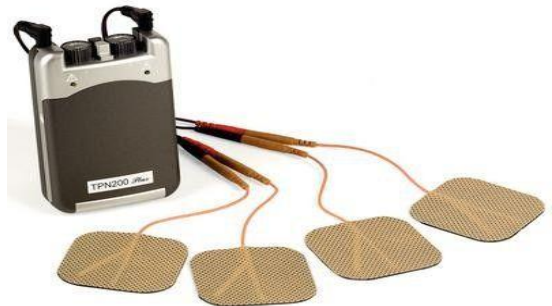


# Transcutaneous Nerve Stimulation

## TENS



---

# What is TENS?

**Transcutaneous electrical nerve stimulation (TENS) is a method of pain relief involving the use of a mild electrical current.**

A TENS machine is a small, battery-operated device that has leads connected to sticky pads called electrodes. The machines are small and lightweight, so you can use them while working or on the move. You can put it in your pocket, clip it to your belt or hold it in your hand.

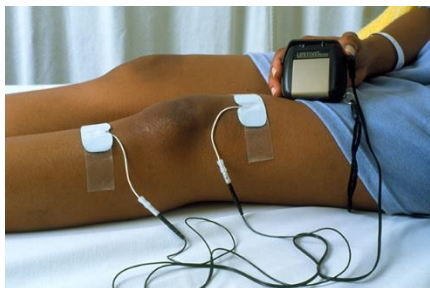
## How does it work

You attach the pads directly to your skin. When the machine is switched on, small electrical impulses are delivered to the affected area of your body, which you feel as a tingling sensation.

The electrical impulses can reduce the pain signals going to the spinal cord and brain, which may help relieve pain and relax muscles. They may also stimulate the production of endorphins, which are the body's natural painkillers.

## Using TENS

You can use TENS throughout the day for as long as you like, although it should not be used while you're driving, operating machinery, or in the bath or shower.



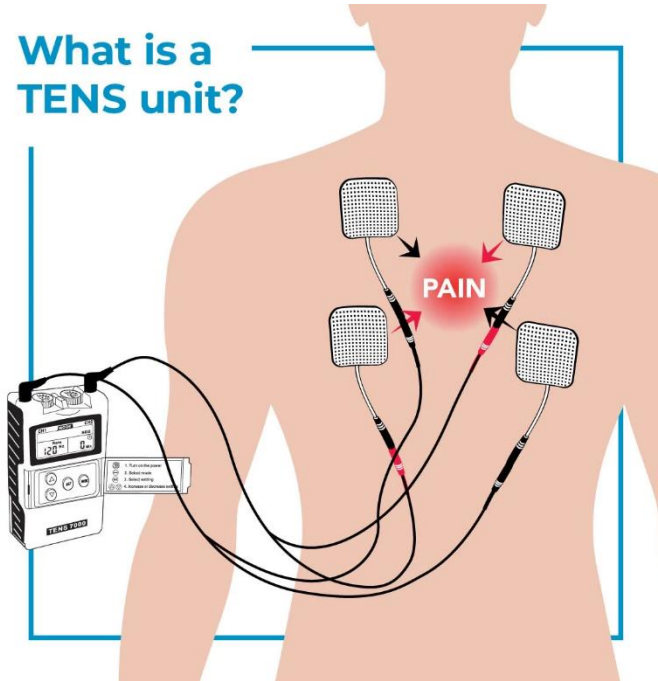
## Positioning the pads

Make sure the machine is switched off before you attach the pads to your skin. Position the pads on clean and dry skin. You can place the pads either side of the painful area, nearby, or in some circumstances anywhere on the body. The pads must be at least 2.5cm (1 inch) apart.

Do not place the pads over:

- the front or sides of your neck
- your temples
- your mouth or eyes
- your chest and upper back at the same time
- irritated, infected or broken skin
- varicose veins
- numb areas

## What is a TENS unit?



Turn on the TENS machine when the pads are attached in the correct places. The machine has a dial that allows you to control the strength of the electrical impulses.

You will feel a tingling, pulsing or throbbing sensation pass through your skin. Gradually increase it until the sensation feels strong but tolerable. If the sensation is painful or uncomfortable, reduce it slightly. Leave it on for at least 30 minutes. Two hours or more is the general recommendation once you are familiar with TENS. Switch the TENS machine off after you've finished using it and remove the electrodes from your skin. These are reusable for approximately one month.



## Are there any risks of side effects?

For most people, TENS is a safe treatment with no side effects.

Some people may be allergic to the pads and their skin may become red and irritated. Speak to your GP, physiotherapist or pharmacist if you have concerns. You may need to take a short break from using TENS. Special pads are available for people with allergies.

TENS is not safe for everyone to use. Do not use it without first getting medical advice if:

- you have a pacemaker or another type of electrical or metal implant in your body
- you're pregnant, or there's a chance you might be pregnant – TENS may not be recommended early in pregnancy
- you have epilepsy or a heart problem
- you have an overactive bladder

---

## Other options to try in your first few weeks to optimise use:

Change the pulse width and/or frequency, (dials in picture below)

Try burst or modulated settings (switch in picture below)

Use it all day

Use it overnight

Wear the TENS while active or doing a painful activity

If you are taking opioid medication it is recommended to use a pulse rate over 50Hz



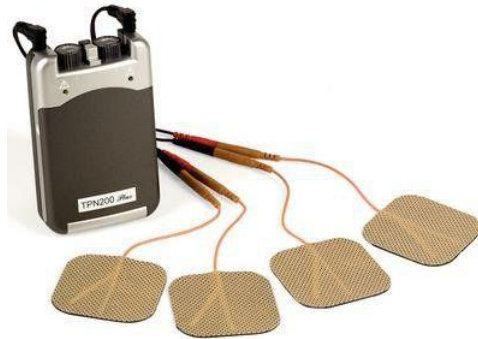
## Recommended machines

Pro TENS II Machine

Med-Fit 1 Dual channel

TPN 200 Plus

These can be purchased on line or at a pharmacy. When purchasing your machine quote “recommended by a health practitioner” and you will save the VAT



Replacement pads are readily available when long term use is required.

---

## Resources

[TENS Machine: How does a TENS machine work? \(patient.info\)](#)

[TENS \(transcutaneous electrical nerve stimulation\) - NHS \(www.nhs.uk\)](#)

The Pain Clinic  
Zone F, Department F18  
Brownsword Therapies Centre  
Royal United Hospitals, Bath BA1 3NG

Royal United Hospitals Bath NHS Foundation Trust  
Combe Park, Bath, BA1 3NG

01225 428331 | [www.ruh.nhs.uk](http://www.ruh.nhs.uk)

If you would like this leaflet in email form, large print, braille or another language, please contact the Patient Support and Complaints team on 01225 825656.

---

Date of publication: August 2024 | Ref: RUH ANA/027

© Royal United Hospitals Bath NHS Foundation Trust