

Chronic Pain: backgrounder

What is chronic pain?

Chronic pain is defined as continuous, long-term pain that has lasted for more than six months, or that prolongs after the time that healing would have been thought to have occurred.¹ Chronic pain can also occur when no obvious cause for it can be found; this is thought to be due to changes in the body's nervous system². Chronic pain does not appear to have a useful function; it can persist for months or even years and is very difficult to treat.³

Chronic pain can be divided into two classes: nociceptive and neuropathic.⁴ All people will experience nociceptive pain at some point and it includes such things like cutting yourself, a burn or an injury. Conversely, neuropathic pain is caused by a problem with nerve pathways, which means the way that the nerve sends pain messages to the brain is affected.⁵

- Neuropathic pain is often described as numbness, tingling or like an electric shock.⁴
- It is a debilitating condition and although the exact number of people suffering from this (the so-called prevalence) is unknown, some European based studies have estimated it at anywhere between seven to 37 per cent.⁵
- It is often under-diagnosed and under-treated.⁵

Neuropathic Pain

Described as:

- Burning
- Opioidresistance

The result of:

- Damage of nervous system
- Pathologic changes

Examples of conditions:

- Radiculopathies
- Neuralgias
- Failed back syndrome
- Complex regional pain syndrome
- Arachnoiditis

Nociceptive Pain

Described as:

- Initially sharp then dull
- Commonly responsive to opioids and nonsteroidal anti-inflammatory drugs (NSAIDs)

The result of:

- Mechanical, thermal or chemical excitation or trauma
- Somatic / visceral causes

Examples of conditions:

- Bone pain
- Cancer pain
- Pain elicited by tissue in jury

CHRONIC PAIN CAN BE DIVIDED INTO TWO CLASSES.

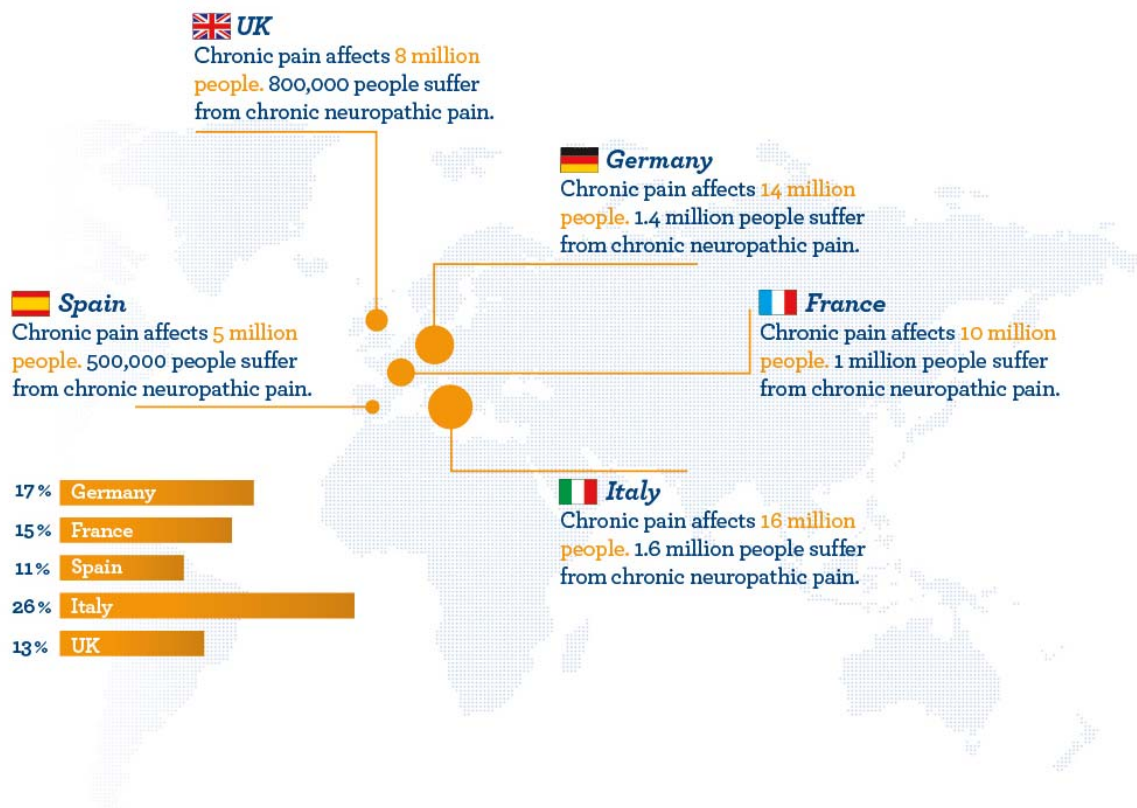
Diagnosis of chronic pain

Electrophysiological studies can be performed to measure how well the nerves and muscles are functioning, and x-rays, MRI and CT scans can be used to pinpoint problems in the bones or deep tissues. However, these tests may fail to find an anatomical reason for chronic pain.³ To date there seems to be no diagnostic tests that can either measure the intensity of pain or pinpoint its location. Although patients can rate their pain subjectively on a pain rating scale, these scales would be of limited value diagnostically because pain tolerance varies greatly from person to person. As a result, diagnosis is difficult and relies on the patient's description.³

Who is affected by chronic pain

Chronic pain affects one in five adults in Europe,⁶ equating to up to 95 million of the adult population (15-64 years) that are suffering from this debilitating condition,⁷ a number greater than those suffering with diabetes (60 million).⁸

The prevalence varies throughout Europe.^{9,7,10}



THE MAP SHOWS THE PREVALENCE OF CHRONIC PAIN THROUGHOUT EUROPE.

Women are more likely to be affected by chronic pain than men. In Europe, 56 per cent of chronic pain sufferers are reported to be women.⁶ Although chronic pain is more common in older adults, it should not be considered a normal part of aging. Older adults are more likely to have long-term medical conditions linked to ongoing pain, such as diabetes or arthritis.

Causes of chronic pain

Chronic pain can occur anywhere in the body. It may follow an illness or an injury that appears to have healed or may develop for no apparent reason. Common types of chronic pain include back pain, headaches, arthritis, cancer pain and neuropathic pain. Chronic pain is thought to be one of the most common conditions for which people seek medical attention.⁴

In Europe, backache is the most commonly reported location for chronic pain.⁶ The causes of back pain can be very complex and it is difficult to obtain an accurate diagnosis.¹¹ The pain may be a result of earlier injury or trauma or may be caused by arthritis or spinal disc abnormalities. Some patients have Failed Back Surgery Syndrome (FBSS), which is persistent low back and leg pain in those who have not achieved a successful outcome with back or spine surgery. However, in many cases the cause of the pain cannot be determined.



IN EUROPE, BACKACHE IS THE MOST COMMONLY REPORTED LOCATION FOR CHRONIC PAIN. SOURCE: GETTY IMAGES

Neuropathic pain is one of the most severe and poorly understood types of chronic pain. It is often under-diagnosed and under-treated.⁵ It is caused by damage to the nervous system and often occurs in association with diseases such as diabetes, cancer, shingles or HIV. It can also occur after a spinal injury or limb amputation. Neuropathic pain can also manifest as a distinct

syndrome such as complex regional pain syndrome, which affects one of the arms, legs, hands, or feet and often spreads to affect the entire arm or leg.

Chronic pain can be caused by abnormal processing of both pain and normal sensations in the nervous system. As a result, affected individuals can experience allodynia, which is pain evoked by a nonpainful touch, and hyperalgesia, which is increased pain evoked by a painful stimulus. Patients describe their pain as burning, electric, tingling, shooting or stabbing.

Chronic pain heavily affects patients

Despite its prevalence, chronic pain remains one of the most poorly understood and undertreated conditions in primary care. In Europe:

- More than 50 per cent of chronic pain sufferers wait at least two years before their pain is adequately managed.¹²
- Approximately one third of people with chronic pain are not being treated, while only two per cent are being treated by a pain management specialist.⁶
- On average, 38 per cent of Europeans with chronic pain report that their pain is not adequately managed with conventional medical management.¹²
- The patients in the survey in *Pain in Europe* had lived with chronic pain for an average of seven years,⁹ and almost one fifth had suffered for up to 20 years.⁶
- One third of patients reported being in constant pain. Without relief or the hope of relief, many patients lose the ability to eat, sleep, work and function normally.⁶

Chronic pain may have a serious impact on quality of life, including impaired physical and social functioning and reduced energy and vitality.¹³

- Activities of daily living may become increasingly difficult, particularly when the pain is severe.
- Many patients develop depression and anxiety or have trouble sleeping. Feelings of isolation and belief that the pain has become the focus of the patient's life are common.⁹
- When treatment fails, chronic pain patients may feel that committing suicide is a solution. The risk of suicide in chronic pain patients is at least doubled.¹⁴
- Many people are unable to continue working because of their pain, in fact one in five people living with pain have lost their job as a result of it⁹ and 16 per cent are forced to change their job responsibilities.⁹

- Furthermore, people living with chronic pain who are able to continue in employment, miss on average 14 days per year because of their pain.¹²

Treatments available for chronic pain

Chronic pain is one of the most common conditions for which people seek medical attention.⁴ The goal of treatment should be to improve function and enable individuals to participate in

daily activities and return to work without pain. However, it is very difficult to relieve or cure chronic pain and many patients are still in pain despite drug treatment.¹⁵

- Nearly one third of patients claim they have been poorly informed about new options to better manage their pain.⁹
- Patients who have had chronic neuropathic pain for a number of years will often be treated with opioids; and as many as 80 per cent will experience adverse events such as constipation, nausea, vomiting, tiredness, dizziness, itchiness and headaches.¹⁶
- One in five patients who use opioids in the long-term report having concerns about not being able to control their medication.¹⁷
- With better management of chronic pain, overall costs to healthcare systems and society would be reduced long-term.¹²

Common treatments for chronic pain include over-the-counter pain relievers such as acetylsalicylic acid, acetaminophen and ibuprofen, which are used for mild-to-moderate pain. Narcotics, such as codeine and morphine, are used only for severe pain. They may cause serious side effects and there is a risk that patients will develop tolerance or chemical dependency.¹⁸ Other drugs such as anaesthetic nerve blocks, muscle relaxants, antidepressants, anticonvulsants (drugs used to treat seizures) and corticosteroids may be effective against certain types of pain.



COMMON STEPS FOR TREATING CHRONIC PAIN¹⁹

Spinal Cord Stimulation (SCS) Therapy

Spinal cord stimulation (SCS) is an option for patients with chronic pain who have not been relieved using drug or surgical treatment approaches. SCS was first used in 1967 and is a reversible method of managing chronic pain that has been given to over 350,000 patients worldwide.²⁰ The technique involves implanting an electrode that stimulates nerve fibres in the spinal cord. This action creates a tingling sensation called paraesthesia that masks the pain.



THE ILLUSTRATION SHOWS AN EXAMPLE OF PLACEMENT OF IPG AND HOW SPINAL CORD STIMULATION WORKS.

The frequency and duration of the stimulation is controlled by the patient with a remote device. SCS can be used to treat patients with pain in more than one area, and is particularly beneficial for patients with back pain or neuropathic pain, both of which are particularly difficult to treat.²¹

SCS therapy can be provided through rechargeable devices. The world's first rechargeable spinal cord stimulator, the Precision™ Plus SCS System became available in 2005 and may last up to 25 years depending on stimulation settings and conditions.

When compared to non-rechargeable systems, rechargeable systems may have greater capability to provide clinical benefits, including extended therapeutic longevity and avoiding frequent surgeries and the complications that may arise from such surgeries¹.

Given the huge numbers of people affected by pain, there is a need to make pain treatment a priority, increasing awareness and uptake of more appropriate management strategies, to help to improve the lives of people living with chronic pain in Europe.

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