



# GLOBAL YEAR AGAINST NEUROPATHIC PAIN

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## Epidemiology of Neuropathic Pain: How Common is Neuropathic Pain, and What Is Its Impact?

### Neuropathic Pain

Neuropathic pain (see the fact sheet on “What Is Neuropathic Pain?”) can result from nerve injury or disease affecting the peripheral or central nervous system.

### Prevalence and Incidence

- General population studies, using validated screening instruments, have found that 7–8% of adults currently have chronic pain with neuropathic characteristics.
- The incidence (new cases) of neuropathic pain was found in a Dutch study to be around 8 cases per 1,000 person-years.
- A study in Germany found that 37% of people attending primary care clinics with chronic low back have predominantly neuropathic pain. This figure was equivalent to 14% of female and 11% of male Germans.
- In the United Kingdom, 26% of people with diabetes were found to have peripheral neuropathic pain. Worldwide, this figure translates to some 47 million individuals, which will increase as the prevalence of diabetes grows (from 2.8% in 2000 to an estimated 4.4% in 2030).
- Of the 33 million people infected with HIV across the world, around 35% have neuropathic pain, which does not respond well to standard treatments.
- A Norwegian study found that 40% of people have persistent pain after surgery, of which a quarter of cases have neuropathic characteristics. Neuropathic postsurgical pain is more likely to be severe and persistent than non-neuropathic postsurgical pain.
- Approximately 20% (18.7–21.4%) of people with cancer have cancer-related neuropathic pain, as a result of either the disease or its treatment.
- The lifetime incidence of herpes zoster (shingles) is around 25%. Studies in the United States and the Netherlands found that 2.6% and 10%, respectively, will develop chronic postherpetic neuralgia.

### Impact

- Pain with neuropathic characteristics is generally more severe, and is associated with worse health, in every measured dimension compared to non-neuropathic pain.
- Health-related quality of life for individuals with neuropathic pain is rated as low as for those with clinical depression, coronary artery disease, recent myocardial infarction, or poorly controlled diabetes. Quality of life is more dependent on the severity of the neuropathic pain than on its underlying cause.
- Seventeen percent of those who had pain with neuropathic characteristics had health-related quality of life scores equivalent to “worse than death” in a U.K. study.

### Prevention

- Reducing the incidence, prevalence, and impact of neuropathic pain is possible by attending to general risk factors, specific risk factors, and treatments with known effectiveness.
- General risk factors for neuropathic pain are similar to those for chronic pain generally and include older age, female gender, relative deprivation, physical inactivity, and a manual occupation, with growing evidence of genetic factors. Most of these factors are not amenable to modification, but they indicate the level of overall risk.
- Specific risk factors include those that increase the risk of underlying conditions, as well as those that increase the risk of neuropathic pain when these conditions are present.
- For example, the incidence of diabetes could be reduced through attention to improved diet and exercise. If diabetes is present, attention to good glycemic control reduces the onset of painful neuropathy.
- Similarly, reducing the need for surgery (for example by improving overall health and fitness) and avoiding unnecessary surgery will reduce the incidence of postsurgical neuropathic pain. Younger age at surgery is associated with a higher incidence of such pain, and research is underway to examine the effects of different surgical techniques, perioperative pain relief, and attention to psychological factors.



- The recent introduction of herpes zoster vaccines in some countries will help reduce the incidence of herpes zoster and its sequel, postherpetic neuralgia.
- Improvements in antiretroviral drugs for HIV may result in a lower incidence of treatment-related neuropathic pain, but also in longer survival and therefore overall higher prevalence of HIV-related neuropathic pain. It is therefore vital that efforts to prevent HIV continue.
- Awareness of neuropathic pain (by patients and professionals) and access to effective prevention and treatments are the most important factors in preventing or reducing the incidence, prevalence, and impact of neuropathic pain.

### References

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