### Dr Danielle Delaney FRACS (Urol)

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# **Transcutaneous Tibial Nerve Stimulation**

Transcutaneous Tibial Nerve Stimulation (TTNS) is a treatment option for patients with Overactive Bladder (OAB) - urgency and frequency, with or without urinary incontinence. It involves stimulating the tibial nerve which originates from the area of the spine that contributes to bladder control (L5-53); this can help normalise bladder function. Research shows this treatment to be effective and safe.

A Transcutaneous Electrical Nerve Stimulation (TENS) machine provides subcutaneous stimulation to the nerve as it runs down the lower leg and under the foot via electrodes on the skin. The electrodes are easy to apply and the TENS machine is small and portable, making it suitable for home use.

I recommend using the TENS machine 30 minutes, 5 days a week for 12 weeks. There should be no pain or burning sensation during the treatment. Side effects are rare, however it is not recommended to be used if you are pregnant, have a cardiac pacemaker, have epilepsy, have metal in your ankle or have an open wound on your ankle. Make sure the skin is clean and free from creams and hair.

TTNS may be combined with other treatment options such as pelvic floor muscle training, behavioural bladder retraining, lifestyle changes and medication.

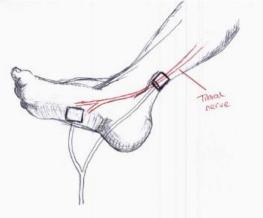
## How to Use the TENS Machine - Tibial Nerve

The TENS machine will be set up for use on a preset program (PIZ) to run for 30 minutes. Please check the program is correct at the beginning of each session:

- One electrode is placed just behind the inner ankle bone (in front of the Achilles tendon).
- The second electrode is placed on the underside of the foot, in the arch, towards the inside of the leg.
- Use the same leg each treatment session.

#### Settings

**Frequency** set to 20Hz, and adjust intensity to comfort level **Time**: 30min, at least 5 days per week



### Please stop using if you notice skin irritation

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## **Changing Frequency**

- Turn device on and select program 12.
  Patients with pelvic pain, you may have been instructed to use program 9.
- Simultaneously press the two program keys (ie keys with up arrow and down arrow) and release them
- 3. Use the intensity keys (+ and keys) to choose the set frequency.
- 4. Press the two program keys again or switch the device off to save the settings.

## Activate the Timer

- 1. Press the quick select program key back/hip and hold it depressed.
- 2. Then press the ON/OFF key to switch the device on.
- 3. The display indicates "Time" and the current set therapy time (default setting is continuous).
- 4. Press the channel 2 intensity keys to set the therapy time. The + button will increase the therapy time set and the button will decrease the therapy time set.
- 5. To save the timer settings, turn off the stimulator. When you turn the stimulator on again, the timer setting will be saved and display on the screen.
- 6. The device will now automatically switch off when the therapy time is completed.

## **Troubleshooting Tips**

#### Cannot feel any stimulus through the probe pads?

Always check that the grey lead in the top of the machine correlates to the correct channel. If the lead is plugged into channel 2 then you have to press the +/- symbols for channel 2 on the same side.

#### Cannot change the intensity during operation?

A padlock symbol appears once the intensity setting has not been increased or decreased for longer than 6 seconds. This is a safety mechanism to ensure that access to the intensity is not altered by accident. To change the intensity setting after this time press the minus symbol (-) on the channel that you are using (ie. 1 or 2) which will unlock the setting and allow you to increase/decrease the setting as desired. It will lock itself again when the setting has sat idle for 6 seconds or longer.

#### Battery symbol flashing or indicating low battery?

Insert new batteries so that the programme does not stop during a treatment session.

#### Where can I buy replacement probe pads?

Replacement pads are available for purchase from reception for \$6.00