

EFFECTIVE DATE: 10|02|2018

POLICY LAST UPDATED: 10|02|2018

OVERVIEW

Percutaneous electrical nerve stimulation (PENS) and percutaneous neuromodulation therapy (PNT) combine the features of electroacupuncture and transcutaneous electrical nerve stimulation. PENS is performed with needle electrodes while PNT uses very fine needle-like electrode arrays placed in close proximity to the painful area to stimulate peripheral sensory nerves in the soft tissue for the treatment of chronic pain conditions.

MEDICAL CRITERIA

Not applicable

PRIOR AUTHORIZATION

Prior Authorization review is not required.

POLICY STATEMENT

BlueCHiP for Medicare

Percutaneous electrical neurostimulation (PENS) or percutaneous neuromodulation therapy (PNT) for the treatment of chronic pain conditions is considered medically necessary if pain is effectively controlled by percutaneous stimulation and implantation of electrodes is warranted.

Note: Blue Cross & Blue Shield of Rhode Island (BCBSRI) must follow Centers for Medicare and Medicaid Services (CMS) guidelines, such as national coverage determinations or local coverage determinations for all BlueCHiP for Medicare policies. Therefore, BlueCHiP for Medicare policies may differ from Commercial products. In some instances, benefits for BlueCHiP for Medicare may be greater than what is allowed by the CMS.

Commercial Product

Percutaneous electrical neurostimulation (PENS) or percutaneous neuromodulation therapy (PNT) for the treatment of chronic pain conditions is considered not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable surgery or not medically necessary benefits/coverage.

BACKGROUND

Percutaneous electrical nerve stimulation (PENS) and percutaneous neuromodulation therapy (PNT) been evaluated for the treatment of a variety of chronic musculoskeletal or neuropathic pain conditions including low back pain, neck pain, diabetic neuropathy, chronic headache, and surface hyperalgesia. Chronic pain presents a substantial burden to patients, adversely affecting function and quality of life. These chronic pain conditions have typically failed other treatments, and the goal of treatment with PENS and PNT is to relieve unremitting pain.

PENS is similar in concept to transcutaneous electrical nerve stimulation but differs in that needles are inserted either around or immediately adjacent to the nerves serving the painful area and are then stimulated. PENS is generally reserved for patients who fail to get pain relief from TENS. PENS is also distinguished from acupuncture with electrical stimulation. In electrical acupuncture, needles are also inserted just below the skin, but the placement of needles is based on specific theories regarding energy flow throughout the human body. In PENS, the location of stimulation is determined by proximity to the pain.

PNT is a variant of PENS in which fine filament electrode arrays are placed near the area causing pain. Some use the terms PENS and PNT interchangeably. It is proposed that PNT inhibits pain transmission by creating an electrical field that hyperpolarizes C fibers, thus preventing action potential propagation along the pain pathway.

For individuals who have chronic pain conditions (eg, back, neck, neuropathy, headache, hyperalgesia, knee osteoarthritis) who receive PENS, the evidence includes primarily small controlled trials. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. In the highest quality trial of PENS conducted to date, no difference in outcomes was found between the active (30 minutes of stimulation with 10 needles) and the sham (5 minutes of stimulation with 2 needles) treatments. Smaller trials, which have reported positive results, are limited by unclear blinding and short-term follow-up. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have chronic pain conditions (eg, back, neck, neuropathy, headache, hyperalgesia, knee osteoarthritis) who receive PNT, the evidence consists of 1 randomized controlled trial. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. The single trial is limited by lack of investigator blinding, unclear participant blinding, and short-term follow-up. The evidence is insufficient to determine the effects of the technology on health outcomes.

BlueCHiP for Medicare

PENS, which involves stimulation of peripheral nerves by a needle electrode inserted through the skin is performed only in a physician's office, clinic, or hospital outpatient department. Therefore, it is covered only when performed by a physician or incident to physician's service. If pain is effectively controlled by percutaneous stimulation, implantation of electrodes is warranted.

CODING

BlueCHiP for Medicare and Commercial Products

There is not a specific code for PENS or PNT. Use the unlisted code below
64999: Unlisted procedure, nervous system

RELATED POLICIES

Lysis of Epidural Adhesions
Nerve Graft with Radical Prostatectomy
Occipital Nerve Stimulation – Insertion
Peripheral Subcutaneous Field Stimulation
Pulsed Radiofrequency for the Treatment of Chronic Pain
Sphenopalatine Ganglion Block for Headache

PUBLISHED

Provider Update, November/December 2018
Provider Update, June 2017

REFERENCES

1. Centers for Medicare and Medicaid. National Coverage Determination (NCD) for Assessing Patient's Suitability for ELECTRICAL NERVE STIMULATION Therapy (160.7.1). 2006; Accessed September 12, 2018.
2. Weiner DK, Perera S, Rudy TE, et al. Efficacy of percutaneous electrical nerve stimulation and therapeutic exercise for older adults with chronic low back pain: a randomized controlled trial. *Pain*. Nov 30 2008;140(2):344-357. PMID 18930352
3. Weiner DK, Rudy TE, Glick RM, et al. Efficacy of percutaneous electrical nerve stimulation for the treatment of chronic low back pain in older adults. *J Am Geriatr Soc*. May 2003;51(5):599-608. PMID 12752833
4. Yokoyama M, Sun X, Oku S, et al. Comparison of percutaneous electrical nerve stimulation with transcutaneous electrical nerve stimulation for long-term pain relief in patients with chronic low back pain. *Anesth Analg*. Jun 2004;98(6):1552-1556, table of contents. PMID 15155304
5. Ghoname EA, White PF, Ahmed HE, et al. Percutaneous electrical nerve stimulation: an alternative to TENS in the management of sciatica. *Pain*. Nov 1999;83(2):193-199. PMID 10534590
6. Ghoname EA, Craig WF, White PF, et al. Percutaneous electrical nerve stimulation for low back pain: a randomized crossover study. *JAMA*. Mar 3 1999;281(9):818-823. PMID 10071003
7. Hamza MA, Ghoname EA, White PF, et al. Effect of the duration of electrical stimulation on the analgesic response in patients with low back pain. *Anesthesiology*. Dec 1999;91(6):1622-1627. PMID 10598602
8. Ghoname ES, Craig WF, White PF, et al. The effect of stimulus frequency on the analgesic response to percutaneous electrical nerve stimulation in patients with chronic low back pain. *Anesth Analg*. Apr 1999;88(4):841-846. PMID 10195535
9. White PF, Craig WF, Vakharia AS, et al. Percutaneous neuromodulation therapy: does the location of electrical stimulation effect the acute analgesic response? *Anesth Analg*. Oct 2000;91(4):949-954. PMID 11004055
10. Hamza MA, White PF, Craig WF, et al. Percutaneous electrical nerve stimulation: a novel analgesic therapy for diabetic neuropathic pain. *Diabetes Care*. Mar 2000;23(3):365-370. PMID 10868867
11. Ahmed HE, White PF, Craig WF, et al. Use of percutaneous electrical nerve stimulation (PENS) in the short-term management of headache. *Headache*. Apr 2000;40(4):311-315. PMID 10759936
12. Raphael JH, Raheem TA, Southall JL, et al. Randomized double-blind sham-controlled crossover study of short-term effect of percutaneous electrical nerve stimulation in neuropathic pain. *Pain Med*. Oct 2011;12(10):1515-1522. PMID 21883874
13. Condon JE, Borg-Stein J, Revord J, et al. A multicenter trial of percutaneous neuromodulation therapy for low back pain patients with a subacute duration of lower extremity pain. Paper presented at: American Academy of Pain Medicine Annual Meeting; 2002; San Francisco, CA.
14. Kang RW, Lewis PB, Kramer A, et al. Prospective randomized single-blinded controlled clinical trial of percutaneous neuromodulation pain therapy device versus sham for the osteoarthritic knee: a pilot study. *Orthopedics*. Jun 2007;30(6):439-445. PMID 17598487

15. National Institute for Health and Care Excellence (NICE). Percutaneous electrical nerve stimulation for refractory neuropathic pain [IPG 450]. 2013; <http://www.nice.org.uk/guidance/ipg450>. Accessed February 17, 2017.
16. Bril V, England J, Franklin GM, et al. Evidence-based guideline: Treatment of painful diabetic neuropathy: report of the American Academy of Neurology, the American Association of Neuromuscular and Electrodiagnostic Medicine, and the American Academy of Physical Medicine and Rehabilitation. *Neurology*. May 17 2011;76(20):1758-1765. PMID 21482920
17. Practice guidelines for chronic pain management: an updated report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. *Anesthesiology*. Apr 2010;112(4):810-833. PMID 20124882
18. Chou R, Qaseem A, Snow V, et al. Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society. *Ann Intern Med*. Oct 2 2007;147(7):478-491. PMID 17909209

[CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS](#)

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 judgment 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. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

