

Percutaneous Tibial Nerve Stimulation

Department of Gynaecology

Percutaneous tibial nerve stimulation is an outpatient procedure done to improve overactive bladder.

This condition makes patients feel they need to go to the toilet quickly. Patients may leak if they do not reach the toilet fast enough. Consequently, they go to the toilet a lot both by day and night. Sometimes people feel they need to reduce their activities, which can affect their quality of life.

The treatment will involve stimulating a nerve that shares the same root as the bladder nerve supply. This is done using a thin needle inserted through the skin behind the ankle and has been shown to reduce involuntary bladder contractions and reduce overactive bladder symptoms.

Why do I need percutaneous tibial nerve stimulation?

The aim of this treatment is to improve the symptoms of an overactive bladder. You will have had urodynamic assessment, which involves monitoring the pressure and flow of your urine, with a catheter.

Percutaneous tibial nerve stimulation is offered when other more conservative measures have not worked. You will have been offered fluid advice, pelvic floor muscle training, bladder drill, smoking cessation and trial of medications that can suppress bladder muscle contractions.

What does the treatment involve?

You will be rested in a comfortable semi-sitting position. A thin slender needle will be inserted near your ankle. Treatment can be on either side, though one works better than the other for some patients. An adhesive pad will be applied to the foot to complete the circuit. It is important to insert the needle at the right location and adjust the strength of stimulation. The nurse will check this for you by asking questions about your sensation and observing your toe movements.



The treatment session lasts half an hour. You will need to sit during this time and not move your leg. We advise you to bring something to distract you, such as personal music, a magazine or a book. You will need 12 sessions, which will last about 3 months without interruption.

What are the risks?

Side effects are minimal but you may experience some pain or numbness. The main limitation of this technique is the need to attend for 12 weekly sessions without interruption. If you miss one session, treatment can be continued. If you miss more than one session, a fresh count will need to start again.

How effective is this technique?

This minimally invasive technique is effective. Research has shown up to 4 in 5 patients having this treatment experience significant improvement in their overactive bladder symptoms. However, it may take up to 6 weeks before seeing any change. It is important to complete all 12 sessions before evaluating the impact. Research has shown the effect to last up to 3 years. Some may experience relapse over time and may benefit from a top up session.

Are there any alternatives?

This technique is attempted in patients who had no improvement on two different medications for overactive bladder symptoms.

Alternatives include:

● **Botulinum toxin A bladder wall injection:**

This injection requires attendance only once, hence it is less disruptive. It can be done under local anaesthesia. There is that a small risk of difficulty passing urine. Patients may need to pass a catheter to help emptying their bladder. The benefit of this injection wanes with time and most patients require repeat injection every 6-18 months. It has been shown to be effective and safe and is widely used.

● **Sacral neuromodulation:**

This technique entails direct stimulation of the nerve centers that control the bladder. It is a more invasive procedure that requires general anaesthesia and is carried out in two stages. It requires the insertion of needles between the bones of the vertebral column (spine). A battery is inserted above the pelvic bone to control it. This battery needs replacement every 5-7 years. The operation has potential for more complications.

● **Clam cystoplasty:**

This entails expanding the bladder using bowel segment. The aim of this is to reduce the effect of bladder muscle contractions. It is an invasive operations and is performed in rare cases.

● **Diversion of urine into bowel:**

This is far more complicated approach with potentially serious complications. It is seldom performed nowadays, usually as a last resort.

Who can I contact with any concerns or questions?

If you have any problems or questions, use the contact numbers below to contact us.

Princess Royal Hospital: 01444 441881 Ext.5686

Royal Sussex County Hospital: 01273 696955 Ext.4013

Urogynaecology Unit at Lewes Victoria Hospital: 01273 474153 Ext.2178

Useful links:

<https://www.bladderandbowel.org/conservative-treatment/tibial-nerve-stimulation/>

<https://bsug.org.uk/budcms/includes/kcfinder/upload/files/info-leaflets/PTNS%20BSUG%20July%202017.pdf>

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This information leaflet has been approved at the Clinical Governance and Safety and Quality Meetings of the Department of Obstetrics and Gynaecology as well as Brighton and Sussex University Hospitals NHS Trust Carer and Patient Information Group (CPIG).

This leaflet is intended for patients receiving care in Brighton & Hove or Haywards Heath

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