A Guide to Using a TENS Machine for Back Pain

by JEREMY ETHIER

How to Properly Use a TENS Unit for Back Pain

When it comes to back pain, there are several possible solutions you can turn to reduce the painful symptoms you may feel. There are solutions for short-term relief and long-term relief.

One such method for short-term back pain relief is electrotherapy, more specifically, transcutaneous electrical nerve stimulation (TENS) for back pain.

What is TENS?

TENS therapy usually involves electrodes on small sticky pads attached via wires to a battery-operated device. These electrodes are placed over the area of pain in the back, and a current is sent through the electrodes by the device which stimulates the sensory nerves in the back and creates a tingling sensation that may reduce the feeling of pain.

A hand-held controller often allows the individual to select from a variety of options, such as different patterns of stimulation and the intensity of the current being delivered. With these units, you can fiddle around with various settings to find the appropriate mix for you.

What is TENS Used For?

TENS has a wide variety of applications. Conditions responding well to TENS include, but are not limited to:

- **Neck pain and stiffness.** TENS can provide short-term relief for neck pain and overall stiffness.
- **Low back pain.** Lower back pain is a major application for TENS to reduce painful symptoms. However, research in this area has been conflicting.
- **Diabetic nerve pain.** TENS has been shown to reduce diabetic nerve pain significantly, and this reduction in pain seems to last for several weeks.
- **Fibromyalgia pain.** TENS can be used to for pain tolerance during physical activity in some individuals.

Do TENS Units Work for Back Pain?

Although there is little research to support how TENS works, its use can be dated back as early as the 1960s where the “gate control theory of pain” was introduced. This theory hypothesizes that stimulating nerves can close a “gate” mechanism in the spinal cord which as a result can help eliminate the sensation of pain.

Basically, pain is completely controlled by an “overprotective brain” that tends to sound its alarm too often regardless of what may be going on in the tissues.

For example, a wrong movement or sudden trauma can cause the brain to protect the back by signaling for pain

whenever you try to move.

The brain decides what hurts based on several sources of information. TENS in a way messes with that system. It sends sensory “noise” to the brain which stimulates nerves and distracts it from the pain. This is why TENS works well for covering up the back pain and is a useful short-term solution for some people.

Another common theory is that the nerve stimulation causes a release of endorphins by the body which can suppress the feeling of pain.

How to Use a TENS Unit for Back Pain

It’s vital that you understand the proper way to use a TENS unit to maximize its effectiveness. Use the following protocol (keep in mind this may vary depending on the type of TENS unit you purchase):

1. Test the battery pack of the TENS unit to ensure it is fully charged. Most TENS units have two control knobs; one control knob makes the electrical signals strong or weak, and the other control knob makes the electrical signals fast or slow.
2. Familiarize yourself with the control knots before using the TENS unit, and ensure these knobs are set on the lowest setting before you start.
3. Use rubbing alcohol to clean the areas of the skin where you will be placing the electrodes.
4. Place a thin coat of gel on the bottom of each of the electrodes. This gel will help with conductivity and will help the electrical signal get to the nerves under your skin.
5. If possible, place medical tape or a sticky patch over the electrodes to allow it to stick to the skin firmly. Ask for assistance if you cannot reach the area where the electrodes should go.
6. Hook the connectors on the end of the electrode wires to the electrodes. Then, simply plug the electrode wires into the TENS unit.
7. When the electrodes are set up on your body and hooked up to the unit, turn the TENS unit on. Slowly turn the control knobs to an adequate setting. You should feel a tingling feeling.
8. Adjust the settings using the control knobs to find a setting that provides adequate stimulus or relief.
9. Hook the TENS unit to your belt, or simply hold it throughout your use.

TENS for Muscle Knots in the Back

Often it is a few muscle knots in the back that are the main culprits of your back pain, which can develop from improper movements done overtime or sudden jerky movements.

A muscle knot is a patch of sensitive soft tissue, which feels like aching muscle. Luckily, TENS seem to work effectively with muscle knots.

A 1997 study of TENS used for specifically treating muscle knots found positive results. They compared nerve stimulation, muscle stimulation, and a placebo for 60 patients with several knots in their shoulders (trapezius).

They found that TENS provided a more effective and more immediate relief of pain from muscle knots than the other methods of treatment. The effects were statistically significant and provided evidence that TENS may be effectively used for treating tight muscle knots in the lower and upper back, in addition to other places in the body.

To use a TENS unit for muscle knots, simply use the protocol described in the previous section but apply the electrodes to the muscle knots in your back.

Caution Before Use

It’s best to be introduced to TENS therapy during a physical therapy or chiropractic session. This gives you the opportunity to see whether the pain relief is effective enough to consider purchasing a TENS unit for home use in the future.

Before experimenting with TENS, it is highly recommended that you have your doctor or physical therapist show you exactly how to use a TENS machine. They will know the proper placements for the electrodes and the proper settings to use for your pain.

Be sure to follow all the directions provided with your TENS unit carefully, and take the following precautions:

- Consult your doctor before considering any use of a TENS unit.
- Do not leave electrodes on the skin for long periods of time without checking and cleaning the area beneath them.
- Do not place the electrodes on rashes or wounds.
- Do not drive while using a TENS unit.
- Do not use the TENS unit while in the shower or bathtub.
- Do not use a TENS unit with heating or cooling packs.
- Do not use a TENS while sleeping.

To conclude, a TENS unit may be an effective way of reducing the painful symptoms that come with back pain.

However, its effectiveness will vary for everyone, and it is recommended that you try one out at your local physical therapy office before purchasing a unit for yourself.

Keep in mind that this is a temporary solution that will simply mask the painful symptoms you feel. For long-term solutions, it is advised that you seek help from a professional.