



## OTC pain management: The importance of understanding pain

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### Pain is a “personal experience”

Pain is one of the most common conditions for which patients seek medical advice. Each person experiences pain in a highly individual manner. How pain is tolerated is as unique as the individual. For example, pain from bruises or even from small cuts may have little or no effect on some people, while others may not be able to tolerate it. Factors such as personality, mood, thoughts, emotions and circumstances play an important role in how a person perceives pain as well as a person's ability to tolerate pain.

### Acute versus chronic pain

Pain of short or limited duration is referred to as acute pain and relates to an identifiable cause such as trauma, inflammation or surgery.

Pain can also progress from acute pain to become chronic. When pain persists or lasts for more than three to six months despite treatment it is considered to be chronic pain.

### Types of pain

It is important to realise that there are different types of pain, and each type needs to be treated differently. Some patients may experience more than one type of pain. Selecting an incorrect analgesic may result in the patient returning after a few days complaining that the medication has not worked.

### Nociceptive pain

Nociceptive pain is the most common type of pain. This type of pain results from stimulation/activation of pain receptors also known

as nociceptors. Nociceptive pain refers to pain caused by actual or threatened damage to bodily tissue (non-neural tissue).

Depending on the origin, nociceptive pain can be classified as being somatic or visceral:

- Somatic pain arises from the activation of pain receptors located in areas such as the skin, bone, joints, tendons and muscle. Examples include soft tissue pain, fractures, sprains, burn pain, postoperative pain and arthritic pain.
- Visceral pain arises from the activation of receptors located in most viscera and surrounding connective tissue (in the abdomen, pelvis, intestines, or chest), for example, menstrual pain.

In most cases, nociceptive pain can be treated with paracetamol, nonsteroidal anti-inflammatory drugs (NSAIDs) and opioids such as codeine.

### Central sensitisation

Centralised sensitisation is characterised by hyperalgesia (when a person experiences a heightened pain response or excessive pain from a normal pain stimulus) and allodynia (pain due to a stimulus that does not normally cause pain). How and why central sensitisation develops in some people is not well understood.

Central sensitisation pain is associated with conditions such as:

- Fibromyalgia
- Irritable bowel syndrome
- Interstitial cystitis (painful bladder syndrome)
- Temporomandibular joint pain (pain within facial or jaw muscles in or around the ear)

Treatment for centralised pain is multifaceted and may include psychological interventions as well as the use of prescription-only medicines such as anticonvulsants, antidepressants and tramadol.

### Neuropathic pain

Neuropathic pain occurs as a result of damage to or problems with nerves, spinal cord or brain, for example:

- Nerve damage can result in postherpetic neuralgia (pain after shingles)
- Compression on a nerve in the wrist can result in carpal tunnel syndrome

Neuropathic pain is typically described as burning, tingling, shooting or electric shock or pins and needles sensation in the affected area. In some cases, the skin may be sensitive to heat, cold or touch. Patients may also experience allodynia and hyperalgesia.

Neuropathic pain is treated very differently from nociceptive pain. Paracetamol and NSAIDs do not play a role in the management of neuropathic pain. Opioids are also not considered first-line treatment options for neuropathic pain. The treatment of neuropathic pain often involves the use of antidepressants, antiepileptics and topical agents (such as lidocaine patches or capsaicin patches).

## Over-the-counter management of mild to moderate nociceptive pain

### Paracetamol

Paracetamol is used to reduce fever and to relieve mild to moderate pain. It should be noted that paracetamol does not have anti-inflammatory properties.

Paracetamol is relatively safe and well-tolerated at recommended doses. However, liver and/or kidney damage may occur following an overdose or when excessive doses are used for prolonged periods. It is important to be aware that accidental overdose can occur when adding a paracetamol-containing combination product if the person is already receiving paracetamol.

### Nonsteroidal anti-inflammatory drugs

Aspirin and other NSAIDs (such as ibuprofen, naproxen and diclofenac) relieve fever, mild to moderate pain and inflammation. NSAIDs are usually preferred for musculoskeletal pain and are effective for painful inflammatory conditions such as dysmenorrhoea (period pain). Short-term use of NSAIDs is usually well-tolerated. To reduce gastrointestinal irritation, these medications should be taken with or after food. Check the manufacturer's product information for specific dosing recommendations.

Topical use of NSAIDs may minimise the risk of systemic side effects, for example, topical NSAIDs may cause fewer gastrointestinal side effects.

The anti-inflammatory effect of aspirin is only provided by higher doses which may not be tolerated by some patients. Aspirin should not be used in children under 16 years of age, because it is associated with Reye's syndrome (which includes swelling in the brain and liver).

### Codeine

Codeine is a weak opioid analgesic (relieves mild to moderate pain) but does not have anti-inflammatory or antipyretic properties. In the acute pain setting, codeine is most effective when used in combination with either paracetamol and/or a NSAID. Codeine-containing analgesics may be considered for those who have not responded to paracetamol or NSAIDs alone.

Codeine is associated with a greater side-effect burden. Owing to the risk of dependency, codeine-containing analgesics should not be used for extended periods of time.

## Selecting the most suitable analgesic

Before recommending analgesics, it is important to ask what type of pain the patient is experiencing and whether the person:

- Is allergic to any medication.
- Is using any other medication.
- Has any underlying current or chronic medical condition (Table I).

### In a nutshell

- To ensure successful pain management, it is vital to determine the type of pain before recommending a treatment.
- OTC products such as paracetamol, aspirin, NSAIDs are generally considered to be safe when used as a short course of therapy for minor and moderate acute pain.
- Paracetamol is the preferred/safer option for elderly patients (aged  $\geq 65$  years).
- The lowest possible dose of NSAIDs should be used, for the shortest possible period.
- In most cases, 24 hours of therapy would be adequate for the treatment of acute pain, and treatment is seldom necessary for  $\geq 5$  days.
- Avoid accidental duplication when recommending OTC pain medication for people already using OTC or prescription analgesics or NSAIDs. This is especially important when combination products are recommended. It is important to ask if

**Table I:** OTC analgesics: Which OTC analgesic to use and which products to avoid (or use with caution) in people with underlying medical conditions

Medical condition	Products to avoid or to use with caution	Preferred/safer option
Gastrointestinal problems (dyspepsia, gastrointestinal bleeding, peptic ulcer or a history of peptic ulcer)	• Aspirin and NSAIDs may cause gastrointestinal irritation and damage to the stomach	Paracetamol
Cardiovascular disease	• NSAIDs may increase the risk of heart attack or stroke • The risk may increase the longer a person is taking NSAIDs; the risk also appears to be higher with higher doses	Paracetamol Codeine
Hypertension	• NSAIDs may increase blood pressure and may reduce the effect of certain medication used for treating high blood pressure	
Asthma	• Aspirin, NSAIDs and codeine may induce or worsen asthma or precipitate bronchospasm in some patients	Paracetamol
Bleeding tendencies (including those using blood thinning medication)	• NSAIDs and aspirin may increase risk of bleeding	Paracetamol Codeine

the patient is using other medication and to read the product ingredients labels before recommending OTC analgesics.

- Analgesic could potentially mask the progression of many other diseases/conditions. Consequently, patients should be advised to consult with their doctor should their pain not resolve within an appropriate time.
- Counsel the patient about:
  - Common side effects
  - Special precautions
  - Potential drug interactions

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