

MEDICAL POLICY

POLICY TITLE	PERCUTANEOUS ELECTRICAL NERVE STIMULATION (PENS) AND PERCUTANEOUS NEUROMODULATION THERAPY (PNT)
POLICY NUMBER	MP 6.050

CLINICAL BENEFIT	☐ MINIMIZE SAFETY RISK OR CONCERN. ☒ MINIMIZE HARMFUL OR INEFFECTIVE INTERVENTIONS. ☐ ASSURE APPROPRIATE LEVEL OF CARE. ☐ ASSURE APPROPRIATE DURATION OF SERVICE FOR INTERVENTIONS. ☐ ASSURE THAT RECOMMENDED MEDICAL PREREQUISITES HAVE BEEN MET. ☐ ASSURE APPROPRIATE SITE OF TREATMENT OR SERVICE.
Effective date:	10/1/2026

POLICY

Percutaneous electrical nerve stimulation (PENS) is considered **investigational** as there is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

Percutaneous neuromodulation therapy (PNT) is considered **investigational** as there is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure.

Policy Guidelines

The correct CPT code to use for percutaneous electrical nerve stimulation (PENS) and percutaneous neuromodulation therapy (PNT) is the unlisted CPT code 64999. CPT codes for percutaneous implantation of neurostimulator electrodes (i.e., 64553-64561) are not appropriate, because PENS and PNT use percutaneously inserted needles and wires rather than percutaneously implanted electrodes. The stimulation devices used in PENS and PNT are not implanted, so CPT code 64590 is also not appropriate.

Cross-References:

MP 1.034 Vagus Nerve and Implantable Peripheral Nerve Stimulators

MP 2.092 Cranial Electrotherapy Stimulation and Auricular Electrostimulation

MP 6.020 Transcutaneous Electrical Nerve Stimulation and Transcutaneous Afferent Patterned Stimulation

MP 6.046 Threshold Electrical Stimulation as a Treatment of Motor Disorders

MP 6.047 Interferential Current Stimulation

MP 6.049 H-Wave Electrical Stimulation

MP 6.051 Functional Neuromuscular Electrical Stimulation

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>

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DESCRIPTION/BACKGROUND

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

CHRONIC PAIN

A variety of chronic musculoskeletal or neuropathic pain conditions, including low back pain, neck pain, diabetic neuropathy, chronic headache, and surface hyperalgesia, present a substantial burden to patients, adversely affecting function and quality of life.

Treatment

These chronic pain conditions have typically failed other treatments, and percutaneous electrical nerve stimulation (PENS) and percutaneous neuromodulation therapy (PNT) have been evaluated as treatments to relieve unremitting pain.

Percutaneous electrical nerve stimulation is similar in concept to transcutaneous electrical nerve stimulation (TENS) (see MP 6.020) 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.

Percutaneous neuromodulation therapy 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.

REGULATORY STATUS

In 2002, the Percutaneous Neuromodulation Therapy™ (Vertis Neuroscience) was cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. The labeled indication is: "... for the symptomatic relief and management of chronic or intractable pain and/or as an adjunctive treatment in the management of post-surgical pain and post-trauma pain."

In 2006, the Deepwave® Percutaneous Neuromodulation Pain Therapy System (Biowave) was cleared for marketing by FDA through the 510(k) process. The FDA determined that this device was substantially equivalent to the Vertis neuromodulation system and a Biowave neuromodulation therapy unit. The Deepwave® system includes a sterile single-use

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percutaneous electrode array that contains 1014 microneedles in a 1.5-inch diameter area. The needles are 736 μ m (0.736 mm) in length; the patch is reported to feel like sandpaper or Velcro.

FDA product code: NHI.

RATIONALE

SUMMARY OF EVIDENCE

For individuals who have chronic pain conditions (e.g., back, neck, neuropathy, headache, hyperalgesia) who receive PENS, the evidence includes primarily small, controlled trials and 2 systematic reviews. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. Two systematic reviews have not revealed consistent benefit from PENS in musculoskeletal pain disorders. One review concluded that PENS could decrease pain intensity, but not related disability, while the other found no significant differences between PENS and TENS in mitigation of pain. These conclusions are uncertain due to important methodological limitations in individual trials included in these reviews, such as high heterogeneity with regard to application methods. In the highest quality trial of PENS conducted to date in chronic low back pain, 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 that the technology results in an improvement in the net health outcome.

For individuals who have chronic pain conditions (e.g., knee osteoarthritis) who receive PNT, the evidence consists of a randomized controlled trial (RCT). 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 that the technology results in an improvement in the net health outcome.

DEFINITIONS

N/A

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.

Investigational for PENS and PNT; therefore, not covered:

Procedure Codes							
64999	1088T						

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POLICY HISTORY

MP 6.050	09/08/2020 Consensus Review. No changes to policy statements. References updated.
	12/03/2021 Minor Review. PENS now MN with criteria. Updated FEP, background, rationale, coding table, and references
	06/10/2022 Administrative Update. New code 0720T added effective 07/01/22
	12/30/2022 Consensus Review. Updated references. 0720T removed as it is housed in MP 2.092

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	10/04/2023 Consensus Review. Updated references. No changes to coding.
	11/04/2024 Minor Review. PENS is no longer MN. Updated clinical benefit, cross references, background, rationale and references.
	04/16/2025 Consensus Review. No changes to the policy statement. References reviewed. No coding changes.
	07/16/2025 Administrative Update. Removed Benefit Variations Section and updated Disclaimer.
	05/29/2026 Consensus Review. No changes to policy statement. Updated formatting, cross-references, product variations, background, rationale, definitions, disclaimer, and references. No coding changes.
	09/02/2026 Administrative Update. New code 1088T added, effective 10/01/2026.

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