indications "Sequential stimulators which act to relieve pain and restore muscle function would be considered a "deluxe" model of TENS. They are not covered." A4595 and E0731 added to coding with format change.
- 7/01 Policy name changed from Transcutaneous Electrical Nerve Stimulator (TENS) to TENS (Transcutaneous Electrical Nerve Stimulator.
- 5/02 Policy revised under when it is not covered to include sympathetic therapy as investigational. Format changes.
- 8/02 Specialty Matched Consultant Advisory Panel review 7/12/2002. No changes.
- 09/02 System coding changes.
- 11/03 The following statement was added to Description section, "For Interferential Stimulation, please see policy DME0155 entitled Interferential Stimulation." No changes to the policy.
- 4/8/04 Removed statement referring to sequential stimulators as deluxe models. Added information referring reader to Interferential Stimulator policy for information regarding the Sequential Stimulator. Billing/Coding section updated for consistency.
- 7/29/04 Specialty Matched Consultant Advisory Panel review 6/22/2004. Removed statement from When Transcutaneous Electrical Nerve Stimulation is covered indicating "When covered, it will be on the basis of individual consideration." Benefit Application section format updated for consistency. References added. Notification given 7/29/2004. Effective 10/14/2004.
- 6/5/06 Specialty Matched Consultant Advisory Panel review 5/3/2006. No changes to policy statement. References added.
- 9/18/06 Added statement "Note: Form-fitting conductive garments used with TENS are considered a convenience item and are not covered." to the "When Not Covered" section. Policy status changed to Active Archive, policy no longer scheduled for routine literature review. (btw)
- 6/22/10 Policy status returned to active, converted from Corporate Medical Policy to Evidence Based Guideline. "Description" section revised. Evidence Based Guideline indicates; "A trial of transcutaneous electrical nerve stimulation (TENS) of at least 30 days may be appropriate to establish efficacy for the management of refractory chronic pain (e.g., chronic musculoskeletal or neuropathic pain) that causes significant disruption of function The pain is unresponsive to at least 3 months of conservative medical therapy; AND The trial is monitored by a physician." "Continued use of transcutaneous electrical nerve stimulation (TENS) may be appropriate for treatment of refractory chronic pain (e.g., chronic musculoskeletal or neuropathic pain) that causes significant disruption of function when the following conditions have been met: Efficacy has been demonstrated in an initial therapeutic trial (see policy guidelines); AND Compliance has been demonstrated in the therapeutic trial with the device used on a regular basis (e.g., daily or near daily use) throughout the trial period." "TENS is not recommended for the management of acute pain (e.g., postoperative or during labor and delivery)." "The use of TENS for any other condition, including the treatment of dementia, is not recommended." Removed HCPCS code E0731, since this is a non-covered item. Reviewed with Senior Medical Director 5/26/2010. References added. (btw)
- 12/21/10 Specialty Matched Consultant Advisory Panel review 11/21/2010. No change to guideline intent. The following information was moved from the "Benefits Guidelines" section to Evidence Based Guideline section; "Refractory chronic pain is defined in this guideline as pain that causes significant disruption of function and has not responded to at least 3 months of conservative therapy, including nonsteroidal anti-inflammatory medications, ice, rest and/or

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physical therapy.” And “Overall, evidence for the use of TENS from high quality trials remains inconclusive. However, clinical input indicates that the use of TENS for the relief of chronic intractable pain has been beneficial in some patients. Therefore, the guideline has been revised; TENS may be recommended for the treatment of chronic pain if shown to be effective during a 30 day therapeutic trial.” Moved statement indicating “TENS devices may be delivered through a practitioner and requires a prescription, or obtained without a prescription. It is possible that prescribed devices provide higher intensity stimulation than units sold directly to the public.” To “Description” section. References to “medical policy” changed to either “evidence based guideline” or “guideline” as appropriate. References added. (btw)

10/11/11 Reference added. (btw)

1/1/12 Specialty Matched Consultant Advisory Panel review 11/30/11. “Evidence Based Guideline” reformatted. No change to guideline. Added 2012 CPT code, 0278T, to the “Billing/Coding” section. (btw)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.