



A patient guide to Transcutaneous Electrical Nerve Stimulation (TENS)

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You have been referred for Transcutaneous Electrical Nerve Stimulation (TENS) as part of your pain management. Please note that we are unable to provide you with a TENS machine however; we will give instruction as to its use and advice on how to purchase a TENS machine.

What is TENS?

TENS is the passage of a small electrical current through the skin to the nerves. A battery-powered machine is connected to electrodes placed on the skin. This can help relieve pain by interfering with the pain signals which travel along these nerves, preventing them reaching the brain; or by stimulating production of the body's natural pain relieving chemicals.

Usually the relief only occurs whilst the machine is turned on, although some people find they get relief for a short while after the machine has been turned off.

What are the potential benefits?

This mode of treatment is a form of pain management that can be self-managed by an individual which is non-invasive (where there is no break to the skin).

What are the potential risks?

There are minimal risks to using a TENS machine if used in accordance with the manufacturer or health professionals instructions. Overuse may result in skin irritation at the site of the electrode pad.

Guidance when using a TENS machine?

It is best to use a TENS machine only on the advice of a doctor or health professional. They are not suitable for all types of pain or all conditions. There are various types and brands of machines. Always follow the manufacturer's instructions supplied with the machine. You may also find the following points helpful.

- TENS machines are designed so that you can move around with them switched on. You can tuck the machine in a pocket or clip it onto a belt.
- Before placing the electrode pads on the skin make sure the machine is switched off.
- Test the machine by holding the pads between your fingers and then carefully turn it on. You should feel a tingling sensation.
- Place the pads above and below the area of pain (or as advised). The pads should not be placed within an inch (2-3cms) of each other.
- Switch the machine on slowly and turn it up gradually until you feel a tingling sensation. The sensation needs to be quite strong but not uncomfortable. After a few minutes the sensation will start to drop away slightly. This is called `accommodation`. When this happens, turn the machine up slightly and leave it for the rest of the time in use. Do not turn the machine sensation too high as this can cause over-stimulation which may make your pain worse. There should be no muscle contraction.
- At the end of the session turn the machine off and disconnect the electrodes from the machine. If you intend using TENS again later there is no need to remove the electrode pads from the skin. Simply tuck the wires out of the way and carry on as normal.

Instructions for use of a TENS machine

It is important that you are shown how to use the machine by a suitably trained person. Please follow instructions below, to ensure you use a TENS machine safely;

- Make sure that the area of skin where the electrodes are to be placed is clean and that there are no cuts or sores
- Apply the electrodes as shown by the health professional
- Set the machine to the recommended combination. Look at the chart enclosed to help you
- Once you are happy with the settings, slide the cover on the machine shut
- Turn on the machine and turn up the intensity knob until you feel a strong but comfortable tingling sensation. (Turning up the machine further will not increase pain relief)
- Look at the chart to give you a general idea of how long you should use the machine for

Using your TENS machine

The following illustrations are for general guidance only as the treatment modes that can be used will vary dependent upon the TENS machine you are using. Please refer to your manufacturer's instructions for more details regarding mode settings, or ask one of the pain management nurses for advice.

Combination 1

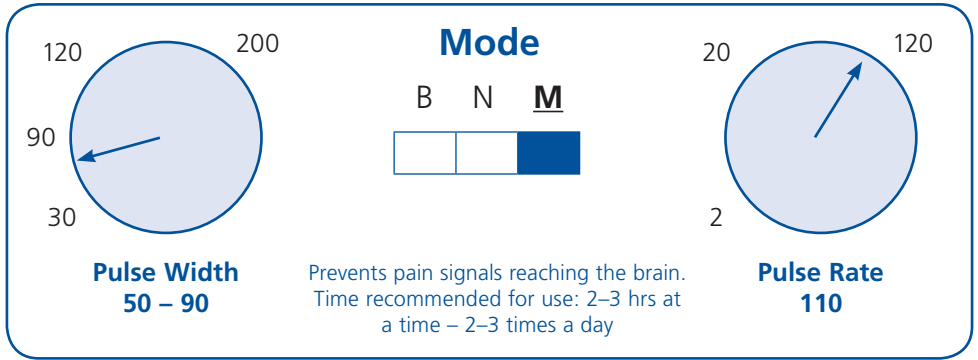


Diagram illustrating the settings for Combination 1. The left dial shows Pulse Width set to 90 (range 30-200). The right dial shows Pulse Rate set to 110 (range 2-120). The Mode selector shows B (blank), N (blank), and M (filled).

Pulse Width
50 – 90

Mode
B N M

Pulse Rate
110

Prevents pain signals reaching the brain. Time recommended for use: 2-3 hrs at a time – 2-3 times a day

Combination 2

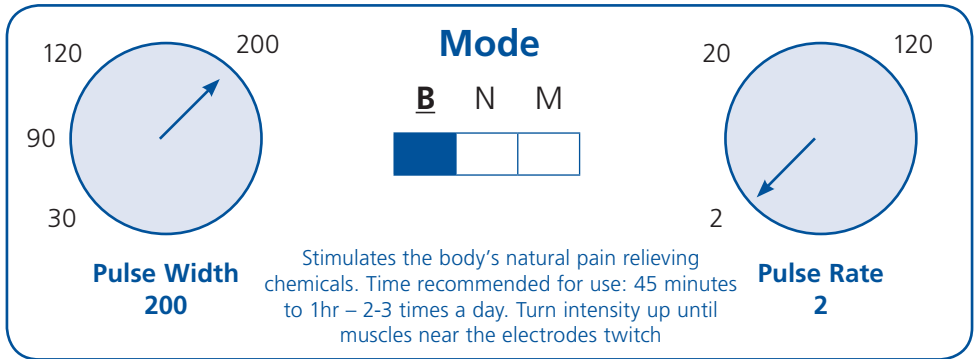


Diagram illustrating the settings for Combination 2. The left dial shows Pulse Width set to 200 (range 30-200). The right dial shows Pulse Rate set to 2 (range 2-120). The Mode selector shows B (filled), N (blank), and M (blank).

Pulse Width
200

Mode
B N M

Pulse Rate
2

Stimulates the body's natural pain relieving chemicals. Time recommended for use: 45 minutes to 1hr – 2-3 times a day. Turn intensity up until muscles near the electrodes twitch

Combination 3

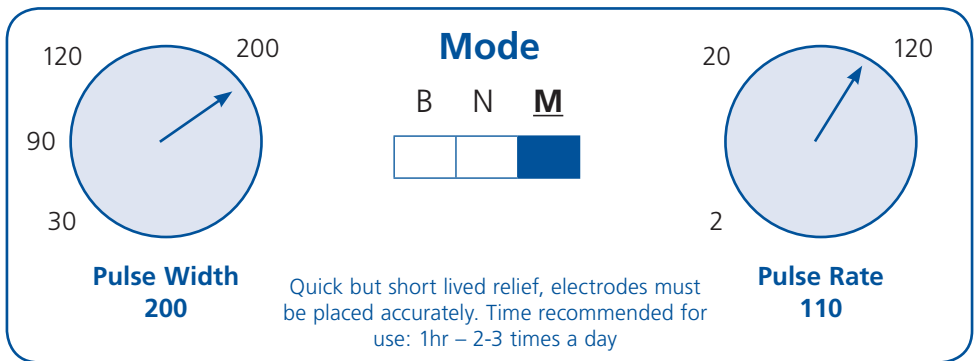


Diagram illustrating the settings for Combination 3. The left dial shows Pulse Width set to 200 (range 30-200). The right dial shows Pulse Rate set to 110 (range 2-120). The Mode selector shows B (blank), N (blank), and M (filled).

Pulse Width
200

Mode
B N M

Pulse Rate
110

Quick but short lived relief, electrodes must be placed accurately. Time recommended for use: 1hr – 2-3 times a day

Please note: other machine settings may differ or be pre-programmed. Always refer to the manufacturer's instructions.

Skincare

- Make sure the skin where the pads are applied is clean and dry and that there are no cuts, grazes or areas of skin irritation
- Check that the pads do not irritate the skin
- Try to put the electrodes in a slightly different position every 3-4 days to prevent soreness occurring.

Electrode care

- After use replace the electrodes on the plastic or shiny cardboard, then put into the packet provided and seal (this prevents the gel pads from drying out)
- If the electrodes do not stick firmly to your skin the gel pads may be too dry. Try adding a drop or two of water to the gel pads – they should then stick to the skin better
- Remember that the life expectancy of an electrode pad varies according to the condition of your skin and how often you use it

Machine care

Do not attempt to repair the machine yourself. Contact the retailer or manufacturer for further advice on the maintenance of your machine.

You should not use TENS;

- If you are driving or operating machinery
- If you are pregnant
- If you have a pacemaker (unless it is prescribed by the specialist treating you)
- If you have epilepsy (you should discuss this with the specialist treating you)

You should not place the electrode pads;

- Over a pregnant uterus (womb)
- On the front side of the neck, close to the eyes or in the mouth
- On skin that is numb or areas of reduced sensation
- Do not use the pads near water such as in the bath or shower
- Over a joint replacement, over a tumour or internally

Contact details

For more information please contact:

Pain Management Nurses

Direct telephone line: 0121 371 5105



The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4323.

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