

# Peripheral Nerve Stimulation

## *Information Sheet for Patients*

### What is peripheral nerve stimulation?

Peripheral nerve stimulation is a procedure utilized for managing chronic pain, involving the placement of a small electrical device, resembling a flexible wire-like electrode, near peripheral nerves (those located beyond the brain or spinal cord). Below is a general overview of how peripheral nerve stimulation works:

- **Device Placement:** A needle, guided by imaging technology such as ultrasound or fluoroscopy (X-ray), is used to position a small, wire-like electrode near the painful peripheral nerve or one of its branches that supplies the painful area.
- **Stimulation:** Once properly positioned, the electrode is linked to a pulse generator that delivers electrical impulses through the electrode to the target peripheral nerve (or branches).
- **Pain Modulation:** The electrical impulses interfere with the nerve's ability to send pain signals to the brain, which may lead you to experiencing a mild and pleasant tingling, known as paresthesia, from the stimulation. Furthermore, regular exposure of the nervous system to these benign, non-painful stimuli may retrain the brain's pain perception, potentially reducing sensitivity in the affected area.
- **Control:** While the ideal electrical parameters are adjusted during the procedure to best suit your condition, you can control the intensity of the stimulus and the sensations you feel using a remote.

Peripheral nerve stimulation systems are available in various configurations, offering both permanent and temporary placement options. The electrical pulse generators may be implanted beneath the skin or adhered to the surface. Your doctor can provide information about which option may be best suited for your condition.

### What is the goal of peripheral nerve stimulation?

The goal is to provide pain relief so that you can improve your function and quality of life.

### Am I a candidate for peripheral nerve stimulation?

Your doctor may consider peripheral nerve stimulation if you experience or have been diagnosed with:

- Complex regional pain syndrome

- Diabetic peripheral neuropathy
- Ilioinguinal neuralgia
- Intercostal neuralgia
- Lateral femoral cutaneous neuropathy (also known as meralgia paresthetica)
- Nerve injury
- Occipital neuralgia
- Pain after hernia surgery
- Peripheral neuropathy
- Phantom limb pain
- Post-amputation (residual limb) pain
- Post-herpetic neuralgia
- Post-mastectomy pain syndrome
- Post-thoracotomy pain syndrome
- Cancer pain

## What happens during the procedure?

Local anesthesia is used. Patients are awake or lightly sedated during the peripheral nerve stimulation procedure, allowing us to test the electrodes and ensure they are in the correct position.

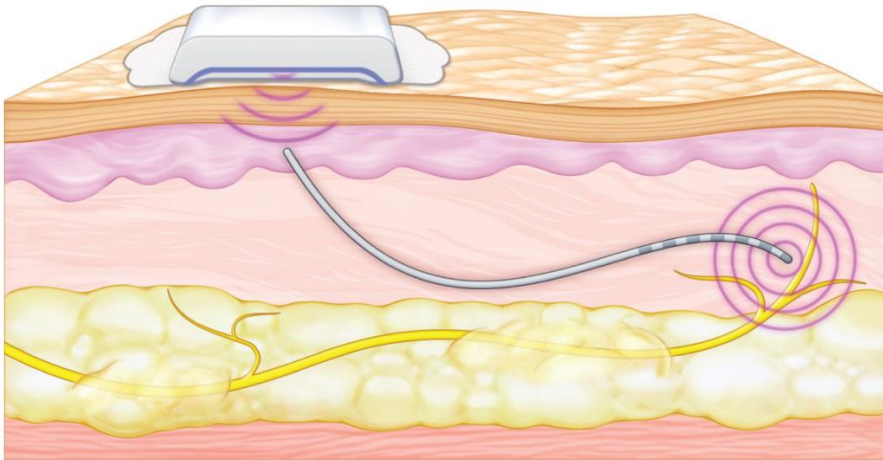
Guided by ultrasound or fluoroscopy (X-ray), the pain doctor places an electrode at the targeted area near the painful peripheral nerve. Although the ideal anatomical position for lead placement is visually confirmed, the variable nature of the nervous system makes real-time feedback from you valuable in ensuring accurate placement. You can expect to undergo a few minor adjustments to optimize the sensation. Typically, this procedure lasts between 45 and 60 minutes.

## What to expect after the procedure?

After the procedure, you may experience some discomfort at the implant site, which is expected to subside gradually. Adhering to the given wound care instructions is crucial for preventing infection. Typically, we schedule the first follow-up within one to two weeks to check on your healing and adjust the stimulator settings. Regular appointments are vital for optimizing the device's performance and ensuring its proper function.

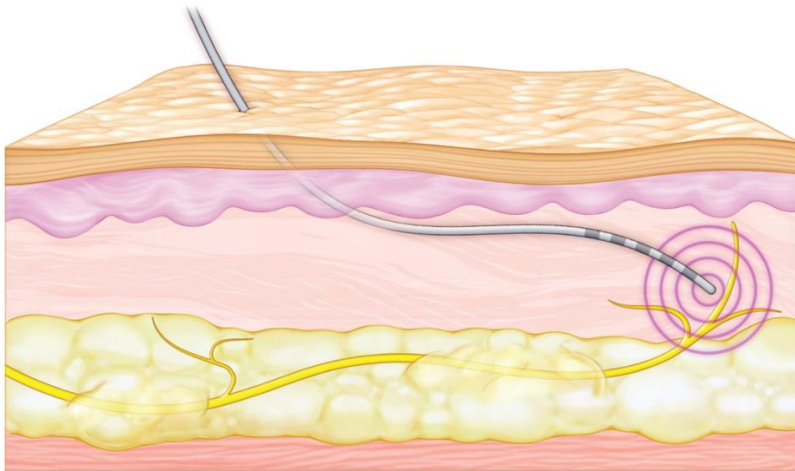
Please be vigilant for any signs of malfunction, like unexpected stimulation changes or pain at the implant site, and report them immediately—though such issues are rare. While the stimulator aims to alleviate your pain, full relief may develop gradually. Maintaining a pain diary and sharing your experiences during follow-up visits can significantly aid in customizing your treatment. Post-procedure, you will be guided on any necessary activity restrictions and receive comprehensive education and training from the device representative or clinical staff on managing and maintaining your device. Should any concerns or questions arise after the procedure, do not hesitate to contact our office.

Your well-being and comfort are our top priorities.



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**Figure 1:** An example of a permanent peripheral nerve stimulation system.



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**Figure 2:** An example of a temporary peripheral nerve stimulation system.