

Dorsal Column Stimulator for Pain Management

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Definition

A dorsal (spinal) column stimulator (DCS) is an electrical stimulation device for chronic pain control. The DCS unit is comprised of an electrode that is connected to a battery-powered electronic stimulus generator, which is surgically implanted in the back near the spinal cord. An electrical signal is transmitted to the spinal cord to decrease the sensation of pain, which is then replaced by a mild tingling sensation. The process involves a first step trial treatment whereby a temporary electrode is utilized and connected to a stimulus generator that is worn on the belt; the current may be switched on and off, or the intensity of the current changed. If good pain relief is achieved, then the entire system is implanted beneath the skin so that it is invisible.

Guideline

Members are eligible for coverage of lumbar/thoracic DCS implantation as an in-patient procedure for one of the following indications:

1. Failed back surgery syndrome (FBSS) with primarily radicular pain
2. Inoperable chronic critical limb ischemia
3. Reflex sympathetic dystrophy (RSD)/complex regional pain syndrome (CRPS)

The following conditions must be met:

1. Use of DCS is limited to late or last resort for chronic intractable pain
2. Other methods of pain management have either failed or are contraindicated (e.g., pharmacological, surgical, physical or psychological therapies)
3. Further surgical intervention is contraindicated, or the member does not wish to proceed with spinal surgery
4. Member has been evaluated by a multi-disciplinary team inclusive of psychological as well as physical evaluation
5. Absence of any untreated existing drug addiction problems
6. Pain is predominantly neuropathic
7. Pain reduction is achieved with trial of percutaneous spinal stimulation; both:
 - Trial must last \geq 2 days
 - Improved function and \geq 50% reduction in pain must be demonstrated with temporarily implanted electrode prior to the permanent implantation

Limitations/Exclusions

1. Lumbar/thoracic spinal cord stimulators are considered experimental/investigational for all conditions not listed above; including visceral or pelvic pain syndromes.
2. Cervical spinal cord stimulators are considered experimental/investigational for all indications due to a lack of strong peer-reviewed evidence supporting use.
3. Dorsal root ganglion (DRG) stimulation is not considered medically necessary due to insufficient evidence of therapeutic value.
4. The Proclaim XR Spinal Cord Stimulation System is considered experimental/investigational for pain secondary to diabetic peripheral neuropathy.

Revision History

Dec. 8, 2023	Added the Proclaim XR Spinal Cord Stimulation System as investigational
Sept. 13, 2019	Added language communicating allowance of dorsal column stimulators for members not wishing to proceed with spinal surgery.
Mar. 13, 2017	Communicated that dorsal root ganglion stimulation is not considered medically necessary.
Nov. 13, 2015	Removed nonmalignant pain, angina and refractory neuropathic pain coverage terms to clarify that medical necessity is limited to failed back surgery syndrome, inoperable chronic critical limb ischemia and reflex sympathetic dystrophy (RSD)/complex regional pain syndrome (CRPS).

Applicable Procedure Codes

63650	Percutaneous implantation of neurostimulator electrode array, epidural
63655	Laminectomy for implantation of neurostimulator electrodes, plate/paddle, epidural
63661	Removal of spinal neurostimulator electrode percutaneous array(s), including fluoroscopy, when performed
63662	Removal of spinal neurostimulator electrode plate/paddle(s) placed via laminotomy or laminectomy, including fluoroscopy, when performed
63663	Revision including replacement, when performed, of spinal neurostimulator electrode percutaneous array(s), including fluoroscopy, when performed
63664	Revision including replacement, when performed, of spinal neurostimulator electrode plate/paddle(s) placed via laminotomy or laminectomy, including fluoroscopy, when performed
63685	Incision and subcutaneous placement of spinal neurostimulator pulse generator or receiver, direct or inductive coupling
63688	Revision or removal of implanted spinal neurostimulator pulse generator or receiver
95970	Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude, pulse duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); simple or complex brain, spinal cord, or peripheral (ie, cranial nerve, peripheral nerve, sacral nerve, neuromuscular) neurostimulator pulse generator/transmitter, without reprogramming
95971	Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude, pulse duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); simple spinal cord, or peripheral (ie, peripheral nerve, sacral nerve, neuromuscular) neurostimulator pulse generator/transmitter, with intraoperative or subsequent programming
95972	Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude, pulse duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient compliance measurements); complex spinal cord, or peripheral (ie, peripheral nerve, sacral nerve, neuromuscular) (except cranial nerve) neurostimulator pulse generator/transmitter, with intraoperative or subsequent programming, first hour

0282T	Percutaneous or open implantation of neurostimulator electrode array(s), subcutaneous (peripheral subcutaneous field stimulation), including imaging guidance, when performed, cervical, thoracic or lumbar; for trial, including removal at the conclusion of trial period
0283T	Percutaneous or open implantation of neurostimulator electrode array(s), subcutaneous (peripheral subcutaneous field stimulation), including imaging guidance, when performed, cervical, thoracic or lumbar; permanent, with implantation of a pulse generator
0284T	Revision or removal of pulse generator or electrodes, including imaging guidance, when performed, including addition of new electrodes, when performed
0285T	Electronic analysis of implanted peripheral subcutaneous field stimulation pulse generator, with reprogramming when performed
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
L8684	Radiofrequency transmitter (external) for use with implantable sacral root neurostimulator receiver for bowel and bladder management, replacement
L8685	Implantable neurostimulator pulse generator, single array, rechargeable, includes extension
L8686	Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension
L8687	Implantable neurostimulator pulse generator, dual array, rechargeable, includes extension
L8688	Implantable neurostimulator pulse generator, dual array, non-rechargeable, 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

Applicable ICD-10 codes

G54.6	Phantom limb syndrome with pain
G54.7	Phantom limb syndrome without pain
G56.40	Causalgia of unspecified upper limb
G56.41	Causalgia of right upper limb
G56.42	Causalgia of left upper limb
G56.80	Other specified mononeuropathies of unspecified upper limb
G56.81	Other specified mononeuropathies of right upper limb
G56.82	Other specified mononeuropathies of left upper limb
G57.70	Causalgia of unspecified lower limb
G57.71	Causalgia of right lower limb
G57.72	Causalgia of left lower limb
G57.80	Other specified mononeuropathies of unspecified lower limb
G57.81	Other specified mononeuropathies of right lower limb
G57.82	Other specified mononeuropathies of left lower limb
G58.8	Other specified mononeuropathies
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
G90.519	Complex regional pain syndrome I of unspecified upper limb
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
G90.529	Complex regional pain syndrome I of unspecified lower limb
G90.59	Complex regional pain syndrome I of other specified site
M54.15	Radiculopathy, thoracolumbar region
M54.16	Radiculopathy, lumbar region
M54.17	Radiculopathy, lumbosacral region
M54.18	Radiculopathy, sacral and sacrococcygeal region
M96.1	Postlaminectomy syndrome, not elsewhere classified

References

- Anderson C. Complications in spinal cord stimulation for treatment of angina pectoris: differences in unipolar and multipolar percutaneous inserted electrodes. *Acta Cardiol.* 1997;52:325-333.
- Anderson C, Hole P, Oxhoj H. Does pain relief with spinal cord stimulation for angina conceal myocardial infarction? *Br Heart J.* 1994;71:419-421.
- Augustinsson LE, Eliasson T, Mannheimer C. Spinal cord stimulation in severe angina pectoris. *Stereotact Funct Neurosurg.* 1995;65:136-141.
- Barolat G, Sharan AD. Future trends in spinal cord stimulation. *Neurol Res.* 2000;22:279-284.
- Bell GK, Kidd D, North RB. Cost-effectiveness analysis of spinal cord stimulation in treatment of failed back surgery syndrome. *J Pain Symptom Manage.* 1997;13:286-295.
- Burchiel KJ, Anderson VC, Brown FD, et al. Prospective, multicenter study of spinal cord stimulation for relief of chronic back and extremity pain. *Spine.* 1996;21:2786-2794
- Burchiel KJ, Anderson VC, Wilson BJ, Denison DB, Olson KA, Shatin D. Prognostic factors of spinal cord stimulation for chronic back and leg pain. *Neurosurgery.* 1995;36:1101-1111.
- Conti CR. Alternative therapies for patients with persistent chronic stable angina. *Clin Cardiol.* 1999;22:773-774.
- DeJongste MJ, Hautvast RW, Hillege HL, Lie KI. Efficacy of spinal cord stimulation as adjuvant therapy for intractable angina pectoris: a prospective, randomized clinical study. *J Am Coll Cardiol.* 1994;23:1592-1597.
- DeJongste MJ. Spinal cord stimulation for ischemic heart disease. *Neurol Res.* 2000;22:293-298.
- Eliasson T, Augustinsson LE, Mannheimer C. Spinal cord stimulation in severe angina pectoris—presentation of current studies, indications and clinical experience. *Pain.* May-June 1996;65:168-179.
- Giller CA. The neurosurgical treatment of pain. *Arch Neurol.* 2003;60:1537-1540.
- Greco S, Auriti A, Fiume D, et al. Spinal cord stimulation for the treatment of refractory angina pectoris: a two-year follow-up. *Pacing Clin Electrophysiol.* January 1999;22:26-32.
- Hassenbusch SJ, Stanton-Hicks M, Covington EC. Spinal cord stimulation versus spinal infusion for low back and leg pain. *Acta Neurochir Suppl.* 1995;64:109-115.
- Hayes Evidence Analysis Research Brief. Proclaim XR Spinal Cord Stimulation System (Abbott) for Management of Diabetic Peripheral Neuropathy: Winifred S. Hayes, Inc.; September 8, 2023.
- Hayes WS. Technology Assessment Report. Spinal Cord Stimulation for Relief of Neuropathic Pain. Lansdale, Penn: Winifred S. Hayes, Inc.; May 14, 2003. Search updated November 21, 2006.
- Holsheimer J. Effectiveness of spinal cord stimulation in the management of chronic pain: analysis of technical drawbacks and solutions. *Neurosurgery.* 1997;40:990-999.

- Horsch S, Claeys L. Epidural spinal cord stimulation in the treatment of severe peripheral arterial occlusive disease. *Ann Vasc Surg.* 1994;8:468-474.
- Jivegård LE, Augustinsson LE, Holm J, Risberg B, Ortenwall P. Effects of spinal cord stimulation (SCS) in patients with inoperable severe lower limb ischaemia: a prospective randomized controlled study. *Eur J Vasc Endovasc Surg.* 1995;9:421-425.
- Kumar K, Toth C, Nath RK, Laing P. Epidural spinal cord stimulation for the treatment of chronic pain--some predictors of success. a 15-year experience. *Surg Neurol.* 1998;50:110-121.
- North RB, Kidd DH, Piantadosi S. Spinal cord stimulation versus reoperation for failed back surgery syndrome: a prospective, randomized study design. *Acta Neurochir Suppl.* 1995;64:106-108.
- North RB, Kidd DH, Zahurak M, James CS, Long DM. Spinal cord stimulation for chronic, intractable pain: experience over two decades. *Neurosurgery.* 1993;32:384-395.
- Ohnmeiss DD, Rashbaum RF, Bogdanffy GM. Prospective outcome evaluation of spinal cord stimulation in patients with intractable leg pain. *Spine.* 1996;21:1344-1351.
- Petrakis IE, Sciacca V. Does autonomic neuropathy influence spinal cord stimulation therapy success in diabetic patients with critical lower limb ischemia? *Surg Neurol.* 2000;53:182-189.
- Practice guidelines for chronic pain management. A report by the American Society of Anesthesiologists Task Force on Pain Management, Chronic Pain Section. *Anesthesiology.* 1997;86:995-1004
- Shealy CN, Mortimer JT, Reswick JB. Electrical inhibition of pain by stimulation of the dorsal columns: a preliminary clinical report. *Anesth Analg.* 1967;46:489-491.
- Simpson BA. Spinal cord stimulation. *Br J Neurosurg.* 1997;11:5-11.
- Specialty-matched clinical peer review.
- Tesfaye S, Watt J, Benbow SJ, Pang KA, Miles J, MacFarlane IA. Electrical spinal-cord stimulation for painful diabetic peripheral neuropathy. *Lancet.* 1996;348:1698-1701.
- Turner JA, Loeser JD, Bell KG. Spinal cord stimulation for chronic lower back pain: a systematic literature synthesis. *Neurosurgery.* 1995;37:1088-1096.
- Villavicencio AT, Leveque JC, Rubin L, Bulsara K, Gorecki JP. Laminectomy versus percutaneous electrode placement for spinal cord stimulation. *Neurosurgery.* 2000;46:399-406.
- Specialty matched clinical peer review.