

Clinical Policy: Posterior Tibial Nerve Stimulation for Voiding Dysfunction

Reference Number: PA.CP.MP.133

Effective Date: 01/18

Last Review Date: 09/18

[Coding Implications](#)

[Revision Log](#)

Description

Posterior tibial nerve stimulation (PTNS), also known as peripheral tibial nerve stimulation, is a minimally invasive form of electrical neuromodulation used to treat overactive bladder (OAB) syndrome and associated symptoms of urinary urgency, urinary frequency, and urge urinary incontinence. This policy describes the medical necessity requirements for posterior tibial nerve stimulation.

Policy/Criteria

- I. It is the policy of Pennsylvania Health and Wellness® (PHW) that PTNS is **medically necessary** for the treatment of moderate to severe urinary dysfunction and OAB symptoms when all of the following criteria are met:
 - A. Urinary dysfunction has persisted for at least 12 months and the condition has resulted in significant disability (i.e., the urinary urgency, frequency, and/or severity of symptoms are limiting the member's ability to participate in activities of daily living); and
 - B. There has been a failure of, contraindications to, or intolerance to conservative medical management (e.g. pharmacotherapy with alpha blockers and cholinergics and/or antibiotics for urinary tract infections); and
 - C. Service is provided in accordance with the standard treatment regimen of 30-minute weekly sessions for 12 weeks.
- II. It is the policy of PHW that once a month maintenance treatments with PTNS are **medically necessary** for patients who experience significant improvement in their OAB symptoms after the 12 initial treatments. Treatment frequency may vary depending on return of symptoms.
- III. It is the policy of PHW that PTNS beyond 12 months or when there is no improvement in urinary dysfunction is **investigational**.

Background

The term "voiding dysfunction" has been used to refer to urinary incontinence, urinary retention, and symptoms of frequency and urgency. OAB is a specific type of voiding dysfunction that includes any of the following symptoms: urinary frequency, urinary urgency, urge incontinence, and nocturia. OAB can significantly impact quality of life; including physical function, sexual function, and social interactions. Treatments for OAB include lifestyle changes, bladder training, pelvic floor muscle training and anticholinergic (anti-muscarinic) drugs.

PTNS involves indirect modulation of the specific nerve that controls bladder function (i.e., the sacral nerve plexus) via stimulation of the posterior tibial nerve accessed just above the ankle. This minimally invasive form of neuromodulation consists of insertion of a 34-gauge needle electrode approximately 5 centimeters (cm) cephalad to the medial malleolus and 2 cm posterior to the tibia near the tibial nerve. A surface electrode is placed on the medial aspect of the foot.

CLINICAL POLICY

Posterior Tibial Nerve Stimulation for Voiding Dysfunction

The needle electrode is connected via a lead wire to a low-voltage electrical stimulator. Stimulation is administered at a current level of 0.5 to 9 milliamperes (mA) at 20 hertz (Hz) and continues for 30 minutes. Initial treatment regimens typically consist of 12 weekly sessions, with responders exhibiting some symptom improvement after 6 to 8 sessions. Maintenance treatment sessions may be required to sustain the response to treatment.¹

A battery-less, leadless, miniature, implantable tibial nerve neuromodulation system is currently under investigation for the management of OAB, however, it has not received FDA approval in the U.S at this time

National Institute for Health and Care Excellence

Current evidence on PTNS for OAB syndrome shows that it is efficacious in reducing symptoms in the short and medium term. There are no major safety concerns, therefore the procedure may be used provided that normal arrangements are in place for clinical governance, consent and audit.²

A NICE guidance on urinary incontinence in women does not recommend the “routine” use of PTNS to treat OAB. Rather, they recommend PTNS for OAB for following:

- There has been a multidisciplinary team (MDT) review, and
- Conservative management including OAB drug treatment has not worked adequately, and
- The woman does not want botulinum toxin A or percutaneous sacral nerve stimulation.¹³

American Urological Association

Clinicians may offer PTNS as third-line treatment in a carefully selected patient population, characterized by moderately severe baseline incontinence and frequency and willingness to comply with the PTNS protocol. Patients must also have the resources to make frequent office visits both during the initial treatment phase and to obtain maintenance treatments in order to achieve and maintain treatment effects because treatment effects dissipate once treatment ceases. The most common protocol is the application of 30 min of stimulation once a week for 12 weeks (the trial duration; for continued benefit, weekly stimulation would have to continue).³

Studies to date evaluating PTNS for the treatment of OAB conclude there is evidence of benefit, although most studies have been small and report short-term outcomes after 12 weeks of treatment. A small study of 33 PTNS responders who continued therapy for 6-12 months reported excellent durability through 12 months.⁴ Another small study reported sustained safety and efficacy of PTNS for the treatment of OAB symptom control over 24 months with initial success after 12 weekly treatments, followed by a 14-week prescribed tapering protocol and a personalized treatment plan with an average of 1.3 treatments per month.⁵

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2018, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage.

CLINICAL POLICY

Posterior Tibial Nerve Stimulation for Voiding Dysfunction

Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

CPT® Codes	Description
64566	Posterior tibial neurostimulation, percutaneous needle electrode, single treatment, includes programming

HCPCS Codes	Description
N/A	

ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
N32.81	Overactive Bladder
N39.41	Urge incontinence
N39.45	Continuous leakage
N39.46	Mixed incontinence
R32	Unspecified urinary incontinence
R35.0-R35.8	Polyuria
R39.15	Urgency of urination
R39.81	Functional urinary incontinence

Reviews, Revisions, and Approvals	Date	Approval Date
Background updated. References reviewed and updated.	09/18	10/18

References

1. Hayes Medical Technology Directory. Percutaneous Tibial Nerve Stimulation for the Treatment of Lower Urinary Tract Dysfunction. Dec 2014. Update Nov 2016.
2. National Institute for Health and Care Excellence (NICE). Percutaneous posterior tibial nerve stimulation for overactive bladder syndrome Interventional procedures guidance [IPG362] Oct, 2010
3. Gormley EA, Lightner DJ, Burgio KL, et al. Diagnosis and treatment of overactive bladder (non-neurogenic) in adults: AUA/SUFU Guideline Algorithm. Updated May 2014. Available at: [http://www.auanet.org/guidelines/overactive-bladder-\(oab\)-\(aua/sufu-guideline-2012-amended-2014\)](http://www.auanet.org/guidelines/overactive-bladder-(oab)-(aua/sufu-guideline-2012-amended-2014))
4. MacDiarmid SA, Peters KM, Shobeiri SA, et al. Long-term durability of percutaneous tibial nerve stimulation for the treatment of overactive bladder. J Urol. 2010 Jan;183(1):234-40.
5. Peters KM, Carrico DJ, MacDiarmid SA, et al. Sustained Therapeutic Effects of Percutaneous Tibial Nerve Stimulation: 24-month Results of the STEP Study. Neurourology and Urodynamics. 2012 Wiley Periodicals, Inc
6. Blue Cross Blue Shield Technology Evaluation Center (BCBS TEC). Percutaneous Tibial Nerve Stimulation for the Treatment of Voiding Dysfunction. Volume 28, No. 10. January 2014.

Posterior Tibial Nerve Stimulation for Voiding Dysfunction

7. Gaziev G, Topazio L, Iacovelli V, et al. Percutaneous Tibial Nerve Stimulation (PTNS) efficacy in the treatment of lower urinary tract dysfunctions: a systematic review. *BMC Urol.* 2013 Nov 25;13:61.
8. 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 Jan;97(1):113-6.
9. Peters KM, Macdiarmid SA, Wooldridge LS, et al. Randomized trial of percutaneous tibial nerve stimulation versus extended-release tolterodine: results from the overactive bladder innovative therapy trial. *J Urol.* 2009 Sep;182(3):1055-61.
10. Ammi M, Chautard D, Brassart E, et al. Transcutaneous posterior tibial nerve stimulation: evaluation of a therapeutic option in the management of anticholinergic refractory overactive bladder. *Int Urogynecol J.* 2014 Aug;25(8):1065-9.
11. Vecchioli-Scaldazza C, Morosetti C, Berouz A, et al. Solifenacin succinate versus percutaneous tibial nerve stimulation in women with overactive bladder syndrome: results of a randomized controlled crossover study. *Gynecol Obstet Invest.* 2013;75(4):230-4.
12. Yoong W, Shah P, Dadswell R, et al. Sustained effectiveness of percutaneous tibial nerve stimulation for overactive bladder syndrome: 2-year follow-up of positive responders. *Int Urogynecol J.* 2012 Sep 7
13. National Institute for Health and Care Excellence (NICE). Urinary incontinence in women: management. Clinical guideline [CG171] Published date: September 2013 Last updated: November 2015
14. Johnson TM. Nocturia: Clinical presentation, evaluation, and management in adults. In: UpToDate. O'Leary MP (Ed), UpToDate, Waltham MA, Dec. 2017. Accessed July 24, 2018.
15. Lukacz ES. Treatment of urgency incontinence/overactive bladder in women. . In: UpToDate. Brubaker L, Schmader KE. (Eds). UpToDate, Waltham MA. May 2018. Accessed July 24, 2018
16. van Breda HMK, Martens FMJ, Tromp J, Heesakkers JPFA. A New Implanted Posterior Tibial Nerve Stimulator for the Treatment of Overactive Bladder Syndrome: 3-Month Results of a Novel Therapy at a Single Center. *J Urol.* 2017 Jul;198(1):205-210
17. Del Río-Gonzalez S, Aragon IM, Castillo E, et al. Percutaneous Tibial Nerve Stimulation Therapy for Overactive Bladder Syndrome: Clinical Effectiveness, Urodynamic, and Durability Evaluation. *Urology.* 2017 Oct;108:52-58