



# Percutaneous Tibial Nerve Stimulation (PTNS)

## Pelvic Health Physiotherapy Department

### A patient's guide

Percutaneous tibial nerve stimulation (PTNS) is a form of treatment called neuromodulation. It is used to treat both bladder and bowel problems and in particular problems with control of your bladder or bowel. It is an out-patient procedure.

PTNS can help patients who feel they need to go to the toilet urgently and frequently or who may get up to pass urine several times in the night or those who leak if they do not reach the toilet in time. These are symptoms of an overactive bladder (OAB).

PTNS can help patients who lose the ability to control their bowel motions.

If you want to go ahead with PTNS we require you to commit to 12 consecutive weeks of treatment and it is important you agree to this before you start. We will ask you to sign an agreement.

### Why do I need PTNS?

The aim of this treatment is to improve the symptoms of an OAB or faecal incontinence (FI). PTNS is offered by your consultant when other more conservative measures have been trialled and not worked to manage your symptoms. For OAB you should already have tried fluid management, pelvic floor muscle training, bladder drill, smoking cessation and a trial of medications that can suppress bladder muscle contractions. For FI you should already have trialled dietary management, medication to stop diarrhoea, pelvic floor muscle training and anal sphincter training.

### How does PTNS work?

Bladder and bowel function is regulated by a group of nerves at the base of the spine called the sacral nerve plexus. PTNS or neuromodulation stimulates the tibial nerve which is in your lower leg through gentle electrical impulses. These impulses are sent from here to the sacral nerves and this indirect stimulation reduces involuntary bladder contractions and OAB symptoms and FI.

### What does the treatment involve?

Sessions take place in groups. You will be seated comfortably in a chair and your foot elevated. Two thin slender needle electrodes (like acupuncture needles) will be inserted near your ankle and connected to a battery-powered stimulator which delivers a mild electrical current via the needles into the tibial nerve. Treatment can be on either limb, although for some patients one may have a better response than the other.



Once connected to the stimulator and after turning it on you will be aware of a response in your foot which indicates that the correct nerves are being stimulated. It is important to insert the needles at the right location and to use the ideal strength of impulses. The nurse will check this for you by asking questions about your sensation or observing your toe movements and can adjust the stimulation accordingly.

You will need to sit during treatment 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 may experience a buzzing, tingling or throbbing sensation during the treatment and the current can be turned down so that it is comfortable for the duration of the treatment.

The treatment session lasts half an hour and the needles are removed at the end of the session.

### What are the risks?

As with all treatments and procedures there are a few risks with PTNS and these will be discussed with you before you begin treatment. However if you have a needle phobia this treatment may not be for you.

PTNS treatment is well tolerated by most patients.

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 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.

**The main limitation of this technique is the need to attend for 12 weekly sessions without interruption.** If you miss more than one session, you will need to start the whole course again.

### How effective is this treatment?

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 six weeks before seeing any change. It is important to complete all 12 sessions before evaluating the impact. The effect can last up to three years but some may experience relapse over time and may benefit from a top up session.

### How should I prepare for PTNS?

No special preparation is required. You will be asked to fill in several questionnaires and bladder or bowel diaries before, part way through and after your initial treatments in order to assess the progress of your treatment. These are an essential part of the treatment programme.

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



## What should I expect after PTNS?

You may experience:

- Some minor discomfort at the needle entry site but this normally subsides very quickly. Some patients may experience redness and inflammation at the site
- Bruising at stimulation site
- Toe numbness

You will be able to travel home and continue with your normal activities after the treatment.

Your response to treatment will be evaluated after 12 consecutive weeks of treatment. If it has been successful further 'top up sessions' will be arranged on an individual schedule.

## Are there any surgical alternatives?

### Botulinum toxin A bladder wall injection for OAB symptoms

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

**Sacral neuromodulation for OAB symptoms and FI:** The treatment involves continuous electrical stimulation of the pelvic nerves which supply the bladder, rectum and anal sphincters. Sphincters are muscles which control the opening to the bladder or bowel and help to keep you continent. This technique entails direct stimulation of the nerve centres that control the bladder and bowel. It is an invasive procedure that requires general anaesthesia and is carried out in two stages.

An implantable electronic metal device is inserted under the skin like a pacemaker. From the implant a thin wire carries electrical pulses down into the nerves that control the bladder and bowel. The operation entails the insertion of the neuromodulator wire into the pelvic nerves through the anatomical foramina (small openings in the bone that the nerves pass through) on the back of the sacrum (the lower part of the back). The correct placement of the wire is checked by x-ray and by the response achieved on stimulation during the procedure.

The procedure takes between half an hour to an hour. This battery for the device needs replacement every 5-7 years.

**Injectable bulking agents for FI:** Increase the strength of a damaged anal sphincter. This procedure is carried out under a local anaesthetic.

### Major reconstructive surgeries

Operations including cystoplasty or ileal conduit may be considered for OAB symptoms, and surgical repair of the anal sphincter muscle or colonic conduit for FI symptoms may be considered.



These procedures are invasive and will change the way you pass urine or bowel motions greatly. It is important that if you are contemplating having this sort of surgery that you discuss these alternatives and ask for more detailed information from your nurse specialist or urogynaecology/urology/colorectal consultant.

You can find more information from:

**Bladder and Bowel Foundation**

<http://www.bladderandbowelfoundation.org/>

Tel: 0800 011 46 23

Provides information on bladder and bowel problems

**Patient advice and liaison service (PALS)**

If you have a compliment, complaint or concern please contact our PALS team on 020 7288 5551 or [whh-tr.whitthealthPALS@nhs.net](mailto:whh-tr.whitthealthPALS@nhs.net)

If you need a large print, audio or translated copy of this leaflet please contact us on 020 7288 3182. We will try our best to meet your needs.

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Date published: 09/10/2019

Review date: 09/10/2021

Ref: EIM/Physio/PTNS/01

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