

# Neuropathic pain



**N**europathic pain is a complex, chronic pain state that usually is accompanied by tissue injury. With neuropathic pain, the nerve fibers themselves may be damaged, dysfunctional, or injured. These damaged nerve fibers send incorrect signals to other pain centers. The impact of

nerve fiber injury includes a change in nerve function both at the site of injury and areas around the injury.

One example of neuropathic pain is called phantom limb syndrome. This rare condition occurs when an arm or a leg has been removed because of illness or injury, but the brain still gets pain messages from the nerves that originally carried impulses from the missing limb. These nerves now misfire and cause pain.

Up to 7% to 8% of the European population is affected, and in 5% of persons it may be severe. Neuropathic pain may result from disorders of the peripheral nervous system or the central nervous system (brain and spinal cord). Thus, neuropathic pain may be divided into peripheral neuropathic pain, central neuropathic pain, or mixed (peripheral and central) neuropathic pain.

## Causes

- Alcoholism
- Amputation
- Back. Leg and hip problems
- Chemotherapy
- Diabetes
- Facial nerve problems
- HIV infection or AIDS

- Multiple sclerosis
- Shingles
- Spine surgery

Central neuropathic pain is found in spinal cord injury and multiple sclerosis and some strokes. Aside from diabetes and other metabolic conditions, the common causes of painful peripheral neuropathies are herpes zoster infection, HIV-related neuropathies, nutritional deficiencies, toxins, remote manifestations of malignancies, immune mediated disorders and physical trauma to a nerve trunk. Neuropathic pain is common in cancer as a direct result of cancer on peripheral nerves (e.g., compression by a tumor), or as a side effect of chemotherapy radiation injury or surgery.

### **Symptoms**

Unlike other neurological conditions, identification of neuropathic pain is hard. Few, if any, objective signs are present. Examiners have to decipher and interpret a collection of words that patients use to describe their pain. Patients may describe their symptoms as sharp, dull, hot, cold, sensitive, itchy, deep, stinging, burning, or some other descriptor. Additionally, some patients may feel pain with a light touch or pressure.

In an effort to help identify how much pain patients may be experiencing, different scales are often used. Patients are asked to rate their pain based on a visual scale or numeric graph. Many examples of pain scales exist. Often, pictures of faces depicting various degrees of pain can be helpful when patients have a difficult time describing the amount of pain they are experiencing.

### **Treatment**

Various medications have been used in an attempt to treat neuropathic pain. The majority of these medications are used “off label,” meaning that the medication was approved by the FDA to treat other conditions and was then identified as being beneficial to treat neuropathic pain. Tricyclic antidepressants have been prescribed for control of neuropathic pain for many

years. Some patients find that these can be quite effective in giving them relief. Other types of antidepressants have also been shown to provide some relief. Selective serotonin reuptake inhibitors and other antidepressants have been used in some patients.

Another common treatment of neuropathic pain includes antiseizure medications. In severe cases of painful neuropathy which don't respond to first-line agents, medications typically used to treat heart arrhythmias may be of some benefit; however, these can lead to significant side effects and must be monitored closely. Medications applied directly to the skin can provide modest to pronounced benefit for some patients. The forms commonly used include lidocaine (in patch or gel form) or capsaicin. Multiple arguments have been made both promoting and vilifying the use of narcotic agents to treat chronic neuropathic pain. No specific recommendations regarding the use of narcotics will be made at this time.

Curing neuropathic pain is dependent on the underlying cause. If the cause is reversible, then the peripheral nerves may regenerate and the pain will abate; however, this reduction in pain may take many months to years.

**Other kinds of treatment include:**

- Physical therapy
- Working with counselor
- Relaxation therapy
- Massage therapy
- Acupuncture

Unfortunately, neuropathic pain often responds poorly to standard pain treatments and occasionally may get worse instead of better over time. For some people, it can lead to serious disability. A multidisciplinary approach that combines therapies, however, can be a very effective way to provide relief from neuropathic pain.

## Reference

<http://www.webmd.com/pain-management/guide/neuropathic-pain>

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