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# Transcutaneous Electrical Nerve Stimulation Unit

Medically reviewed by [University of Illinois-Chicago, College of Medicine](#) on September 30, 2016  
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## What is a TENS device?

A transcutaneous electrical nerve stimulation (TENS) unit is a device that sends small electrical currents to targeted body parts. These currents are used to relieve pain. Some TENS units are designed for use in a hospital or healthcare facility. Others are safe to use at home.

TENS therapy subdues hyperalgesia, which is a high sensitivity to pain. The pain may be located anywhere on the body.

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## What does a transcutaneous electrical nerve stimulation unit do?

A TENS unit sends electrical pulses through the skin. These pulses control pain signals in the body, creating temporary or permanent relief from pain. They can control abnormally excited nerves and release endorphins.

TENS therapy is used for many conditions, including:

- bursitis
- arthritis
- tendonitis
- surgery
- headaches

It's also used for injuries and wounds.

## What are the side effects of transcutaneous electrical nerve stimulation?

TENS therapy is considered mostly safe. On rare occasions, an electrical current will be too intense for a patient, causing burning or irritation on the skin.

The effect of TENS on fetuses is unknown at this time. Pregnant women should not use electrical stimulation for pain relief. People with heart conditions should use caution as well.

Some people with skin allergies may react to the electrode pads used with the units. People with pacemakers, infusion pumps, defibrillators, or similar devices shouldn't be exposed to the electrical currents produced by a TENS unit.

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## How is transcutaneous electrical nerve stimulation administered?

A TENS unit is an electrical device that sends low-voltage currents into the body. Electrode pads are placed over specific nerves on the body to conduct the currents from the unit to the nerves.

The frequency of the currents coming from a TENS unit can be turned up or down, ranging from about 10 Hz to 50 Hz. Most sessions with a TENS unit last less than 15 minutes and can be administered as often as needed.

# What are the benefits of transcutaneous electrical nerve stimulation?

Transcutaneous electrical nerve stimulation is considered highly effective in controlling pain. It can reduce the feelings of pain and prevent them from coming back in the future.

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# How do you prepare for transcutaneous electrical nerve stimulation?

There is no preparation necessary for a TENS unit. Electrodes are placed on the surface of the skin, above the overactive nerves. For home devices, a patient will need to know where these pads go, but the doctor will place them in a healthcare setting.

# What are the results of transcutaneous electrical nerve stimulation?

Transcutaneous electrical nerve stimulation may result in instant and possibly prolonged pain relief. Through the release of endorphins and the control of nerves, TENS sends relief directly to the site of pain.

Some people experience permanent pain relief after repeated sessions with a TENS unit. Others need TENS therapy for a prolonged period of time. The effectiveness ranges by condition and intensity of

treatment.

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## The takeaway

TENS devices send small electrical currents to parts of the body to control pain signals, creating temporary or permanent relief. The effectiveness of TENS treatment varies depending on what condition you're treating, and how intense the treatment is. The treatment may be conducted in a healthcare setting, or you may be able to use a device in your home. Before starting this treatment, be sure to discuss any questions you may have with your healthcare provider.

**Q:**

Can a TENS unit be used for pain in your jaw from oral surgery?

— Anonymous Healthline reader

**A:**

TENS therapy may be a helpful treatment option for pain. However, it isn't very clear which