

# Percutaneous tibial nerve stimulation

(PTNS)



## Information for patients

Gastrointestinal Physiology



**PROUD TO MAKE A DIFFERENCE**

SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST



## **The aims of this booklet are:**

- **To inform and involve you in your care**
- **To explain what happens if you decide to have the treatment**
- **To answer questions you may have about the treatment**

## **What is percutaneous tibial nerve stimulation (PTNS)?**

Nerves are specialised cells which are involved in carrying messages around the body. Nerves are very important in sending information to and from the bowel, and to the muscles that control bowel movement. If this communication is disrupted then it can lead to bowel symptoms such as faecal incontinence.

Neurostimulation is a treatment that involves stimulating a group of nerves in the base of the spine called the sacral nerve plexus. Stimulating these nerves through electrical impulses can help to modify bowel function and/or pelvic floor function. PTNS is a minimally invasive type of neurostimulation, which involves electrical stimulation of a nerve in the leg (the tibial nerve). Stimulating this nerve at the ankle can in turn stimulate the sacral nerve plexus, which can help to modify bowel function.

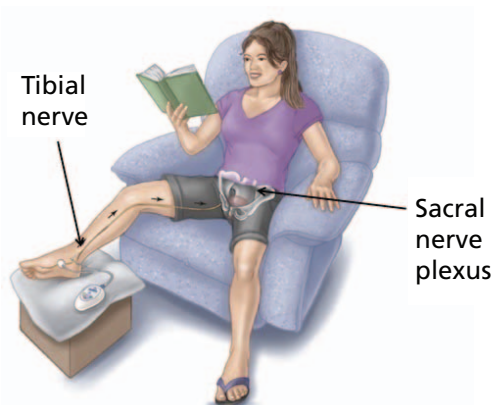
## **Who is PTNS for?**

PTNS is used to treat bowel symptoms such as urge and passive faecal incontinence. Urge incontinence is the need to rush to open your bowels, whereas passive incontinence is the leakage of stool without being aware. Bowel dysfunction can be both distressing and debilitating.

Conservative treatments are usually tried first to help improve symptoms, such as dietary changes, pelvic floor muscle training, biofeedback (advice and tips on exercises, positioning and relaxation), and medication. If these fail to work, you may be offered PTNS.

## How is it done?

1. You will be asked to sit on the couch with your leg stretched out comfortably in front of you.
2. The arch of your foot and your ankle will be cleaned using an alcohol wipe.
3. A small, thin needle will be inserted into the skin near your ankle.
4. A sticky electrode pad will be stuck to the arch of your foot.
5. The needle and the electrode pad will be connected to a battery powered stimulator box.
6. The stimulator will be switched on and a small electrical current will be delivered via the needle to the tibial nerve.
7. The strength of the stimulation will be slowly turned up and the clinician will observe your responses to find the ideal strength for you.
8. The treatment will last 30 minutes. After 30 minutes the needle and sticky pad are removed, and you are free to go home.
9. You will need to attend for treatment once a week for up to 12 weeks.



## **What does it feel like?**

It is difficult to say what you will feel as every patient is different. Usually a tapping or pulsing sensation can be felt in the leg or foot. The sensation should not be painful. Often the sensation does not last for the entire 30 minutes. This is because you become used to it, it does not mean it has stopped working.

## **What happens after treatment?**

After the 30 minutes, the needle will be removed and you will be free to leave. You should be able to resume normal activities immediately and you can drive straight away. You may feel slightly sore at the needle site but this should ease within a few hours.

## **What are the results?**

Because PTNS gently modifies the signal to the nerves in the pelvic floor and bowels, it can take up to 6 weeks before you see any change in your symptoms.

The success of PTNS can vary from person to person. Some find an improvement in their symptoms, others use it in combination with medication, and some find no improvement at all. Studies suggest that between 60-80% of patients notice an improvement in their bowel symptoms, such as less urgency and accidents.

As PTNS is still a relatively new treatment it is not known how effective it is in the long term.

## **Can everyone have this treatment?**

PTNS should not be used in patients:

- With pacemakers or implantable defibrillators
- Who are prone to excessive bleeding
- With nerve damage that could impact either percutaneous tibial nerve or pelvic floor function
- Who are pregnant or are planning to become pregnant during the duration of the treatment
- With metal implants at the needle insertion site

## **What are the risks?**

There are currently no recorded serious side effects.

Minimal side effects should be short-lived and should go away within a few hours. Minimal side effects can include:

- Discomfort and pain at or near the needle site
- Bleeding at the needle site
- Redness/inflammation/swelling at or near the needle site
- Slight aching around the ankle after the treatment
- Numbness of toes
- Stomach ache

## **Is there anything I need to do to prepare for the treatment?**

There are no special preparations required for PTNS.

You may wish to bring a book / magazine or some other distraction with you, to help pass the time. You can eat and drink normally before and after the treatment.

## **What is the treatment schedule?**

You will be asked to attend a session once a week for 12 weeks. Each session will last approximately 30 minutes. It is important to the success of the treatment that there are no long breaks during the initial 12 weeks of treatment.

At the beginning and end of your treatment you will be asked to complete a 2-week bowel diary and 2 questionnaires regarding your symptoms. This helps us to track any changes in your symptoms. These sessions may therefore take slightly longer.

At week 6, we will assess your symptoms. If you have noticed an improvement, we will continue with the sessions until week 12. If you have not noticed an improvement we will refer you back to your consultant to discuss other treatment options.

After the initial 12 weeks, we will assess your symptoms. If you are happy with your symptomatic improvement you may need to return periodically for PTNS 'top-up' sessions. The first top-up session is 2 weeks after, and the second is 4 weeks after this. Top-ups are then booked when you need them and are usually every 4-6 months. If you are unhappy with your symptoms we can refer you back to your consultant.

## **Where do I go?**

The department is located in the Chesterman building on 'C' Floor (ground level). If you come in via the main Chesterman entrance, please walk past the café, turn left, walk a few yards down the corridor and the Department of GI Physiology is on the right hand side. Please ring the doorbell on the wall and a member of staff will open the door. You will be asked to take a seat in the small waiting room. You will be taken into a private room where the member of staff will discuss the treatment with you.

You are very welcome to bring someone with you, although they will be asked to stay in the department's waiting room whilst you have your treatment.

## **Can I bring my children with me?**

Unfortunately it is not appropriate to bring children under the age of 16 in to this area without appropriate adult supervision. Adult supervision should be provided by someone other than the patient as children will not be allowed to accompany the patient in to the clinical rooms. Failure to ensure that you have arranged appropriate childcare may result in the cancellation of your procedure as staff in the department are unable to care for your child / children during your treatment. If this is likely to cause you any significant difficulties we kindly ask that you contact the department to arrange a more convenient appointment time or discuss your needs with the team.

## **What are the alternatives?**

If PTNS fails to work for you, other considerations, alongside conservative treatments can include:

- **Sacral nerve stimulation (SNS)**

An electrical stimulator is surgically implanted into the buttocks. It sends continuous electrical impulses to the sacral nerve plexus.

- **Surgery**

There may be potential surgical options which could improve your symptoms. Examples include sphincteroplasty to repair the muscles in your anal canal, and a colostomy where the large bowel is removed and stool is collected in a bag at the stomach wall. Your consultant will be able discuss this with you and advise as to what option is most appropriate.

## Who can I contact for more information?

For further information please contact the Department of GI Physiology on **0114 271 4293**.

## Where can I find further information?

- [www.bladderandbowelfoundation.org](http://www.bladderandbowelfoundation.org)
- [www.nice.org.uk/guidance/ipg395/informationforpublic](http://www.nice.org.uk/guidance/ipg395/informationforpublic)
- <https://www.cogentixmedical.com/patients/products/urgent-pc>



To help support your local hospitals visit  
[sheffieldhospitalscharity.org.uk](http://sheffieldhospitalscharity.org.uk)

Registered Charity No. 1165762



Alternative formats can be available on request.  
Please email: [sth.alternativeformats@nhs.net](mailto:sth.alternativeformats@nhs.net)

© Sheffield Teaching Hospitals NHS Foundation Trust 2021

Re-use of all or any part of this document is governed by copyright and the "Re-use of Public Sector Information Regulations 2005" SI 2005 No. 1515. Information on re-use can be obtained from the Information Governance Department, Sheffield Teaching Hospitals. Email [sth.infogov@nhs.net](mailto:sth.infogov@nhs.net)