

STANDARDIZED PROCEDURE

PERCUTANEOUS TIBIAL NERVE STIMULATION/PTNS (Adults)

These procedures are intended to describe procedures performed by Nurse Practitioners and/or Certified Nurse Midwives (depending on the clinical privileges granted to the individual practitioner) at UC San Diego Health.

I. Definition

Percutaneous Tibial Nerve Stimulation/PTNS is also referred to as posterior tibial nerve stimulation. This process involves introducing a temporary impulse to the tibial nerve near the medial malleolus of the ankle; the stimulus travels to the sacral plexus and produces neuromodulation. This intervention is used in the treatment of urinary urgency, urinary frequency and urinary urge incontinence.

II. Background Information

A. Setting:

The setting (inpatient vs outpatient) and population (adults vs pediatrics) for the Advanced Health Practitioner (AHP) is determined by the approval of the privileges requested on the AHP Privilege Request Form.

B. Supervision: The necessity of this protocol will be determined by the Advanced Health Practitioner in collaboration with the supervising physician or his/her designee. Designee is defined as another attending physician who works directly with the supervising physician and is authorized to supervise the Advanced Health Practitioner. Direct supervision will not be necessary once competency is determined, as provided for in the protocol. The Advanced Health Practitioner will notify the physician immediately upon being involved in any emergency or resuscitative events or under the following circumstances:

1. Patient decompensation or intolerance to the procedure
2. Response to the stimulus that is not expected
3. Outcome of the procedure other than expected

C. Indication

PTNS is used for the treatment of urinary urgency, urinary frequency and urinary urge incontinence.

D. Precautions/Contraindications

1. PTNS is contraindicated in patients with pacemakers or implantable defibrillators, patients prone to excessive bleeding, patients with nerve damage that could impact percutaneous tibial nerve or pelvic floor function, or patients who are pregnant or planning to become pregnant during the duration of treatment.
2. PTNS should be used with caution with patients whom have cardiac issues related to pacing.

III. Materials

1. Stimulation device as supplied by the manufacturer.
2. Disposal patient kit including needle electrode, alcohol pad and lead.

IV. Procedure: PTNS

A. Pre- treatment evaluation

1. History- to evaluate if patient has contraindications to treatment.

STANDARDIZED PROCEDURE

PERCUTANEOUS TIBIAL NERVE STIMULATION/PTNS (Adults)

2. Patient evaluation: vital signs; include examination of needle site. As well, at sessions 1, 6 and 12, will have patient or caregiver will indicate degree of effectiveness of PTNS to treat urinary symptoms.
3. Diagnostics: none

B. Patient Preparation

Provide for the patient the purpose, risks (bleeding, tenderness at needle site), benefits (including research purposes), and steps involved of the procedure.

C. Procedure:

1. Assemble materials.
2. Check patient history for contraindications to use PTNS.
3. Choose area for needle placement: lower inner aspect of either leg approximately 3 finger-breadths (5 cm or 2 in) cephalad to the medial malleolus and approximately 1 finger-breadth (2cm or ¾ in) posterior to the tibia. Place patient in a comfortable position, supine or sitting.
4. Clean site with alcohol pad.
5. Place the needle electrode guide tube assembly over the identified and cleaned insertion site in a position that creates a 60 degree angle between the shaft of the needle electrode and the skin with the needle tip pointed cephalad. Remove the stop plug in the guide tube to release the needled electrode. Gently tap the needle electrode to pierce the skin. Once the needle electrode has penetrated the skin, remove the guide tube and advance the needle electrode using a rotating motion to facilitate entry. Introduce the needle till approximately 2 cm of the needle electrode is in the leg.
6. Connect lead wire to stimulator.
7. Attach the surface electrode.
8. Attach lead electrode clip.
9. Determine current setting for therapy: after turning the stimulator on, press and hold the Test button till an audible sound is heard. Slowly increase the current till a motor or sensory response for the patient is established. Once a response is confirmed, reduce current setting by one level and begin therapy mode.
10. If increasing the current fails to establish a motor or sensory response, turn the stimulator off, remove the electrode clip from the needle, remove needle and repeat the procedure on the other leg with the second needle that is supplied in the patient kit.
11. Conduct therapy: press the Therapy mode button which will automatically set the session to time out in 30 minutes.

D. Post- procedure

1. Complete treatment session: turn off the stimulation device, remove the clip electrode from the needle, and remove the needle from the patient's ankle. Apply pressure to puncture for 10-15 seconds and offer bandage if bleeding occurs from the site.

E. Follow-up treatment

1. Treatment frequency: conduct 12 treatments, typically one per week. If the patient determines that the treatment is effective for control of his/her urinary symptoms, transition to monthly sessions should follow for as long as the treatment is desired.

STANDARDIZED PROCEDURE

PERCUTANEOUS TIBIAL NERVE STIMULATION/PTNS (Adults)

V. Documentation is in the electronic medical record

1. Documentation of the pretreatment evaluation and any abnormal physical findings including response or lack of response to treatment sessions.
2. Record teaching and discharge instructions.

VI. Competency Assessment

A. Initial Competence

1. The Advanced Health Practitioner will be instructed on the efficacy and the indications of this therapy and demonstrate understanding of such.
2. The Advanced Health Practitioner will demonstrate knowledge of the following:
 - a. Medical indication and contraindications of PTNS and risks and benefits of the procedure
 - b. Related anatomy and physiology
 - c. Steps in performing the procedure
 - f. Documentation of the procedure
 - e. Ability to interpret results and implications in management.
3. Advanced Health Practitioner will observe the supervising physician perform each procedure three times and perform the procedure **three** times under direct supervision.
4. Supervising physician will document Advanced Health Practitioner's competency prior to performing procedure without direct supervision.
5. The Advanced Health Practitioner will ensure the completion of competency sign-off documents and provide a copy for filing in their personnel file and a copy to the medical staff office for their credentialing file.

B. Continued proficiency

1. The Advanced Health Practitioner will demonstrate competence by successful completion of the initial competency.
2. Each candidate will be initially proctored and signed off by an attending physician. Advanced Health Practitioner must perform this procedure at least **three** times per year. In cases where this minimum is not met, the attending, must again sign off the procedure for the Advanced Health Practitioner. The Advanced Health Practitioner will be signed off after demonstrating 100% accuracy in completing the procedure.
3. Demonstration of continued proficiency shall be monitored through the annual evaluation.
4. A clinical practice outcomes log is to be submitted with each renewal of credentials. It will include the number of procedures performed per year and any adverse outcomes. If an adverse outcome occurred, a copy of the procedure note will be submitted.

VII. RESPONSIBILITY

Please contact the Advanced Practice Council if you need help. The administrative assistant for the Chief Nursing Officer can direct you. Call; 619-543-3438

VIII. HISTORY OF POLICY

Revised by the Committee of Interdisciplinary Practices:	2/26/2014, 9/28/2016
Reviewed by the Medical Staff Credentials Committee:	3/5/2014, 10/6/2016
Approved by the Medical Staff Executive Committee:	3/20/2014, 10/7/2016