

Medical Policy



An independent licensee of the
Blue Cross Blue Shield Association

Title: **Implanted Peripheral Nerve Stimulator (PNS) for Pain Control**

Professional

Original Effective Date: July 1998
Revision Date(s): May 15, 2007;
November 1, 2007; January 26, 2010;
February 25, 2011; January 1, 2012;
March 13, 2013; February 10, 2015;
April 1, 2016; October 1, 2016;
May 10, 2017; May 9, 2018; April 24, 2019
Current Effective Date: April 1, 2016

Institutional

Original Effective Date: December 13, 2007
Revision Date(s): February 25, 2010;
February 25, 2011; January 1, 2012;
March 13, 2013; February 10, 2015;
April 1, 2016; October 1, 2016;
May 10, 2017; May 9, 2018; April 24, 2019
Current Effective Date: April 1, 2016

State and Federal mandates and health plan member contract language, including specific provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage. To verify a member's benefits, contact [Blue Cross and Blue Shield of Kansas Customer Service](#).

The BCBSKS Medical Policies contained herein are for informational purposes and apply only to members who have health insurance through BCBSKS or who are covered by a self-insured group plan administered by BCBSKS. Medical Policy for FEP members is subject to FEP medical policy which may differ from BCBSKS Medical Policy.

The medical policies do not constitute medical advice or medical care. Treating health care providers are independent contractors and are neither employees nor agents of Blue Cross and Blue Shield of Kansas and are solely responsible for diagnosis, treatment and medical advice.

If your patient is covered under a different Blue Cross and Blue Shield plan, please refer to the Medical Policies of that plan.

DESCRIPTION

The peripheral nervous system includes pathways outside of the spinal cord, specifically various plexuses and peripheral nerves. Peripherally implanted nerve stimulation entails the placement of electrodes on a selected peripheral nerve. The stimulating electrode array is connected to an implanted pulse generator.

POLICY

- A. Implanted peripheral nerve stimulators may be considered **medically necessary** when **ALL** of the following criteria are met:
1. Cause of pain isolated to a single nerve or in an area on a limb that can be stimulated by a proximal nerve, **AND**
 2. Pain is refractory to reasonable alternative therapies such as physical therapy, analgesics, anticonvulsants, muscle relaxants, antidepressants, topical anesthetics, and nerve blocks, **AND**
 3. Diagnosis was confirmed by nerve blocks, **AND**
 4. Psychological evaluation prior to trial implantation has been performed and indicates no contraindications to implantation, **AND**
 5. A successful trial with percutaneous leads is performed.
- B. Implanted peripheral nerve stimulators are considered **experimental / investigational** for all other indications.

CODING

The following codes for treatment and procedures applicable to this policy are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) 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 of these services as it applies to an individual member.

CPT/HCPCS

64553	Percutaneous implantation of neurostimulator electrode array; cranial nerve
64555	Percutaneous implantation of neurostimulator electrode array; peripheral nerve (excludes sacral nerve)
64575	Incision for implantation of neurostimulator electrode array; peripheral nerve (excludes sacral nerve)
64585	Revision or removal of peripheral neurostimulator electrode array
64590	Insertion or replacement of peripheral or gastric neurostimulator pulse generator or receiver, direct or inductive coupling
64595	Revision or removal of peripheral or gastric neurostimulator pulse generator or receiver
L8680	Implantable neurostimulator electrode, each
L8681	Patient programmer (external) for use with implantable programmable neurostimulator pulse generator, replacement only
L8682	Implantable neurostimulator radiofrequency receiver
L8683	Radiofrequency transmitter (external) for use with implantable neurostimulator radiofrequency receiver

- L8685 Implantable neurostimulator pulse generator, single array, rechargeable, includes extension
- L8686 Implantable neurostimulator pulse generator, single array, nonrechargeable, includes extension
- L8687 Implantable neurostimulator pulse generator, dual array, rechargeable, includes extension
- L8688 Implantable neurostimulator pulse generator, dual array, nonrechargeable, includes extension
- L8689 External recharging system for battery (internal) for use with implantable neurostimulator, replacement only
- L8695 External recharging system for battery (external) for use with implantable neurostimulator, replacement only

ICD-10 Diagnoses

- G56.41 Causalgia of right upper limb
- G56.42 Causalgia of left upper limb
- G56.43 Causalgia of bilateral upper limbs
- G57.71 Causalgia of right lower limb
- G57.72 Causalgia of left lower limb
- G57.73 Causalgia of bilateral lower limbs
- G89.21 Chronic pain due to trauma
- G89.4 Chronic pain syndrome
- G90.50 Complex regional pain syndrome I, unspecified
- G90.511 Complex regional pain syndrome I of right upper limb
- G90.512 Complex regional pain syndrome I of left upper limb
- G90.513 Complex regional pain syndrome I of upper limb, bilateral
- G90.521 Complex regional pain syndrome I of right lower limb
- G90.522 Complex regional pain syndrome I of left lower limb
- G90.523 Complex regional pain syndrome I of lower limb, bilateral
- G90.59 Complex regional pain syndrome I of other specified site
- G90.59 Complex regional pain syndrome I of other specified site
- M53.1 Cervicobrachial syndrome
- M54.10 Radiculopathy, site unspecified
- M54.18 Radiculopathy, sacral and sacrococcygeal region
- M79.2 Neuralgia and neuritis, unspecified
- R51 Headache

REVISIONS

Effective 11-01-2007	<ul style="list-style-type: none"> • Description added. • Policy liberalized to allow additional indications for Implanted Peripheral Nerve Stimulators. • Under item I. Conditions that may cause intractable pain, the following were deleted: Reflex sympathetic dystrophy and Causalgia" and replaced with the more current terminology and broadened application of: "Complex Regional Pain Syndrome, Type I and II" to include the definition of Complex Regional Pain Syndrome. • Under item II, general criteria were revised to provide clarification as follows: <ul style="list-style-type: none"> ➤ To item A. added : "by significant, function limiting pain in a peripheral nerve distribution"
-------------------------	--

	<ul style="list-style-type: none"> ➤ To item B. added "or in an area on a limb that can be stimulated by a proximal nerve" ➤ To item C. added "such as physical therapy, analgesics, anticonvulsants, muscle relaxants, antidepressants, topical anesthetics, and nerve blocks" ➤ Added item F. "A successful trial with percutaneous leads is performed" ➤ Added item G. "Surgical decompression is not indicated" ➤ Added item H. "Diagnosis was confirmed by nerve blocks" ➤ Deleted "No nerve abnormalities demonstrable" • Policy section revised to delete the following: "Conditions generally NOT responsive to PNS: <ul style="list-style-type: none"> a. Sciatica b. Pain associated with failed low back surgery c. Cancer pain d. Idiopathic Pain e. Pain due to nerve root injury".
	<ul style="list-style-type: none"> • References were updated.
01-26-2010	<p>In Policy Section:</p> <ul style="list-style-type: none"> ▪ Added clarification wording to II. E. "...prior to the procedure and..." so the sentence reflected, "Psychological evaluation obtained prior to the procedure and by someone familiar with the pain process."
	<p>In Coding Section:</p> <ul style="list-style-type: none"> ▪ Added HCPCS Codes: L8680, L8681, L8682, L8683, L8685, L8686, L8687, L8688, L8689, L8695
02-25-2011	<p>In Coding Section:</p> <ul style="list-style-type: none"> ▪ Removed CPT code 64573, 63685
01-01-2012	<p>In Coding section:</p> <ul style="list-style-type: none"> ▪ Revised CPT nomenclature for the following codes: 64553, 64555, 64575, 64585
03-13-2013	<p>In Policy section:</p> <ul style="list-style-type: none"> ▪ Revised policy language from: "I. Implanted peripheral nerve stimulators may be medically necessary for the following conditions when they cause intractable pain (positive findings must be present): <ul style="list-style-type: none"> A. Direct or indirect nerve trauma. B. Complex Regional Pain Syndrome, Type I and II. (Complex Regional Pain Syndrome [CRPS] is a chronic pain condition that is believed to be the result of dysfunction in the central or peripheral nervous systems. Typical features include dramatic changes in the color and temperature of the skin over the affected limb or body part, accompanied by intense burning pain, skin sensitivity, sweating, and swelling. CRPS Type I is frequently triggered by tissue injury; the term describes all patients with the above symptoms, but no underlying nerve injury. Patients with CRPS Type II experience the same symptoms, but their cases are clearly associated with a nerve injury.) II. The following general criteria may be used as a guide for review: <ul style="list-style-type: none"> A. Pathology for the pain complaint demonstrated by significant, function limiting pain in a peripheral nerve distribution. B. Cause of pain isolated to a single nerve or in an area on a limb that can be stimulated by a proximal nerve. C. Have exhausted reasonable alternative therapies such as physical therapy, analgesics, anticonvulsants, muscle relaxants, antidepressants, topical anesthetics, and nerve blocks. D. No serious drug habituation problems detected. E. Psychological evaluation obtained prior to the procedure and by someone familiar with the pain process.

	<p>F. A successful trial with percutaneous leads is performed. G. Surgical decompression is not indicated. H. Diagnosis was confirmed by nerve blocks."</p> <p>In Coding section:</p> <ul style="list-style-type: none"> ▪ Removed CPT code 61885 ▪ Removed diagnosis code: 723.1, 724.2 ▪ Added ICD-10 diagnoses: G90.50, G90.59, G90.511, G90.512, G90.513, G90.519, G90.521, G90.522, G90.523, G90.529, G90.59, G56.40, G56.41, G56.42, G57.70, G57.71, G57.72, G89.21, G89.4, M53.1, M54.10, M54.18, M79.2, R51 <p>Updated Reference section.</p>
02-10-2015	<p>Description section updated</p> <p>In Policy Section:</p> <ul style="list-style-type: none"> ▪ In Item D removed "obtained prior to the procedure" and added "prior to trial implantation has been performed and indicates no contraindications to implantation." to read "Psychological evaluation prior to trial implantation has been performed and indicates no contraindications to implantation." <p>Other References updated</p>
04-01-2016	<p>In Policy section:</p> <ul style="list-style-type: none"> ▪ Added Item B, "Percutaneous tibial nerve stimulators are considered experimental / investigational for all other indications." <p>Updated References section.</p>
10-01-2016	<p>In Coding section:</p> <ul style="list-style-type: none"> ▪ Added ICD-10 codes effective 10-01-2016: G56.43, G57.73 ▪ Removed ICD-10 codes: G56.40, G57.70, G90.519, G90.529
05-10-2017	<p>Policy reviewed; no changes made.</p>
05-09-2018	<p>In Policy section:</p> <ul style="list-style-type: none"> ▪ In Item A, added "ALL of" to read, "Implanted peripheral nerve stimulators may be considered medically necessary when ALL of the following criteria are met:" ▪ In Item A 1, added "AND" to read, "Cause of pain isolated to a single nerve or in an area on a limb that can be stimulated by a proximal nerve, AND" ▪ In Item A 2, added "AND" to read, "Pain is refractory to reasonable alternative therapies such as physical therapy, analgesics, anticonvulsants, muscle relaxants, antidepressants, topical anesthetics, and nerve blocks, AND," ▪ In Item A 3, added "AND" to read, "Diagnosis was confirmed by nerve blocks, AND" ▪ In Item A 4, added "AND" to read, "Psychological evaluation prior to trial implantation has been performed and indicates no contraindications to implantation, AND" <p>In Coding section:</p> <ul style="list-style-type: none"> ▪ Removed ICD-9 codes. <p>Remainder of policy reviewed; no changes made.</p>
04-24-2019	<p>Policy reviewed; no changes made.</p>

REFERENCES

1. Waisbrod H, Panhans C, Hansen D, Gerbershagen H. Direct Nerve Stimulation for Painful Peripheral Neuropathies. *Journ of Bone and Joint Surgery* 1985; 67-B:3:470-472.
2. Kim P. Advanced Pain Management Techniques: An Overview of Neurostimulation. *Medscape Neurology & Neurosurgery* 2004; 6(1).
3. Slavin K, Colpan E, Munawar N, et. al. Trigeminal and Occipital Peripheral Nerve Stimulation for Craniofacial Pain: A Single-institution Experience and Review of the Literature. *Neurosurgical Focus* 2006; 21(6).

4. Goroszeniuk R, Kothari S, Hamann W. Percutaneous Implantation of a Brachial Plexus Electrode for Management of Pain Syndrome Caused by a Traction Injury. *Neuromodulation: Technology at the Neural Interface* 2007; 10:2:148-155.
5. Oh M, Oretga J, Bellotte J, et.al. Peripheral Nerve Stimulation for the Treatment of Occipital Neuralgia and Transformed Migraine Using a C1-2-3 Subcutaneous Paddle Style Electrode: A Technical Report. *Neuromodulation* 2004; 7:2:103-112.
6. Monti E. Peripheral Nerve Stimulation: A Percutaneous Minimally Invasive Approach. *Neuromodulation* 2004; 7:3:193-196.
7. Ellrich J, Lamp S. Peripheral Nerve Stimulation Inhibits Nociceptive Processing: An electrophysiological Study in Healthy Volunteers. *Neuromodulation* 2005; 8:4:225-232.
8. Johnstone C, Sundaraj R. Occipital Nerve Stimulation for the Treatment of Occipital Neuralgia – Eight Case Studies. *Neuromodulation* 2006; 9:1:41-47
9. Lavano A, Volpentesta G, Piragine G, et.al. Sacral Nerve Stimulation with Percutaneous Dorsal Transforaminal Approach in Treatment of Isolated Pelvic Pain Syndromes. *Neuromodulation* 2006; 9:3:229-233.
10. Konstantin, Colpan, Munawar, et.al. Trigeminal and Occipital Peripheral Nerve Stimulation for Craniofacial Pain: A Single-Institution Experience and Review of the Literature. *Neurosurg Focus* 2006; 21 (6):E6:1-5.
11. Eisenberg, Waisbrod, and Gerbershagen. Long-Term Peripheral Nerve Stimulation for Painful Nerve Injuries. *Clin J Pain*, 2004; 20:3:143-146.
12. Schwedt, Dodick, Hentz, et.al. Occipital Nerve Stimulation for Chronic Headache--Long-Term Safety and Efficacy. *Cephalalgia* 2007; 27:153-157.
13. MCMC, Consultant, May 10, 2007, MCOP ID 1074-5165.
14. MCMC Consultant, August 6, 2007, MCOP ID 1075-5918.

Other References

1. Blue Cross and Blue Shield of Kansas Anesthesiology Liaison Committee, May 15, 2007; May 2010; May 2014; May 2015.
2. Blue Cross and Blue Shield Medical Advisory Committee (MAC), August 2, 2007.
3. Blue Cross and Blue Shield of Kansas Anesthesiology Liaison Committee CB, November 2014.