

## Instructions for use

1. Before putting on or taking off electrodes, ensure the machine is switched off
2. Plug the leads into the pads
3. Lift one corner of electrode from liner and secure the electrodes firmly onto clean, washed skin at the positions indicated by your physiotherapist. Do not pull electrode by the cables
4. Plug the leads into the machine
5. Turn the machine on and gradually turn up the dial (both may be used if instructed) until you feel the appropriate sensation (mild tingling or pinprick) as discussed with your physiotherapist
6. Wear the machine for the period suggested by your physiotherapist
7. When you switch off the machine, turn the dials back to zero. Remove the electrodes and wipe your skin with a damp cloth. If a rash develops, discontinue use until the skin is back to normal. Electrodes must be removed at least once a day and the skin washed. Return electrodes to the liner and store in the package at room temperature
8. If further batteries (9 volt PP3 battery) are needed, please replace them

## Important

Single patient use only. **Do not** apply to broken skin. Should a skin rash occur, immediately discontinue use and contact your clinician. **Do not** use while driving or operating machinery.

### Checklist if not working:

Electrodes:	Loose electrodes give poor connection and can become uncomfortable
	If the pad seems dry add water and air dry for a few seconds then re-attach
	Check connection to electrodes or unit
	Re-connect
Batteries:	Power/light depleted?
	Replace with a 9 volt PP3 battery

**DO NOT HESITATE TO CONTACT  
THE PHYSIOTHERAPIST WHO  
LOANED THE MACHINE**

## NHS Buckinghamshire Musculoskeletal Integrated Care Service (MusIC)



### TENS information for patients

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## What is TENS?

TENS (TNS) is an abbreviation for Transcutaneous Electrical Nerve Stimulation. It is a device to help with your pain and can be used instead of medication/drugs/pain killers or alongside them. TENS can be used to help you manage your pain, and is effective with new pain or with an old problem that is ongoing.

## How does TENS work?

TENS is believed to work in two ways:

1. By stimulating the body's own 'pain control' system by causing the body to produce an increase of endorphins. These are morphine-like substances which occur in our body and can act as pain relievers – this can last for several hours after use with the TENS machine.
2. By blocking the "pain-gate" – this can give immediate relief only when you have the machine on you.

## Modes of therapy

There are two types of treatment as described below. Your physiotherapist will select the most appropriate method and you **must** follow this advice.

### 1. High Frequency TNS

Pulse width: 200 us  
Pulse rate: 90-130 Hz Mode: N

TNS may be used from 30 minutes up to a few hours. Electrodes may be placed on

or near the site of pain or on a nerve to/from that area.

### 2. Low Frequency TNS (acupuncture like TNS)

Pulse width: 200 us  
Pulse rate: 2-5 Hz Mode: B

TNS may be used from 30 minutes up to a few hours. Electrodes may be placed away from the site of pain or on a nerve trunk. Your therapist will advise you where to place them.

You should feel a pinprick sensation which should be strong to tolerance but not painful. This activates the release of chemicals from the brain (endorphins) which are like the brain's natural medicine cabinet providing longer-lasting pain relief.

## Health and Safety precautions on the use of TNS

Use TNS only as directed by your physiotherapist and for no other condition than the one it is prescribed for.

1. TNS should not be used by patients with pacemakers
2. TNS should not be used if unable to feel pinprick
3. The use of TENS in pregnancy should only be conducted with guidance by your physiotherapist
4. TNS should not be used on patients who do not understand the use and application
5. Patients with known myocardial

disease and arrhythmias should not use TNS over the thoracic region

6. Do not place over an active epiphyseal region (growth plates) in children
7. TNS should not be used in the areas of the carotid sinus at the front of the neck and mouth
8. TNS can be used over areas containing metal but the patient should be warned that they may feel some discomfort
9. TNS appliances should be kept out of the reach of children
10. TNS should ideally not be used while operating vehicles or potentially hazardous equipment. Use of TNS while driving may render insurance policies invalid
11. Application or removal of electrodes should always be carried out with the appliance switched off
12. Electrodes must not be placed over inflamed and infected skin and broken skin sites
13. One side effect can be a skin irritation or a rash developing beneath or around the electrode in prolonged application. Only electrodes designed for use with TNS should be used. If the skin is reddened, do not replace the electrodes on the same area until the skin is back to normal
14. Not to be worn in water