

TENS Device

Introduction

The pain specialist has prescribed a TENS device for you. For instructions on how to use the TENS device, you can report to the Pain Medicine Outpatient Clinic of Amstelland Hospital. You can read the information in this leaflet, which goes into greater detail on various matters, at your leisure. Be aware that your personal situation may differ from the one described in this leaflet.

What is the TENS device?

TENS stands for 'transcutaneous electrical nerve stimulation'. The TENS device combats pain in two different ways:

1. The device blocks the pain signal from reaching the brain. This treatment is based on gate control theory, whereby the assumption is that activating 'tactile fibers' will close the gate, so that fewer 'pain fibers' are sent to the brain.
2. Electrical impulses stimulated the production of substances (endorphins), which are the body's natural painkillers. The TENS device is assumed to work by activating something that inhibits the painful stimulus (pain-inhibiting system).

The degree of pain relief felt by the patient during the treatment and how many hours of pain relief are experienced after the treatment differs for everyone. Usually, the analgesic (painkilling) effect will increase over time.

Use of the device

A pain consultant from the Pain Medicine Department will instruct you on how to use the TENS device, which is battery operated. The device is connected by a cable to two or four electrodes, which are attached to the skin.

This is an example of one of the devices with which we work.

You can attach the device with a belt or a different clothing item, for example, so that it is not visible to others.

TENS is not suitable for patients who:

- have a pacemaker (on demand pacemaker)
- are pregnant (first three months of the pregnancy, thereafter with an electrode placed on the stomach)
- have epilepsy

General use

In the morning:

- Clean the skin and check for irritation or minor wounds.
- Apply the electrodes (see below for specific instructions).

In the evening:

- Turn the device off before removing the electrodes.
- Remove the electrodes. When removing the electrodes, never pull on the cables themselves but on the edge of the electrodes!

- Moisten the electrodes with water and stick them to the film. Store this in the bag in the fridge.

Store the device in its case after each use.

The TENS has a rechargeable battery

Electrodes:

- Never place an electrode on irritated or broken skin.
- It is imperative for the electrodes to be attached on clean, dry skin.
- Do not wear the electrodes while bathing, showering or swimming.
- To ensure that the electrodes fasten securely to your skin, you can slightly dampen the surface with a wet finger before applying them.
- Storing the electrodes in the refrigerator will make them useful for longer periods of time.
- Skin irritation may occur as a result of certain types of electrodes, excessive perspiration, pulling too hard on the electrodes during their removal or prolonged use of the electrodes on the same location.
- You should replace the electrodes if you notice that they are no longer sticky, are bubbly/grainy or they are beginning to curl.

Conventional TENS, program 1

This treatment is based on gate theory. Use the TENS device throughout the day. Later, it may be possible to phase this out.

Instructions:

- Attach the two ends of the wire to the electrodes before attaching them to your skin.

Apply the electrodes in the following way:

- When using a single electrode (butterfly): attach the middle section over the spinal column.
- When using two electrodes on a single output: center the painful area between the two electrodes, placing them at least three centimeters apart, but no more than ten centimeters. Sometimes additional electrodes are attached to an area on the skin associated with the pathway of the nerve, such as on the arm or leg. This allows the nerve pathway to receive extra stimulation via the cutaneous (skin) nerves.
- Now attach the electrodes to the skin areas designated (marked) by the nurse. Here, the electrode connected to the cable with the red plug (higher) is placed first, and then the electrode connected to the cable with the black plug (lower) is attached. Sometimes, this is performed the other way around for testing.
- On the other side of the wire is a grey 'plug'. Insert this into the device.
- You can regulate the strength of the electrical current yourself. Set up the device so that you feel a tingling sensation. The TENS is most effective when you feel the tingling just above the pain threshold; most people find the tingling comfortable.

Once you have found the right current intensity, lock it with the red button on the side.

AL/Burst TENS, program 2

This treatment is administered according to the pain-inhibiting system. Use the device several times a day for at least twenty minutes at a time, but no more than forty minutes at any one time. You can expect results within three weeks.

Instructions:

- Attach the two ends of the wire to the electrodes.
- Then place the electrodes on a muscle group associated with the nerve pathway, such as the arm or the leg. (according to the pain consultant's instructions).
- Attach the electrode with the black cable below and the electrode with the red cable above.
- On the other side of the wire is a grey 'plug'. Insert this into the device.
- Set the strength of the current. You should experience a beating sensation at the site of the electrode (black cable) and see the muscle contract.

Trial period

The trial period will last for approximately three weeks. After these three weeks have passed, you will have an appointment with the pain consultant either at the outpatient clinic or over the telephone. If the TENS treatment is satisfactory, the pain consultant will definitively request the TENS device from your health insurance. You may then keep the TENS device and re-order the electrodes from the supplier of your device.

Important

In consideration of insurance provisions, switch off the TENS device while driving, cycling or operating machines. When you travel by aeroplane, you can request a medical certificate (English language) from the Pain Medicine Outpatient Clinic to show customs officials.

Troubleshooting the TENS device

1. Device continually turns off.
 - Low batteries.
 - The on/off button has been accidentally pressed.

- The electrode cannot establish sufficient contact (does not attach properly to the skin or there is a kink in the electrode's cable).
2. The device cannot be set higher.
 - The block is on (lock shown on display).
 - The cable is defective.
 3. The device gives a 'different' sensation (a 'tickle').
 - The program has been accidentally changed.

Questions?

If you still have questions after reading this brochure, please contact the assistant of the Pain Medicine Outpatient Clinic on telephone number +31 (0)20 755 7010.

Notes on this leaflet

If any information in this leaflet is unclear or incomplete, please notify us. You can share your remarks with us via voorlichting@zha.nl.