Percutaneous Tibial Nerve Stimulation (PTNS)

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Who is it for?

Percutaneous tibial nerve stimulation (PTNS) treatment is used to treat bowel dysfunction, in particular, faecal incontinence. Faecal incontinence is when a person loses the ability to control their bowel movements resulting in leakage of gas or stool. Faecal incontinence has many different causes. It can be distressing and can severely affect everyday life. Initial treatment for faecal incontinence usually includes dietary management and medication to regulate bowel function. This may be followed by pelvic floor and anal sphincter muscle training, such as biofeedback. If conservative management is unsuccessful, PTNS may be advised.

What is PTNS?

PTNS is a form of treatment which is called neuromodulation. Bowel function is regulated by a group of nerves at the base of the spine called the sacral nerve plexus. By stimulating these nerves through gentle electrical impulses (neurostimulation), your bowel activity can be changed.

One way to adjust (or enhance) the control of continence is by PTNS. PTNS is a minimally invasive procedure carried out in an outpatient setting. PTNS stimulates the nerves in the leg (the tibial nerves) which in turn stimulate the sacral nerves.

How is it done?

A small, slim needle electrode (like an acupuncture needle) is temporarily inserted just above your ankle. The needle electrode is then connected to the battery-powered stimulator. The stimulator delivers a mild electric current along the needle into the tibial nerve.

After turning on the stimulator, the clinician observes the response to determine the ideal strength of the impulses. Each
of the treatment sessions will last approximately 40 minutes. The treatment consists of an initial series of 12 treatments, typically scheduled a week apart.

After the initial 12 treatments, your clinician will discuss your response to the treatments and determine if you will need future treatments to maintain your results.

What does it feel like?

It’s difficult to say as people respond in different ways, but most patients feel a buzzing, tingling or throbbing sensation while the stimulation is occurring.

Once the correct feeling is located the current can be turned down so that it is comfortable – it is not necessary to feel this throbbing sensation for the whole 30 minutes.

What are the results?

This is a relatively new treatment but the published studies have shown that 3 out of 4 people had a reduction in their faecal incontinence after treatment.

It usually takes between 6 and 10 treatments before any change in symptoms is apparent. It is very important that there is no gap in the twelve-week treatment programme as this can affect the success of the treatment.

Most patients have to return for booster treatments as the effects of PTNS start to wear off after 4-6 months.

As it is a relatively new treatment it is not known how effective it is long term.
What are the risks?

PTNS is a very safe procedure.

Treatment with the ‘Urgent PC Neuromodulation System’ for PTNS should not be used for:

- Individuals with pacemakers or implantable defibrillators
- Individuals prone to excessive bleeding
- Individuals with nerve damage that could impact either percutaneous tibial nerve or pelvic floor function.
- Women who are pregnant or planning to become pregnant during the duration of the treatment

Potential side effects associated with PTNS treatments include:

- Discomfort and pain (including throbbing pain) near the stimulation site
- Redness and inflammation at or near the stimulation site
- Bruising at the stimulation site
- Toe numbness
- Stomach ache

There are currently no recorded serious side effects.

What are the benefits?

This is a minimally invasive treatment which improves the symptoms of bowel leakage and urgency in three quarters of the patients who have it.

What are the alternatives?

The other method of neuromodulation is to surgically implant a stimulator in the buttocks which sends continuous impulses to the sacral nerve plexus. This involves surgery and having a permanent implant in the body and so involves more risks and side effects.
How is the treatment done?

Treatment set-up
You will be asked to sit in a chair or on a couch with your treatment leg elevated. Your clinician will:

- Clean your ankle and arch on the treatment leg
- Insert a thin needle electrode above your ankle
- Attach a sticky pad to the arch of your foot
- Connect the components to the stimulator
- You will remain comfortably seated for the 30 minute treatment

To determine the optimal treatment settings
- Your clinician will turn on the stimulator and adjust the setting
- You will feel a sensation in your ankle or foot
- Your toes may also spread out and curl

Let your clinician know if the sensation is too strong or if your sitting position is uncomfortable.
Receiving treatment
The stimulator will deliver 30 minutes of therapy.
You can read, or do crossword puzzles or other similar activities during your treatment.

After treatment
The stimulator will beep upon the completion of the treatment session. Your clinician will turn off the stimulator and remove the needle electrode. You should be able to resume normal activities immediately following treatment.

Treatment schedule
You will have an initial series of 12 weekly sessions lasting for approximately 30 minutes each.
As this is a relatively new treatment it is important to collect as much information about your problem both before and after the treatment You will be asked to fill in assessments about your symptoms and the affect they have on your life. You should report any side effects you experience. This is important as it is a new treatment.
You may need to return periodically to maintain your improved continence for further treatments (this is usually every 4-6 months).

It is very important to the success of the treatment that there are no long breaks during the initial 12 weeks of treatment.
If you have a holiday planned it is best to delay the start of treatment until after the holiday. It is also possible to have the treatment twice a week, so only having to attend for 6 weeks.
Please discuss any problems about appointments with your clinician.

If you have any further questions, please do not hesitate to ask
Contact details
Colorectal clinical nurse specialists
Telephone: 0121 371 4980
Telephone: 0121 371 4501 (answerphone)

Useful contacts
Bladder and Bowel Foundation
Helpline: 0845 345 0165
www.bladderandbowelfoundation.org

Core
Telephone: 0207 486 0341
www.corecharity.org.uk
We would like to thank Urolplasty, Inc. for kindly granting us permission to use the illustration contained in this leaflet.

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