

An Overview of Neuropathic Pain and Its Impact

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What is neuropathic pain?

The International Association for the Study of Pain (IASP) defines neuropathic pain as “pain caused by a lesion or disease of the somatosensory system”^[9]. This means pain caused by injury to a nerve or by a disease affecting the nervous system. Nerves are the structures that carry electrical and chemical signals around the body. The nervous system is the network of nerves that control and coordinate our bodily functions. An injury or disease affecting our nerves can change their structure and/or how they work in ways that can cause neuropathic pain.

Sometimes, scientists and health care professionals separate neuropathic pain into two types, ‘central’ and ‘peripheral’ neuropathic pain, depending on which part of the nervous system is affected^[15].

Central neuropathic pain refers to pain felt because of an injury or disease that affects the central nervous system. This includes the brain and spinal cord. Central neuropathic pain can sometimes happen after a stroke as a result of a bleed or blood clot in the brain. It can also result from damage to the spinal cord. People who live with multiple sclerosis and Parkinson’s disease may also experience central neuropathic pain.

Peripheral neuropathic pain refers to pain caused by an injury to or a disease affecting the peripheral nervous system. The peripheral nervous system includes the networks of nerves that extend throughout the body beyond the brain and spinal cord, including our arms, legs, face, chest, and abdomen. Examples of conditions causing peripheral neuropathic pain include sciatica because of nerve compression, diabetic neuropathy, which is a complication of diabetes, and postherpetic neuralgia, which is pain experienced after shingles. Cancer treatments, especially chemotherapy, can also cause neuropathic pain.

What are the symptoms?

Neuropathic pain is complex and unpredictable, both in the science of how it is caused and in how people experience it. There are a variety of ways in which nerve injuries and diseases can lead to neuropathic pain^[4].

People may experience neuropathic pain in many different ways. Some people experience neuropathic pain as a constant or intermittent burning or shooting type of pain, whereas for others it can feel like electric shocks. It varies a lot in how intensely it is felt, how it behaves, and how it affects people’s day-to-day lives and emotional well-being^[5].

How common is neuropathic pain?

Among adults in the ‘general population,’ the prevalence of neuropathic pain is around 7–10%^[1,16]. This suggests that as many as one in every ten adults could be experiencing neuropathic pain. We do not know how common neuropathic pain is in children^[6].

Not everyone who experiences an injury to a nerve or disease of the nervous system will develop neuropathic pain. We do not know for sure why this happens to some people and not others, but being older, female, having poorer general health, or having a genetic susceptibility may increase the likelihood of someone developing neuropathic pain^[17]. In some people who develop neuropathic pain, it gets better over time or with treatment, but for others, it can persist^[2].

What is the impact and burden of neuropathic pain?

Neuropathic pain impacts both individuals and societies.

People living with neuropathic pain can experience varying levels of pain-related suffering, disability, sleep disturbance, as well as

emotional distress, such as anxiety and depression [7]. It can also negatively affect people's ability to work, do things around the home, and take part in social activities [8,10,14]. For some people, the impact of neuropathic pain can be relatively mild; for others, it can be severe and life-changing.

People living with neuropathic pain have described many challenges. These include coping with its psychological and social impact, making decisions about treatment, finding reliable information, and learning how to manage symptoms in everyday life [13,16].

Information about the impact and burden of neuropathic pain on societies is limited. We do know that people with neuropathic pain experience worse physical, mental, and social health than the general population and people without neuropathic pain [1,3]. We also know that the financial costs can be substantial, both to individuals and to national economies, when sufferers are unable to work and need treatment [10,12].

Next steps

The IASP Global Year 2026 on neuropathic pain will shine a light on our scientific understanding of neuropathic pain. Future fact sheets will provide summaries of key topics related to neuropathic pain, such as:

- Causes and types of neuropathic pain
- Challenges of understanding and treating neuropathic pain across the globe
- How our thoughts, feelings, lifestyles, communities, and cultures can influence how people experience neuropathic pain
- What it's like to live with neuropathic pain
- Scientific advances in recognizing, understanding, and treating neuropathic pain

Conclusion

This fact sheet explains what neuropathic pain is and the impact it can have on people and society. While gaps in our knowledge remain [11], researchers, clinicians, and people with lived experience continue to work together to deepen this understanding, develop more effective treatments, and improve the lives of those living with neuropathic pain.

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