

# Neuropathic Pain

The information provided in this handout is to help you understand the general and specific aspects regarding Neuropathic pain.

Content of this handout is extracted from national and international stroke organizations, peer reviewed scientific research articles.

If you or your family members have questions after reading this handout, please contact your doctor and or therapist in-charge.



## What is neuropathic pain?

Pain is broadly divided into two types - nociceptive pain and neuropathic pain.

### Nociceptive pain

Caused by actual, or potential damage to tissues.

For example, a cut, a burn, an injury, pressure or force from outside the body, or pressure from inside the body (for example, from a tumour) can all cause nociceptive pain.

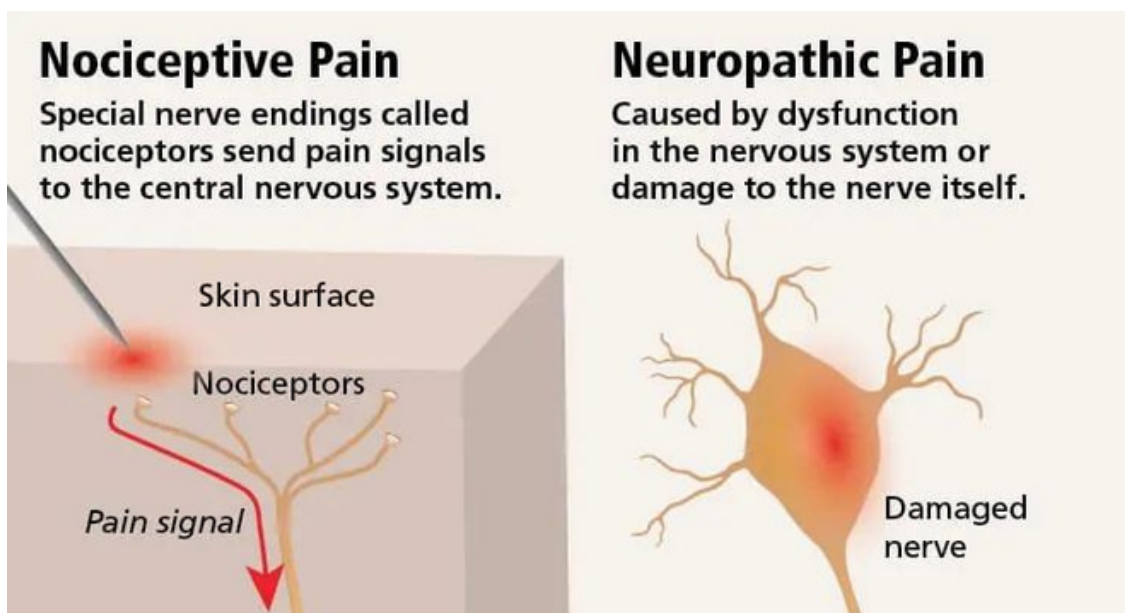
The reason why we feel pain in these situations is because tiny nerve endings become activated or damaged by the injury, and this sends pain messages to the brain via nerves.

### Neuropathic pain

Caused by problems with signals from the nerves themselves (somatosensory system) and processing of those signals.

It is different from the common type of pain that is due to an injury, burn, pressure, etc.

Traditional painkillers such as paracetamol, anti-inflammatories usually do not help very much.



Source: <https://wellnessdoctorr.com/what-is-neuropathic-pain/>

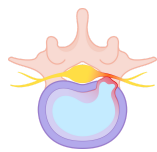
## What causes neuropathic pain?

Neuropathic pain is due to damage or a malfunction in the 'wiring' of the nervous system. When nerves are irritated, they become super-sensitive and 'fire-off' thousands of extra pain signals. These extra nerve impulses or 'sparks' are mistakenly interpreted as 'pain' signals by the brain.

Nerves anywhere in the body can be damaged by

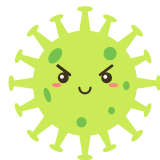
- Injury ; like to the spinal cord (e.g. a diving or car accident) or the brain (e.g. stroke or multiple sclerosis).

- Surgery



- 'Compression' (e.g. spinal disc pressing on a nerve going to the leg [sciatica])

- Viruses (e.g. shingles)



- Diabetes



- Auto-immune diseases (e.g. rheumatoid arthritis)



- Vitamin deficiencies

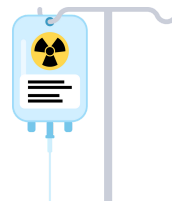


- Medications, alcohol



- Phantom limb pain following surgical removal (amputation) of a limb

- Cancer and following chemotherapy

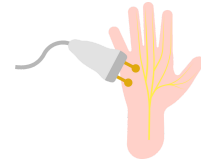


- HIV infection

You can have nociceptive pain and neuropathic pain at the same time, sometimes caused by the same condition. For example, you may develop nociceptive pain and neuropathic pain from certain cancers.

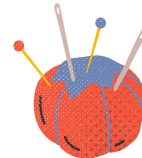
## What is the nature of neuropathic pain?

Because neuropathic pain is a problem with the malfunction in the 'wiring' of the nervous system, it often feels 'electrical' in quality.



People with neuropathic pain usually describe following

- Spontaneous pain (pain that comes without stimulation): Shooting, burning, stabbing, or electric shock-like pain; tingling, numbness, or a "pins and needles" feeling
- Evoked pain: Pain brought on by normally non-painful stimuli such as cold, gentle brushing against the skin, pressure, etc. This is called allodynia. Evoked pain also may mean the increase of pain by normally painful stimuli such as pinpricks and heat. This type of pain is called hyperalgesia.
- An unpleasant, abnormal sensation whether spontaneous or evoked (dysesthesia).
- Trouble sleeping, and emotional problems due to disturbed sleep and pain.
- Pain that may be lessened in response to a normally painful stimulus (hypoalgesia).



Neuropathic pain often 'waxes and wanes' or comes in 'bursts', lasting from seconds to hours.

## How is neuropathic pain diagnosed?

Your doctor will take a medical history and do a thorough physical exam to differentiate the neuropathic pain from other causes of pain. Your doctor will then try to find the underlying cause of the neuropathy by ordering appropriate diagnostic tests as required.

## How is neuropathic pain managed?

### Prevention:

Some forms of neuropathic pain can be prevented from happening with appropriate prevention measures.

The identification of risk factors is essential to prevent neuropathic pain developing in at-risk individuals. Primary prevention strategies (in generally healthy but at-risk individuals) include:

- Administering herpes zoster vaccines, which reduce the likelihood of postherpetic neuralgia.
- Administering preventive interventions to individuals who are experiencing an illness, injury or treatment that can cause chronic neuropathic pain.
- Proper management of health conditions, such as diabetes mellitus, may prevent neuropathic pain before it even presents



## Management:

Neuropathic pain is sometimes difficult to treat and can be long-lasting, especially conditions like shingles. The management of neuropathic pain generally focuses on the following:

### Treating underlying cause

If this is possible, it may help to ease the pain. For example, if you have diabetic neuropathy then good control of the diabetes may help to ease the condition. If you have cancer, if this can be treated then this may ease the pain.

### Medicines

Patients with neuropathic pain generally do not respond to traditional analgesics such as paracetamol, acetaminophen, NSAIDs or weak opioids such as codeine. Please discuss with your doctor for further suggestions.

### Physical treatments

These include: physiotherapy, acupuncture, nerve blocks with injected local anaesthetics, transcutaneous electrical nerve stimulation (TENS) machines.

### Psychological treatments

Behavioural pain management strategies such as pain education, anxiety and sleep management, relaxation, mindfulness techniques may help to varying degrees. Also, treatments such as stress management, counselling, cognitive behavioural therapy, sometimes have a role in helping people with persistent (chronic) neuropathic pain.

Please discuss these treatment options with your doctor and physiotherapist.

Contributed by Physiotherapy, Rehabilitation, Allied Health Services

This brochure is produced for educational purposes and should not be used as a substitute for medical diagnosis or treatment. Please seek the advice of a qualified healthcare provider before starting any treatment or if you have any questions related to your health or medical condition.

Information shared is accurate as of April 2024 and subject to revision without prior notice.



Scan QR code to download e-brochure