

# Understanding and dealing with pain

PAIN can arise from different origins. Specifically, pain can be divided into nociceptive, inflammatory and neuropathic.

Nociceptive pain occurs after tissue damage or injury, without damage or impairment in nervous system function. Examples include burns, sprains, bone fractures and bruises.

Inflammatory pain is associated with the immune system responding to tissue injury, such as in an infection or from joint inflammation in people with rheumatoid arthritis. Once again, the nervous system is not impaired.

Neuropathic pain arises as a direct consequence of nerve damage or disease affecting the nerve fibres. Examples include nerve injuries, post-herpetic neuralgia and toxic and metabolic peripheral neuropathies.

Characteristics of neuropathic pain include burning, stabbing, tingling, pins and needles as well as spontaneous (pain arising without stimulus) and abnormal responses to non-painful or painful stimuli.

Pain is a complex disease and in many cases, patients suffer from painful conditions caused by multiple, co-occurring mechanisms. This mixture of pain types has been defined as the "mixed pain concept".

Mixed pain is derived from both nociceptive/inflammatory and neuropathic origins.

In many common conditions, such as low back pain and osteoarthritis, pain can have both nociceptive and

neuropathic components.

Often, the neuropathic component may go unrecognised, particularly with pain such as osteoarthritis with a strong history of being associated with purely nociceptive/inflammatory mechanisms.

## Management of mixed pain

The nature of mixed pain requires a combination treatment which addresses both the nociceptive and neuropathic pain components.

Neuropathic component of mixed pain could be adequately managed with medicine indicated to relieve neuropathic pain and medicine such as non-steroidal anti-inflammatory drugs (NSAIDs) help to relieve nociceptive or inflammatory pain in mixed pain.

Alternative treatment options, such as neurotropic B vitamins (B1, B6 and B12) are available to target the underlying cause of the neuropathic pain, which is nerve damage.

Each of these B vitamins has been found to have unique essential roles, which contributes to nerve function.

Vitamin B1 is involved in energy metabolism, helps in maintaining the myelin sheath covering the axon of nerves and in the synthesis of key signalling molecules in the nervous system known as neurotransmitters.

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