



# TTNS

TTNS (Transcutaneous Tibial Nerve Stimulation) is a type of TENS (Transcutaneous Electrical Nerve Stimulation) used in the treatment of OAB (Overactive Bladder).

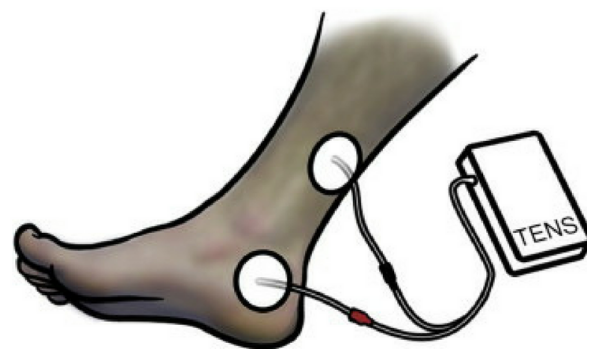
TENS is low frequency electrical stimulation of nerves. It creates a current along the nerve that impacts the area where the nerve starts and ends.

Electrodes are placed on the inner shin of the lower leg (as shown) to stimulate the tibial nerve. The tibial nerve originates from an area in the lower spinal cord where the nerves to and from your bladder originate. Stimulating of the tibial nerve creates inhibition/dampening down of the bladder nerves which in turn can decrease symptoms of OAB – urgency, frequency and urge incontinence. This will allow you to more easily hold off toileting which increases good stretch of the bladder muscle enabling your bladder to hold more urine calmly.

Bladder retraining takes many months to improve the health of your bladder muscle – using TTNS assists along with your other strategies of adequate good fluids, holding on and pelvic floor exercises.

In the clinic your TTNS machine will be set up with the appropriate settings, you will be shown where to put the electrodes and how intense it should feel.

- STEP 1: Sit comfortably
- STEP 2: Attach the leads to the unit and the electrode pads
- STEP 3: Attach the electrode pads to your lower leg (NOT over broken skin) as shown below. First electrode pad should be a pad width above your inner ankle bone and placed slightly behind the bone. Second electrode pad should be between the ankle and heel bone
- STEP 4: Slowly turn up the machine – you will feel a strong tingling feeling. The TTNS sensation must be strong enough to pull your big toe down yet comfortable. It may take a few minutes to be able to turn it up strongly enough to move the toe. As your body gets used to the feeling you may need to turn it up.  
DO NOT rely on the intensity number – rely on how it feels as your body's nerve sensitivity changes as does the battery power.
- STEP 5: The machine is set to stop at 30 minutes – if you need to stop prior to that just turn the intensity back down to zero.
- STEP 6: Use your TTNS 1x/day to 1x/week. This depends on how significant your symptoms are – if you have daily symptoms use the TTNS daily. There are no side effects using the TTNS too often.
- STEP 7: Once the treatment time has finished ensure that you peel the electrode pads off and pop them on the plastic sheet so they don't lose stickiness – don't pull the pads by the leads.



TTNS must be used as you have been shown.

It must not be used with the following:

- Over a pregnant uterus
- Near cancer
- Near infection
- Over the heart
- Epileptics
- Near radiated tissue

5x5cm electrodes can be purchased:

- 1) My Physio shop online - <https://myphysioshop.com.au/products/allcare-electrodes>  
\$10 for 1x pack of 4 electrodes + \$11.50 for shipping. Orders over \$50 - FREE shipping
- 2) Pelvic Floor exercise shop online - search Tens electrodes - <https://www.pelvicfloorexercise.com.au/adhesive-tens-electrodes-50x50mm-4pack/electrodes>  
\$8.45 for 1x pack of 4 electrodes + \$11 - \$14 for shipping. NO free shipping

Setting up TTNS:

- Medial aspect of ankle
- Electrode 1 → between medial malleolus and heel
- Electrode 2 → 2 pad widths up, behind tibia
- Turn mA up until you get toe curling OR sensory result along tibial nerve. This will often be around 22-28mA
- If no toe curl/sensation : re-position pads and try again
- This ensures you are on the tibial nerve
- Turn intensity down so no muscle activity but still comfortably strong sensation.

Parameters most often used:

10Hz 200uS 30 minutes

Anywhere from daily to weekly

Some research uses 20Hz to match the PTNS frequency but remember this is the Hz at which tetanic contraction starts so you may not get intensity (mA) up as high