

National Ankylosing Spondylitis Society

TENS Machines: the facts

How do TENS machines work?

Transcutaneous Electrical Nerve Stimulation (TENS) machines work by delivering small electrical pulses to the body via electrodes placed on the skin.

TENS machines are thought to affect the way pain signals are sent to the brain. Pain signals reach the brain via nerves in the spinal cord. If pain signals can be blocked then the brain will receive fewer signals from the source of the pain. Therefore less pain may be felt.

TENS machines are thought to act by stimulating the body to make its own pain-easing chemicals called endorphins. These act a bit like morphine to block pain signals.

How do I use a TENS machine?

TENS machines are designed so that you can move around with them working. You can tuck the machine in a pocket or clip it onto a belt.

Electrode pads are attached to your skin using adhesive tape or a water based gel. A small current is passed through the electrodes which can be adjusted using a control on the machine. Adjustments to the voltage setting should be gradual until you feel a tingling sensation. The sensation will need to be quite strong but not uncomfortable.

TENS machines are available in single and dual format, the former having two electrodes and the latter having four.

Session length and frequency will vary depending on the degree of pain being experienced and if TENS treatment is proving effective for you. Your physiotherapist will be able to devise a treatment plan for you.

The National Ankylosing Spondylitis Society

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How effective are TENS machines?

TENS machines are used all over the world for the treatment of chronic pain. Some people have short-lived relief but others find they can be without pain for periods lasting 12 hours to several days or even weeks.

TENS treatment should only be part of an overall strategy for dealing with your pain: relaxation techniques, exercise and medication all play a part in managing pain.

Can TENS machines be used by everybody?

TENS machines tend to be mainly used to help reduce pain from problems in muscles, joints and nerves rather than abdominal, chest or head pains. Unlike a lot of medication there are virtually no side effects when using a TENS machine. However, people with the following must not use a TENS machine:

- When the cause of the pain is unknown or not diagnosed
- Pregnancy (unless specifically medically advised)
- Pacemakers
- Epilepsy
- Certain types of heart disease

How safe are TENS machines?

- It is best to use a TENS machine only on the advice of a doctor or other health professional.
- Ask your physiotherapist to show you how to use the TENS machine safely as some machines have varying modes, channels and frequencies, a physiotherapist is usually the best person to give you guidance on the most appropriate machine for you to use.
- Care should be taken not to place the electrodes over your carotid artery in the neck or mouth area.
- Some people may develop a skin reaction to a particular adhesive tape or gel, if this happens stop and ask your doctor, physiotherapist or pharmacist for alternative ideas.
- Always follow the manufacturer's instructions supplied with the machine.

How can I obtain a TENS machine?

Speak to your physiotherapist or doctor before purchasing a TENS machine and ask them if they recommend a suitable one for you. You can purchase TENS machines from high street chemists and on line.

TENS machines are normally VAT exempt as long you sign the exemption declaration form before you purchase. The forms are provided by the supplier.

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