

# Transcutaneous Electrical Nerve Stimulator (TENS)

## How does TENS work?

A TENS unit sends electrical pulses through the skin to start your body's own pain killers. The electrical pulses can release endorphins and other substances to stop pain signals in the brain. TENS can help with short term pain relief. It works best when used during activities, such as walking, doing chores, or exercise.

## What is TENS used for?

A TENS may be used to help with many types of chronic (long-term) pain, such as:

- Arthritis or other joint pain
- Back and neck pain
- Fibromyalgia
- Muscle pain
- Neuropathic pain

## When is it best to use TENS?

Research has shown that TENS is most helpful for chronic pain when used for at least 30 minutes while you are active. It is less effective when you are sitting still, lying down, or resting.

## Do not use TENS if you have:

- A cardiac pacemaker or defibrillator
- Spinal cord stimulator
- In-dwelling pumps or monitors
- Any implanted metallic or electronic device

## Talk with your health care provider if you have:

- Cancer
- Diabetes
- Cognitive impairment
- Epilepsy
- Or are pregnant

People who are allergic to nickel and/or adhesives may have skin irritation with TENS.

## TENS safety

- **Do not** use TENS on:
  - Open wounds or rashes
  - Swollen, red, infected, or inflamed skin
  - Cancerous lesions, or close to them
  - Skin that does not have normal sensation (feeling)
  - Any part of your head or face
  - Any part of your throat
  - Both sides of the chest or trunk at the same time
  - Directly on your backbone
  
- **Do not** use TENS while:
  - Bathing or showering
  - Sleeping
  - Driving
  - Using machinery
  
- **Turn the TENS unit off** before you put on, move, or take off the electrode patches.
  
- **Do not** share your patches with other people.
  
- Only use the TENS unit on yourself as instructed.
  
- Keep out of the reach of children.
  
- Electronic equipment, such as EKG monitors and EKG alarms, may not work the right way when TENS is in use.
  
- Stop using TENS and talk with your doctor or health care team if you have:
  - Skin irritation (redness, rash, itching)
  - Headache
  - Dizziness
  - Nausea (feel like you are going to throw up)

## How to use the TENS unit

Your TENS works by delivering an electrical current through wires and patches.

Your package should have:

- TENS unit (dual channel)
- 2 wires with a total of 4 connectors
- 4 electrode patches
- Power source/batteries
- Belt clip

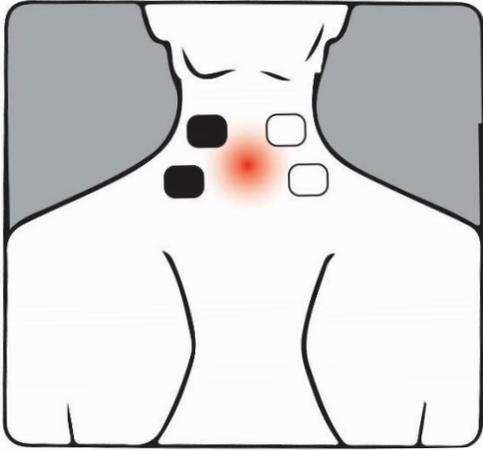


### To start treatment

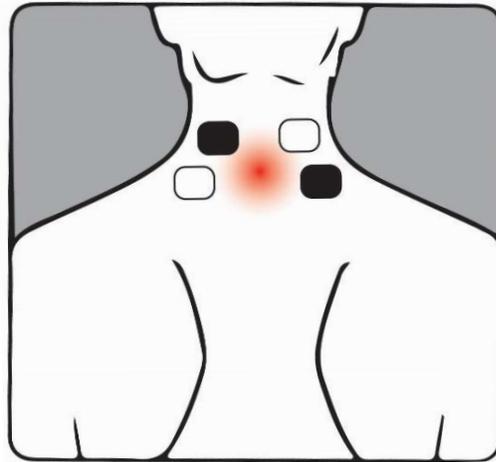
Make sure the skin around your painful area is clean (clean off oil/lotion) and dry. It is very important to put the patches on clean, dry skin so they make firm contact. If the patch is not secure, changes in the stimulation may happen, which could cause discomfort.

1. Make sure the TENS unit is **off**.
2. Put in the batteries, or charge the unit, using the instructions.
3. Take the patches out of their plastic storage bag. Save the bag for future storage.
4. Put the lead wires all the way into the connector on each patch.
  - Make sure there are no bare metal pins exposed.
5. Put the lead wire plugs into the socket on the top of the TENS unit.
6. Take the patches off the plastic liner. Save the liner for future storage.
7. Place the patches on your clean, dry skin.
  - See the pictures on the next pages to learn where to place the patches. There are 2 sets of electrodes that must be placed on the body. The first set are black in the pictures, the second set are white. You may try any electrode placement shown on these pages.
  - The patches should not touch each other or any metal object, such as a belt buckle or metal jewelry.
8. Turn the unit **on**.
9. Follow the treatment program in your After Visit Summary.
10. Start treatment and change the intensity to be strong but comfortable.
  - This may cause your muscles to contract.
11. After a few minutes, it may seem the stimulation is less. This is normal as your body gets used to the TENS. You should turn up the intensity of the TENS unit to keep it feeling strong, but comfortable.

### Neck pain

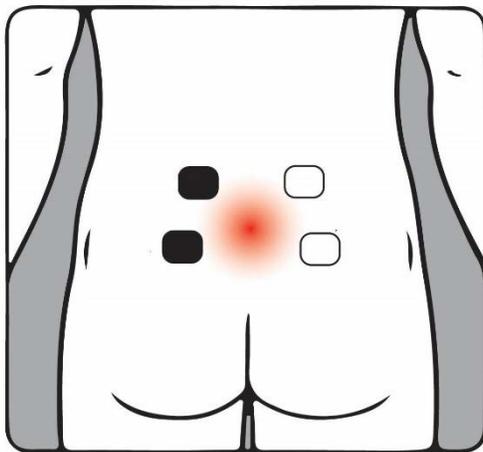


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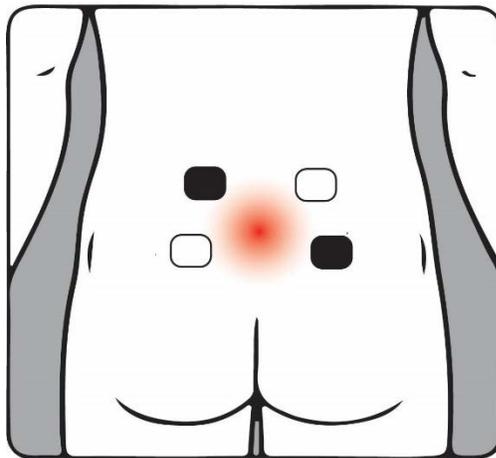


- = 1st set of electrodes, Channel 1
- = 2<sup>nd</sup> set of electrodes, Channel 2

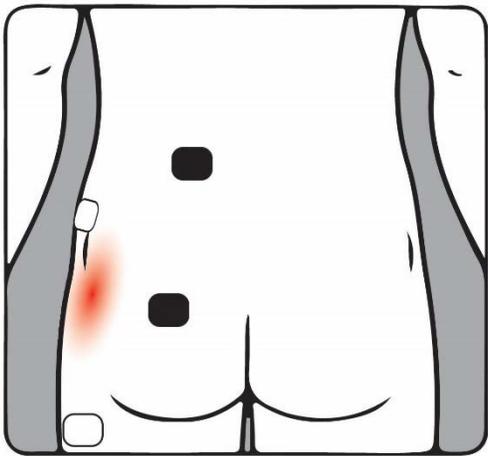
### Back pain



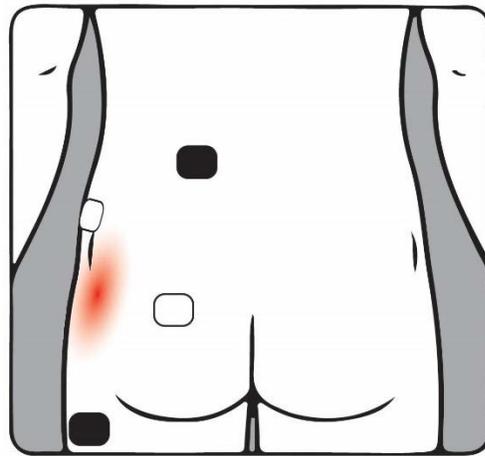
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### Hip pain



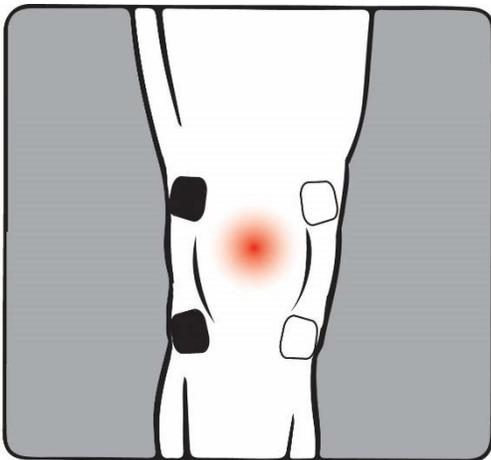
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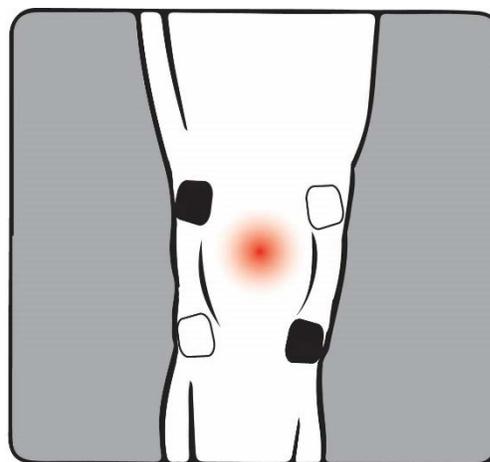
■ = 1st set of electrodes, Channel 1

□ = 2<sup>nd</sup> set of electrodes, Channel 2

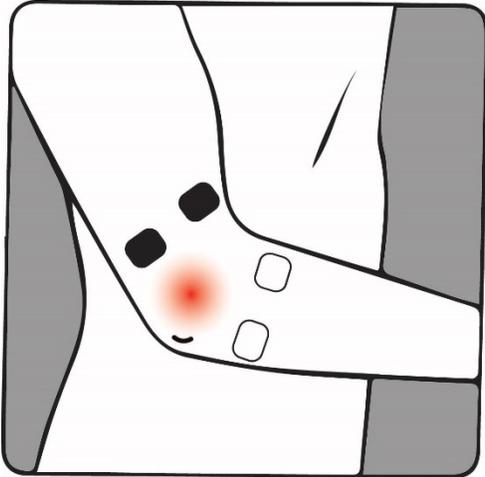
### Knee pain



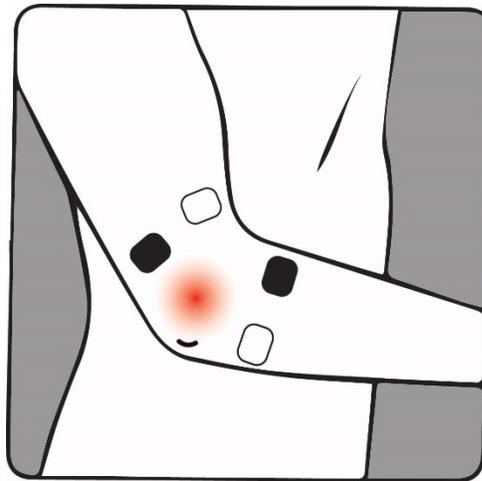
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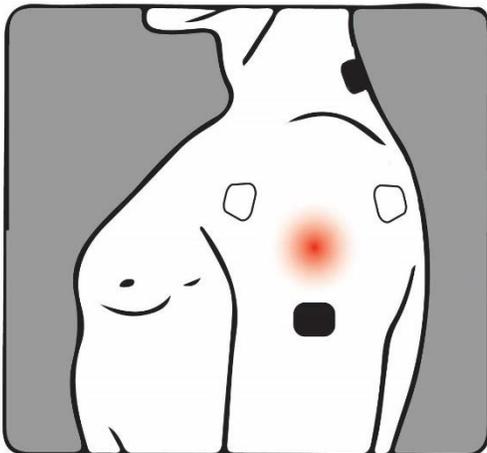
### Elbow pain



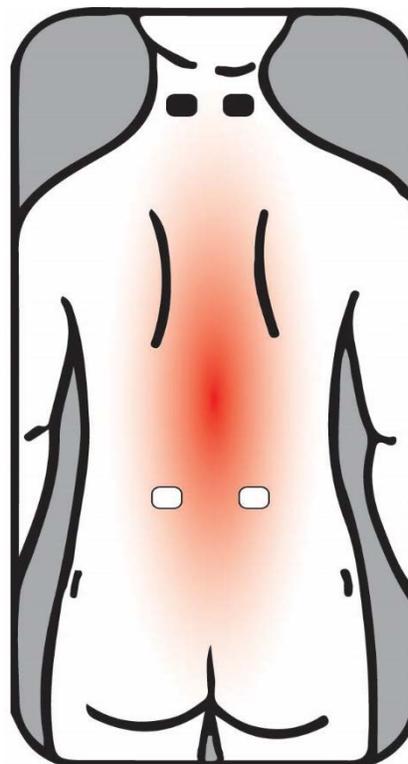
or



### Shoulder pain



### Full body pain



● = 1st set of electrodes, Channel 1  
○ = 2<sup>nd</sup> set of electrodes, Channel 2

Images Courtesy of Compass Health Brands AccuRelief Tens products [www.accurelief.com](http://www.accurelief.com)

## To stop treatment

1. Make sure the TENS unit is turned **off**.
2. Carefully take the lead wires out of the patches.
  - Pulling or yanking on the wires could damage the electrodes.
3. You may either take off the patches from your skin or leave them on until your next use if you are going to use it again within the next 2 hours.
  - If you take off the patches, gently peel them off your skin and place them back onto the plastic liner.
4. Put the liner and patches in the plastic storage bag and store it in a cool, dry place until you use them again.

## Tips for use

- The patches can be used over and over, until the adhesive wears out.
  - The patches will stay sticky and last longer if you clean your skin before you start and put them back in the storage bags when you are done.
  - Patches can dry out if left out of the storage bags too long.
- Patches that are dirty and/or hard to attach can be washed softly with your fingertips under slow-running, cold water and air-dried.
- Replace the batteries or recharge the unit when the low power light flashes on the display of the unit.

Attach a belt clip to the TENS unit to use it hands-free while you are active.

## Cleaning and storage

- To clean the unit, turn it off and take the lead wires out of the patches. Gently wipe the unit with a slightly moistened, soft cloth.
  - Do not use chemical cleaners.
  - Do not use rubbing alcohol.
  - Do not let water get inside the unit.
- Store the unit and wires in a cool, dry place when you are not using it. Keep it in a place that is above -14°F and less than 131°F (-10°C to 55°C) and 90% relative humidity. Check the instruction manual for more details about your unit.
- If you will not be using the unit for a long amount of time, take the batteries out so the liquid in the batteries does not leak.

## Preventative maintenance

- Do not drop the unit on hard surfaces, get it wet, or leave it in very hot or very cold places.
- Do not bend or coil the lead wires tightly. This can damage them.

## Tips for buying

There are many TENS units you can buy at local retail stores and on the internet. Here are the key points to think about when buying a TENS Unit:

- Channels
  - Pick a model with dual (2) channels. This will let you put on up to 4 patches.
- Patches
  - Please note that wires connect to the patch with a pin or a snap. Patches come in many shapes and sizes. Pick the patches that will work for your area of pain. Make sure it will be easy to buy replacement patches when you need them.
- Power
  - Most models use alkaline or rechargeable batteries. Do not forget about the cost of replacement batteries. If you are thinking of a wireless model, make sure you can reach the buttons on the unit to raise or lower the intensity.
- Accessories
  - Some units come with belt clips or pouches to help you wear and carry the unit. You may also put the unit in your pocket. Pick what is right for you.
- Cost
  - The costs of having a TENS unit are the TENS unit, replacement patches, and batteries as you need them. Patches may last up to 2 weeks. Choose a TENS unit that meets your needs.

TENS units and electrode patches can be found on Amazon, EBay and retailers' websites, as well as at local retailers and medical supply stores. You can also choose to ship to a retailer or your home.

## Troubleshooting

### **Problem: Cannot feel the current. Turn the unit off before making changes.**

- Check the power source.
  - Are the batteries inserted properly?
  - Are the batteries dead or weak?
- Check the patches.
  - Are they all sticking on the body?
  - You may be able to reactivate the sticky surface. Wet your fingertip with water and gently rub the patch surface. Let it dry for 60 seconds and try putting it on again. If this does not work, use new patches.
- Check the wires.
  - Are they plugged into the patch and unit properly?

### **Problem: No pain relief**

- Do not use the unit for 3 to 5 days. Then try it again.
- Try a different setting.
- If you have not tried this, turn up the intensity to keep the feeling strong but comfortable.
- Try changing the position of the patches.
- Call your health care team for help if you cannot get relief.

### **Problem: Skin irritation**

- Call your health care team if you have redness, a rash, or itching in the first 24 hours of use.
- Move the patches to a different site. Do not put them on broken or irritated skin.
- Clean your skin and let it air dry before putting on the patches.

### **Problem: Patches will not stay on or in place**

- Try to reactivate the sticky surface. Wet your fingertip with water and gently rub the patch surface. Let it dry for 60 seconds and try putting it on again.
- Try using a skin prep product. This product is put on the skin before placing the patch. It helps the patches stick better. You can buy it online or at a medical supply store.
- Sweating can cause the patches to move out of place. If this happens often and a skin prep product does not help, try to hold the patches in place with medical tape. Ask your health care team for instructions.

## Frequently Asked Questions

### What does TENS feel like?

You may feel tingling, tapping, buzzing, or muscle twitching. You may also notice the TENS feels stronger or weaker at times. You may become used to the feeling and can turn up the intensity as you wear it longer.

### Does it hurt?

No, it should not hurt. Make sure you are setting it at a strong but comfortable intensity.

### Can TENS harm my body?

No, but it can cause some skin irritation from the patches.

### Can I get shocked?

The TENS unit gives a therapeutic dose of electricity to your body. The higher you turn it up, the more intense the feeling will be and the more pain relief you will get. Turning it up as high as it will go may cause surprise and discomfort, but it will not harm you.

Since the unit is an electrical device, you can get shocked if:

- You reposition, or take off, the patches or if you remove the wires from the patches without first turning the unit off
- The unit gets wet while you are using it
- You touch bare wires on a damaged cord

### What if a wire comes out of the unit or patches?

Turn the unit **off**, put the wire back in, and restart the unit.

### Does it matter where I place the patches?

Yes! Try to surround the painful area. Place them on fleshy areas of the body, not over boney sites.

### What if the patches fall off?

Turn the unit **off** and take the wire out of the patch. You can either clean and dry the patch or replace it with a new patch. In either case, make sure your skin is clean and dry before putting on the patch and restarting the unit.

### Is it OK if my muscles twitch?

Yes, as long as it is not uncomfortable. Having your muscles twitch for longer than 30 minutes may cause them to get tired or sore.

**Is it OK to turn it up to where I just barely feel it?**

No. Research shows this will not provide pain relief.

**Why do I not wear it to bed?**

It is easy for the wires to get tangled or unplugged, or the patches may come off. Not wearing it to bed also lets your skin rest from wearing the patches.

**Do I have to use my TENS unit daily? Can I take a break?**

You can take a break; 3 to 5 days off may be helpful. If your pain is at a manageable level, you may want to leave the unit off and wait to use it again when you have a flare-up. Some people use their TENS only when their pain is most severe, while others use it daily.

**Why can't I let someone else try my TENS unit?**

Just as you would not let others take a medicine that was only prescribed for you, you should not let others use your TENS unit.

**What is the problem with wearing it in the shower?**

There is a chance for electrical shock since it is an electrical device. Also, the unit is not waterproof and would be damaged.

**Do I have to use all four patches?**

No. But, if the area is large enough to get all 4 patches on, you will get more stimulation, which could give you greater pain relief.

**Will my insurance cover a TENS unit?**

TENS units are not routinely covered by insurance, but all companies have different policies. Please call your insurance company to find out if your plan covers a TENS unit.

**Where do I get more TENS unit patches?**

Look in your TENS unit manual to learn how you can get more TENS supplies. Your best choice is to go back to the vendor where you bought the unit. You may find patches on-line, but check with the vendor to be sure the patches work with your unit.

# TENS Skin Prep



Some people find their TENS electrodes can slip and slide around. This can happen even if they wash and dry their skin before putting them on. In these cases, we suggest special skin preparation pads. **You can buy some in the Iowa River Landing pharmacy.**

## Directions:

1. Using water only, clean the area where the electrodes will be applied.
2. Let skin dry.
3. Use skin prep on the same area and let skin dry.
4. Wash your hands so you do not get the skin prep on other surfaces or in your eyes.
5. Put on electrodes as usual.