

Corporate Medical Policy

Posterior Tibial Nerve Stimulation for Voiding Dysfunction

File Name: posterior_tibial_nerve_stimulation_for_voiding_dysfunction
Policy Number: SUR6546
Origination: 1/2007
Last CAP Review: 9/2009
Next CAP Review: 9/2011
Last Review: 9/2009

Description of Procedure or Service

Posterior tibial nerve stimulation (PTNS) is a technique of electrical stimulation for the treatment of voiding [dysfunction](#) in patients who have failed [behavioral therapies](#) and/or [pharmacologic](#) therapies. Voiding [dysfunction](#) includes [urinary frequency](#), urgency, [incontinence](#), and nonobstructive [retention](#). Common causes of voiding [dysfunction](#) are pelvic floor [dysfunction](#) (from pregnancy, childbirth, surgery, etc.), inflammation, medication side effects (e.g., diuretics and anticholinergics), obesity, [psychogenic](#) factors and disease (e.g., multiple sclerosis, spinal cord injury, [detrusor hyperreflexia](#), diabetes with peripheral nerve involvement, etc.). Altering the function of the posterior tibial nerve with PTNS is believed to improve voiding function and control. While the posterior tibial nerve is located near the ankle, it is derived from the lumbar-sacral nerves (L4-S3) which control the bladder detrusor and perineal floor.

The system used to provide PTNS consists of a small gauge needle electrode, surface electrode, lead wire, and handheld electrical generator. The percutaneous needle is inserted into the ankle. After the lead wire and electrode are attached, the stimulator is turned on and the amplitude is slowly increased until the patient's response indicates proximity to the nerve bundle (i.e., the large toe starts to curl, the toe digits fan out, or the entire foot extends.) Noninvasive PTNS has also been delivered with surface electrodes. PTNS studies have been designed as 30-minute sessions given weekly for 10-12 weeks. Recently, consideration has been given to increasing the frequency of treatments to 3 times per week to speed achievement of desired outcomes. However, an optimal treatment approach has not been identified and the durability of PTNS is uncertain.

PTNS must be 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. Thus in PTNS, the location of stimulation is directly in the posterior tibial nerve rather than using the theories of energy flow that guide placement of stimulation for acupuncture.

In July 2005, the Urgent® PC Neuromodulation System (Uroplasty, Inc.) received 510(k) marketing clearance for percutaneous tibial nerve stimulation to treat patients suffering from [urinary urgency](#), [urinary frequency](#), and [urge incontinence](#). This device was cleared as a class II "nonimplanted, peripheral nerve stimulator for pelvic floor [dysfunction](#)" because it was considered to be substantially equivalent to the previously cleared percutaneous Stoller afferent nerve system (PerQ SANS System) in 2001 (K992069, Uro-Surge, Inc.).

PTNS was derived as a less-invasive treatment alternative to traditional sacral root [neuromodulation](#) which has been successfully used in the treatment of urinary [dysfunction](#), but requires implantation of a permanent device. In sacral root [neuromodulation](#), an implantable pulse generator that delivers controlled electrical impulses is attached to wire leads that connect to the sacral nerves, most commonly the S3 nerve root that modulates the neural pathways controlling bladder function.

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

Policy

BCBSNC will not provide coverage for posterior tibial nerve stimulation for urinary dysfunction, including but not limited to urinary frequency, urgency, incontinence and retention, because it is considered investigational. BCBSNC does not cover investigational services.

Benefits Application

Please refer to Certificate for availability of benefits. This policy relates only to the services or supplies described herein. Benefits may vary according to benefit design, therefore certificate language should be reviewed before applying the terms of the policy.

When Posterior Tibial Nerve Stimulation for Voiding Dysfunction is covered

Not applicable.

When Posterior Tibial Nerve Stimulation for Voiding Dysfunction is not covered

Posterior tibial nerve stimulation for voiding [dysfunction](#), including but not limited to urinary frequency, urgency, incontinence and retention, is not covered. It is considered investigational and BCBSNC does not cover investigational services.

Policy Guidelines

Randomized trials with appropriate control groups are needed to determine the durability and short and long-term effects of PTNS on voiding [dysfunction](#). Additionally, further randomized trials to determine appropriate treatment periodicity are needed.

Billing/Coding/Physician Documentation Information

This policy 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.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: The correct CPT code to use for PTNS is the unlisted CPT code 64999. CPT codes for percutaneous implantation of neurostimulator electrodes (i.e., 64553-64565) are not appropriate since PTNS uses percutaneously inserted needles and wires rather than percutaneously implanted electrodes. The stimulation device used in PTNS is not implanted so CPT code 64590 is also not appropriate.

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BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Medical Term Definitions

Behavioral Therapies

biofeedback, bladder training, habit training, pelvic muscle exercises.

Detrusor Hyperreflexia

involuntary bladder contraction in a patient with a known neurologic abnormality such as MS. It involves overactivity of the detrusor muscle, which results in symptoms of urgency and often urge incontinence; over exaggerated reflexes of the detrusor muscle

Dysfunction

disturbance, impairment, or abnormality of the functioning of an organ.

Incontinence

an inability to control the body's elimination of waste products through urination or defecation.

Neuromodulation

electrical stimulation that targets specific nerve tissue and disrupts the signals that lead to the symptoms of voiding dysfunction.

Pharmacologic

pertaining to the principles and reactions of drugs.

Psychogenic

produced or caused by psychic or mental factors rather than organic factors.

Retention

inability to empty urine from the bladder, which can be caused by atonic bladder or obstruction of the urethra.

Urge incontinence

is characterized by a sudden uncontrollable urge to urinate and frequent urination. It is often necessary to use a bathroom as frequently as every 2 hours, and bed-wetting is common.

Urinary frequency

urination eight or more times a day.

Urinary urgency

inability to delay urination.

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Scientific Background and Reference Sources

External Specialty Matched Consultant review 4/4/06

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.106, 7/20/06.

Specialty Matched Consultant Advisory Panel review 5/8/07.

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.106, 9/18/07.

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.106, 10/07/08.

Nuhoglu B, Fidan V, Ayyildiz A et al. Stoller afferent nerve stimulation in woman with therapy resistant over active bladder; a 1-year follow up. *Int Urogynecol J Pelvic Floor Dysfunct* 2006; 17(3):204-7.

van der Pal F, van Balken MR, Heesakkers JP et al. Percutaneous tibial nerve stimulation in the treatment of refractory overactive bladder syndrome: is maintenance treatment necessary? *BJU Int* 2006; 97(3):547-50.

Finazzi Agro E, Campagna A, Sciobica F et al. Posterior tibial nerve stimulation: is the once-a-week protocol the best option? *Minerva Urol Nefrol* 2005; 57(2):119-23.

van der Pal F, van Balken MR, Heesakkers JP et al. Correlation between quality of life and voiding variables in patients treated with percutaneous tibial nerve stimulation. *BJU Int* 2006; 97(1):113-6.

Kim SW, Paick JS, Ku JH. Percutaneous posterior tibial nerve stimulation in patients with chronic pelvic pain: a preliminary study. *Urol Int* 2007; 78(1):58-62.

Specialty Matched Consultant Advisory Panel review - 9/2009

Policy Implementation/Update Information

1/3/07 Notification of new policy. BCBSNC will not provide coverage for posterior tibial nerve stimulation for urinary dysfunction, including but not limited to urinary frequency, urgency, incontinence and retention, because it is considered investigational. BCBSNC does not cover investigational services. Notification given 1/3/07. Effective date 3/12/07. (pmo)

6/4/07 Specialty Matched Consultant Advisory Panel review 5/8/07. No changes to criteria. Reference source added. (pmo)

9/28/09 No changes to criteria. Repeated same types of urinary dysfunction under "When not Covered" that is included in policy statement. Reference sources added. (pmo)

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.