



Patient & Family Guide
2020

Using TENS for Pain



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What is TENS?

- TENS stands for Transcutaneous Electrical Nerve Stimulation. Transcutaneous means across the skin.
- TENS can help you manage your pain when it is used with other self-help strategies. These may include pacing (balancing activity with rest to save energy and manage pain), relaxation, movement, and nutrition. Less pain can improve your sleep, work abilities, home activities, and social life.
- Your health care provider will teach you how to use TENS at home.

What is pain?

- Pain is an unpleasant sensory and emotional experience created by the brain. It warns you that your body may be in danger or that you have been injured.
- Most of the time pain is helpful. For example, it can help you avoid injury by telling you to move your hand away from a hot stove before you get burned.

- Pain also tells you to be less active while you are healing from an injury or medical condition. As your body heals you have less pain, which tells you to move again.
- When your nervous system is working well, the amount of pain you feel matches your injury. Sometimes, the amount of pain does not match your injury. You may have a big injury with no pain, no injury with a lot of pain, or something in between. This is because how you experience pain depends on many things. These include the situation, your thoughts, emotions, and past experiences, etc.
- Sometimes pain lasts longer than you might expect, even after an injury has healed. This may happen because your nervous system is still on high alert. This can happen if the nerves have been injured or if your nervous system has become more sensitive.
- If you would like to learn more about pain, ask your health care provider for more information.

How does a TENS unit work?

- TENS is a way of changing the danger signal produced by your brain. It works by creating electrical stimulation on your skin.
- The stimulation helps to release chemicals that can lower your pain.

- Everyone responds differently to different sensations. Your brain's response to TENS may be affected by your general health and well-being, thoughts, emotions, expectations, posture, movements, and the medications you are taking.
- You can adjust the pulse rate (speed), pulse width (duration), and intensity (strength) to produce different sensations. Talk with your health care provider about which settings may work best for you. You may wish to change the setting when you have more pain. It is also a good idea to change the setting every once in a while as our nervous system can get used to a particular sensation and lose its effectiveness.
- A home TENS unit is small enough to fit in your pocket. You can use it while resting or while you are active.
- Most TENS units have 2 sets of leads (wires). There is a black lead that is usually called negative and a red lead that is usually called positive.
- The leads attach to the TENS unit with a jack on one end and to electrodes on the other end. The electrodes deliver the electrical current to the skin.

- The current is delivered to your skin in pulses.
 - › **Pulse width (duration):** The pulses can be adjusted from 50 to 300 microseconds.
 - › **Pulse rate:** The number of pulses per second. This can usually be adjusted from 2 to 200 pulses per second.
 - › **Pulse intensity (height):** This is like a volume that you can control.
 - › There are many ways to change the pulse width and rate, called modes.

How do I use a TENS unit?

1. **Read the instructions from the TENS unit manufacturer carefully.**
2. Attach the leads to the electrodes and to the TENS unit.
3. Electrode types:
 - › Self-adhesive (self-stick): The electrodes have a sticky gel pad that sticks to your skin without tape.
 - › Carbon (black): The electrodes on some older units may not have self-adhesive gel pads. You will need to use conducting gel to let the current transmit to your skin, and tape to hold the electrode in place. Use just enough gel to cover the electrode completely and evenly.

4. Place the electrodes on clean, dry skin where your health care provider has recommended. Place the electrodes at least 2 inches apart so that the current can reach deeper tissues. If the electrodes are too close together, the current will travel directly between them and not be as effective.
5. Use the settings on the TENS unit recommended by your health care provider. Slowly increase the intensity one channel at a time until you feel the electrical stimulation.
6. If you are very sensitive, keep the intensity low, but high enough that you can notice it. If the sensation fades, it means your body has started producing more of the chemicals to help your pain. **If you have a sensitive nervous system, let the sensation fade and do not turn up the intensity.** If you do not have a sensitive nervous system, you may turn the intensity up slowly to a new comfort level, if you wish.
7. **If your pain gets worse when using the unit, turn it off.** Talk with your health care provider about using different settings.

Taking care of your skin

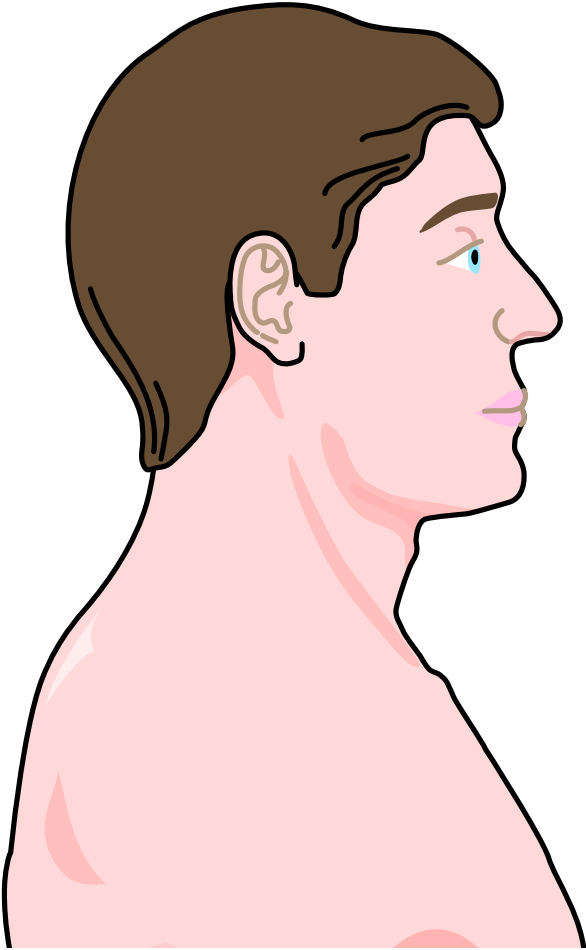
Check your skin each time you remove the electrodes. If it looks red or feels itchy, you can:

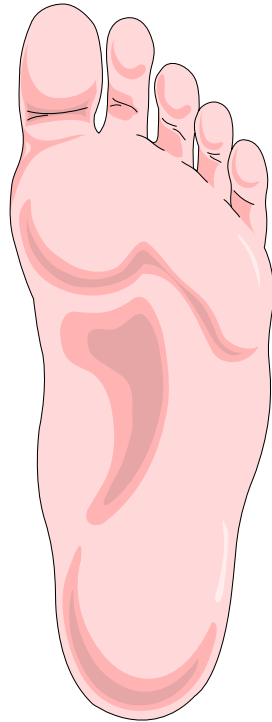
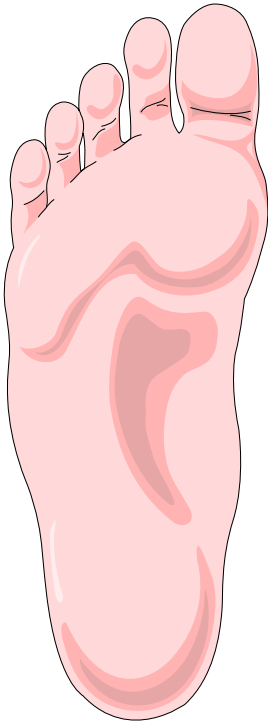
- › put the electrodes in a different spot.
- › use a different type of electrode.
- › shorten the treatment time.
- › stop using the unit until you talk with your health care provider.

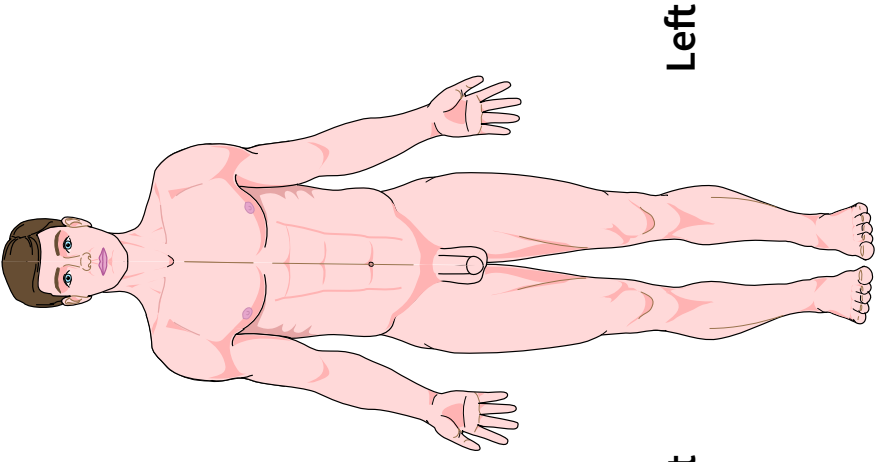
Taking care of the unit

- **Do not get the machine wet.**
- **Do not kink (twist) or pull on the leads.**
- After each use, turn the machine off and remove the electrodes from your skin.
- Self-adhesive electrodes should be placed on the plastic liner or the inside of a heavy plastic bag. **Keep the electrodes in the fridge between uses.**
- When the electrodes lose some of their stickiness:
 - › Gently wet the surface of the electrode with water by brushing it with a wet finger or putting it under slow running water.
 - › Let the electrodes air dry until they feel sticky again. Electrodes should be replaced when they are no longer sticky, or the electrical stimulation changes and feels prickly or stings.

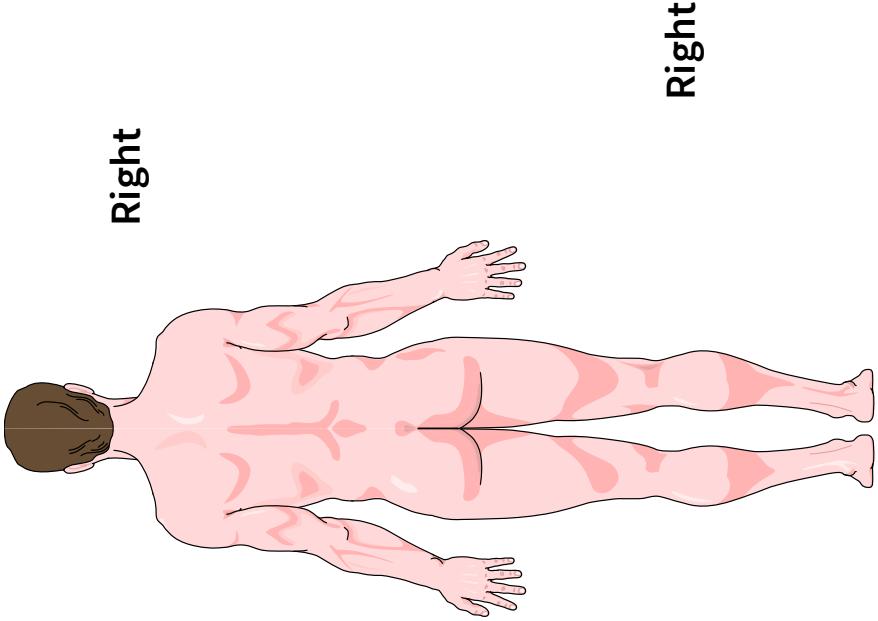
Electrode placement







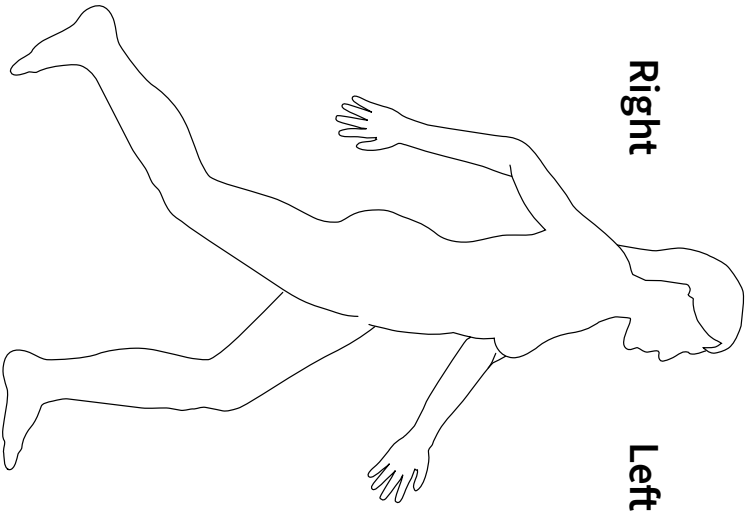
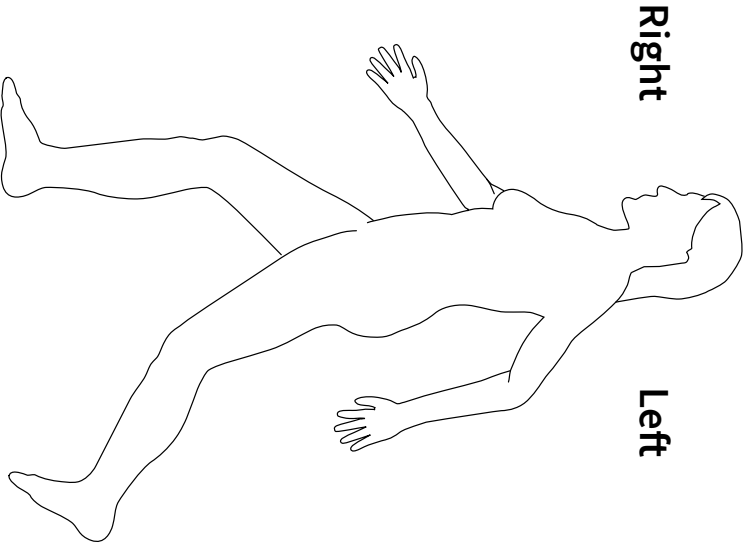
Left



Right

Right

Left



Safety guidelines

- **Do not shower or bathe with the unit or electrodes attached.**
- Do not drop or bang the unit.
- Do not recharge regular batteries.
- Do not sleep with the unit attached.
- Do not use the unit while driving or operating heavy equipment.
- Do not use TENS on other parts of your body without first talking with your health care provider.
- Do not lend the unit to others.
- Do not use TENS to push your activity boundaries.

Note: If you have a pacemaker, defibrillator dorsal column stimulator, or any other similar implanted device, talk about the use of TENS with your health care provider. TENS may affect your device and have negative effects on your health.

Starting settings

Option	1	2	3
Mode (M)			
Treatment time			
Pulse rate (R)			
Pulse width (W)			

Intensity (I):

Troubleshooting

See manufacturer’s instructions.

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Find this pamphlet and all our patient resources here: <http://library.nshealth.ca/PatientEducation>

Contact your local public library for books, videos, magazines, and other resources.

For more information go to <http://library.novascotia.ca>

Connect with a registered nurse in Nova Scotia any time: call 811 or visit <https://811.novascotia.ca>

Learn about other programs and services in your community: call 211 or visit <http://ns.211.ca>

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The information in this pamphlet is to be updated every 3 years or as needed.