



CHRONIC PAIN

What is chronic pain?

Chronic pain is the ongoing experience of persistent pain. It usually follows an injury or illness, but persists long after the initial issue has resolved. Sometimes chronic pain can occur even in the absence of an injury or illness. Because of its enduring nature, chronic pain is considered to be a condition in its own right. It can be debilitating.

Chronic pain results when changes to the nervous system mean that the nerves keep firing, sending pain signals to the brain. Sometimes the body becomes highly sensitised and even very slight stimuli can provoke a strong pain response.

Pain is a complex interplay of both physical and mental processes. Everyone experiences pain differently, depending on their genetics, culture, experience of trauma, stress and previous pain experiences.

Chronic pain is invisible. Sufferers can feel stigmatised and isolated.

1.5 billion people around the world live with chronic pain.



1 in 5 Australians suffering from chronic pain also have depression or other mood disorders.



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Treatments currently available to sufferers of chronic pain often rely on multidisciplinary pain management methods. First line approaches include medication, psychological and physical therapy.

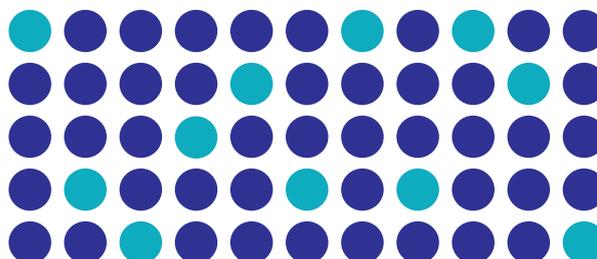
The drugs available to treat chronic pain are the standard pain relief drugs— aspirin, ibuprofen, or opioids. These can vary in efficacy from patient to patient and opioids have a number of negative side effects.

Brain imaging advances have helped scientists map the pain centre regions of the brain. This knowledge has been combined with effective cognitive therapy approaches to help patients manage their pain.

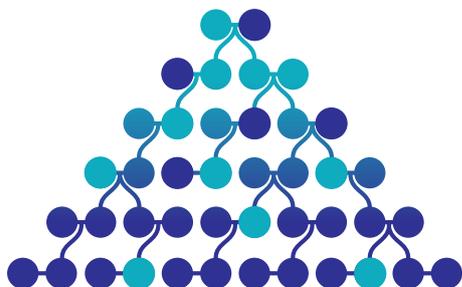
Other advances include brain stimulation neurotechnology approaches. Currently undergoing trials is the Evoke Spinal Cord Stimulator, developed by Saluda Medical. This is the world's first closed-loop (meaning the entire device is housed within the patient's body, not needing input from an external computer) spinal cord stimulator. This is a precision medical device that records and monitors nerve responses to stimulation and automatically provides a therapeutic dose of brain stimulation in real time. Early clinical trials have demonstrated the potential of this revolutionary new technology to offer a drug-free solution to millions of people worldwide who suffer from debilitating chronic pain.

This sort of innovative approach to brain research and neurotechnology development will be a priority for the Australian Brain Initiative. Both basic research and enhanced collaboration between research and industry are required to progress the fundamental understanding of the brain and the neurotechnology applications that will improve the lives of those living with chronic pain.

1 in 5 Australians live with chronic pain.



As our population ages, it's expected that more and more people will be living with chronic pain.



1 in 3 Australians over the age of 65 live with chronic pain.

