

Percutaneous Tibial Nerve Stimulation (PTNS)

This leaflet explains more about PTNS, including the benefits, risks and any alternatives and what you can expect when you come to hospital.

If you have any further questions, please speak to a doctor or nurse caring for you.

What is Percutaneous Tibial Nerve Stimulation (PTNS)?

Percutaneous Tibial Nerve Stimulation (PTNS) or neuromodulation is a relatively new treatment for Overactive bladder (OAB). OAB is a common condition defined as urgency to void, usually accompanying frequency and nocturia, with or without urge urinary incontinence (UUI), in the absence of urinary tract infection (UTI) or other obvious pathology.

Bladder and bowel function is regulated by a group of nerves at the base of the spine called the sacral nerve plexus. Neuromodulation helps in stimulating these nerves through gentle electrical impulses and bringing about a change in bladder activity. PTNS indirectly stimulates the nerves responsible for bladder function using the tibial nerve in your lower leg. Thus, impulses are sent from your ankle to the sacral nerve plexus via the tibial nerve in your leg.

At the hospital, PTNS is carried out using a system known as the Urgent® PC System for neuromodulation, which is a simple device used in the outpatient setting.

Why should I have PTNS?

You have been referred by your doctor for this treatment because of your bladder symptoms. Based on the available medical literature, we would expect approximately 60% of patients to have some improvement in symptoms.

What are the risks?

As with all treatments and procedures there are a few risks with this procedure and these will be discussed with you before you begin treatment. PTNS is not used in patients with pacemakers or implantable defibrillators, patients prone to excessive bleeding, those who are pregnant or planning to become pregnant and is used with caution in those with abnormal heart rhythms. The risks of PTNS treatment are rare but reported side effects include mild transient pain, throbbing or skin inflammation (at or near to the stimulation site), numbness of the toes and stomach ache. However, PTNS treatment is most often well-tolerated by patients.

Are there any alternatives?

Alternative therapies include conservative measures such as pelvic floor physiotherapy, use of medicines, surgical treatment or Botox. Neuromodulation can also be achieved through a more invasive technique known as sacral nerve stimulation (SNS). PTNS aims to modify these same

nerves in a less invasive way. Your doctor will determine the level of intervention you need depending on the cause of your symptoms.

How can I prepare for PTNS?

No special preparation is required. You will be asked to fill in several questionnaires before, part way through and after your initial treatments in order to assess the progress of your treatment.

Asking for your consent

You will not be asked to sign a consent form prior to PTNS. The treatment will be explained to you fully when you come to the department and you will have the chance to ask any questions that you might have. Please do not hesitate to ask questions or voice any worries. If you decide to go ahead, you are confirming that you agree to have the treatment and understand what it involves.

What happens during PTNS?

You will attend up to twelve, half hour sessions of stimulation, typically given at weekly intervals. Everyone is different, but in general we expect you to undergo several sessions (usually about six) before you see a change in your symptoms. Therefore, it is important for you to continue to receive treatment until you and your doctor decide whether it has been successful or not.

Your doctor or nurse specialist will choose a healthy area of skin to insert the needle. The area will be cleaned with an alcohol swab and a small, slim needle is gently inserted near to your ankle. The electrode needle is then connected to the battery-powered stimulator and a grounding pad (to complete the circuit) is placed on the bottom of your foot (see figures 1 and 2). After turning on the stimulator, you will be aware of a response in your foot which indicates that the correct nerves are being stimulated. The stimulation will last for 30 minutes and the needle is then removed.



Figure 1. Urgent[®] PC Stimulator



Figure 2. PTNS Procedure

Will I feel any pain?

You may feel some mild transient pain at or near the stimulation site.

What happens after PTNS?

After the initial treatment sessions, your response to PTNS will be discussed with you so as to determine if you will need future treatments to maintain your response. If your symptoms are improved further sessions will be undertaken at less frequent intervals.

What do I need to do after I go home?

PTNS is an outpatient procedure; you will not need any help and do not need to be accompanied.

Will I have a follow-up appointment?

You will be seen for twelve consecutive weeks to complete the PTNS treatment. Any further follow-up will depend upon the outcome of the initial treatment.

Useful sources of information

The Simon Foundation for Continence.

<https://simonfoundation.org/ptns/>

References

Peters KM, Carrico DJ, Perez-Marrero RA, et al. Randomized trial of percutaneous tibial nerve stimulation versus Sham efficacy in the treatment of overactive bladder syndrome: results from the SUmIT trial. J Urol. 2010; 183(4):1438–1443

Tudor KI, Seth JH, Liechti MD, Ochulor J, Gonzales G, Haslam C, Fox Z, Pakzad M, Panicker JN. Outcomes following percutaneous tibial nerve stimulation (PTNS) treatment for neurogenic and idiopathic overactive bladder. Clin Auton Res. 2018 Aug 3.

Contact us

If you have any questions or concerns about PTNS, please contact the benign urology team on **020 8725 3264** (Monday to Friday, 9am to 5pm) or bleep 7107.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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