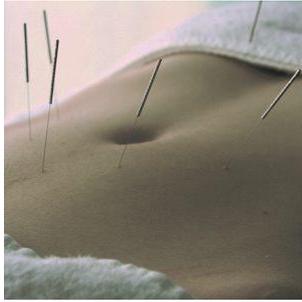


# Acupuncture and Pain Relief



Pain is the most common reason for seeking medical attention. For some people pain may be temporary and easy to tolerate, but for many others it can be severe or unrelenting or both. If you have a body, then you will be familiar with the experience of pain.

The good news is that, although pain is inevitable, suffering is optional! Numerous high-level studies have demonstrated that acupuncture is an effective method for relief of pain associated with a range of disorders.

## What is Pain?

Pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage ... this is the definition provided by the The International Association for the Study of Pain (IASP). As you can infer from this definition, the experience of pain is more than just a physical sensation; it includes complex psycho-emotional and cultural factors. Various factors can significantly modulate the intensity of pain including such things as access to social support, meditation or hypnotic suggestion or simply distraction.

PainAustralia is the peak national body working to improve the quality of life of people living with pain and to minimise the social and economic burden of pain. They define three main categories of pain: acute, chronic and cancer pain.

- **Acute pain** lasts for a short time and occurs following trauma (including surgery) or some other internal condition. It may arise as a single event or recur episodically.
- **Chronic pain** is unrelenting and by its nature is resistant to resolution. In the case of trauma it lasts well beyond normal expected healing time. Chronic pain can be a symptom of other disease, it can also arise without any clear causative factor. In such cases chronic pain is characterised by central nervous system changes.
- **Cancer pain** can occur in patients with early stage and advanced disease, and in cancer survivors as a severe and debilitating side-effect of treatment.

## Who Gets Pain?

Pain affects everyone at some time or another. One in five Australians are subject to chronic pain and this comes with a significant cost burden, not only in economic terms but in quality of life. It is often accompanied by other factors such as sleep disruption, anxiety and depression.

Chronic pain is more common for older people. One in three people over 65 years of age are subject to chronic pain. It is also more common among women than men. The most frequent conditions by far are low-back pain or osteoarthritis. Other common diagnoses include rheumatoid arthritis, migraine, menstrual disorders, carpal tunnel syndrome and fibromyalgia.

## What Causes Pain?

Pain is a signal from your nervous system that something is wrong. It most commonly results from an underlying disease or health condition or from an injury to the tissues or joints, including surgical trauma. It can also arise from inflammation or from a nervous system problem (neuropathic pain) or from an unknown cause.

## The Problem with Pain Relief Medication

Pharmaceutical drugs can provide effective relief of pain in 20% to 70% of cases. Unfortunately, this often comes at a cost with many of the standard medications associated with serious side effect.

The use of opioids is a particularly serious problem; a 2015 study states that 33,000 people in the United States dies from opioid related deaths, nearly half whom were prescribed medications. A study from the NIH's Intramural Research Program and McGill University showed that pain-induced changes in the brain's opioid receptor system may explain the limited effectiveness of opioid therapy in chronic pain and the depression that often accompanies it. Previous research in people with chronic pain has demonstrated reduced availability of opioid receptors in the brain which may explain the limited ability of opioids to relieve chronic pain.

In January 2018 the Therapeutic Goods Authority, TGA restricted access to products containing codeine due to the opioid crisis that is occurring internationally. This meant even low dose codeine derived medication is now restricted to prescription only.

The United States Food and Drug Authority, FDA, has warned that non-steroidal anti-inflammatories (NSAIDS) distinctly increase the risk of heart attack and stroke. Other common side effects of NSAIDS are:

- Stomach pain
- Heartburn
- Stomach ulcers
- Increased bleeding
- Headaches
- Dizziness and tinnitus
- Allergic reactions
- Hypertension
- Liver and kidney problems

The Australian Therapeutic Goods Administration (TGA) states long term ibuprofen use also involves significantly increased risks including:

- Serious internal bleeding
- Kidney failure
- Heart attack

Long term use of paracetamol (acetaminophen) may have significant negative impact on liver function and a potential for multi-organ failure.

A further perspective on the collective detriment of pain and its standard treatment is the cost: chronic pain is one of Australia's third highest economics costs and was estimated in 2007 at more than \$34 billion. This includes losses in productivity, health costs and loss of income.

Even when pharmaceutical drugs provide effective pain relief, it can often be regarded as a management system at best, rather than a cure of the underlying problem. Obviously, there are many problems associated with the pharmaceutical drug model for pain treatment. Fortunately, there is a realistic alternative.

## **Additional Methods That Contribute To Pain Relief**

- **Diet**  
Regular daily consumption of alcohol and refined sugars both contribute to high systemic inflammatory levels. A diet high in fresh fruits, vegetables and protein foods with relatively low proportions of carbohydrates is ideal for reducing inflammation, ensuring good cellular nutrition and maintaining a correct acid/alkaline balance in the intracellular fluids.
- **Exercise**  
All bodies require regular exercise for optimal health. Exercise produces endorphins and promotes healthy circulation of blood and lymph fluids.
- **Meditation / Mind Training**  
Relaxation, meditation, positive thinking and a wide variety of mind-training techniques have all been used successfully to relieve pain.
- **Acupuncture**  
Acupuncture has been used for centuries to relieve pain and rigorous studies all over the world are continuing to confirm its efficacy. The National Institute of Health (NIH) has said “acupuncture appears to be a reasonable option for people with chronic pain to consider.”

## **Chinese Medicine’s View of Pain**

Whenever there is tissue injury, the local blood circulation is disrupted. Blood is essential to supply local tissues with anti-inflammatory factors, proteins for rebuilding damaged tissues, oxygen to cleanse and a wide variety of immune cells to fight against invasion of bacteria and other pathogenic factors. In the language of Chinese Medicine, pain is a stagnation of Blood. Pain is a signal sent to the central nervous system that communicates the information about damage to local tissues.

## **How Acupuncture Helps with Pain Relief**

Whenever an acupuncture needle is inserted, a number of different things start to happen. The body interprets the presence of an acupuncture needle as a potential threat to its integrity and an immune response is initiated. The primary function of this immune response is to protect the body from pathogenic invasion. This is achieved by

- enhancing the local circulation of blood
- producing endorphines, the body’s own pain relieving factors
- stimulating the parasympathetic nervous system to promote relaxation
- softening tension in the muscle structure

## **Common Pain Conditions Seen in Chinese Medicine Practice**

- Neck, shoulder, elbow and knee pain
- Low back pain and sciatica
- Joint and arthritic pain
- Headaches & migraine
- Menstrual pain

- Digestive pain
- Fibromyalgia
- Plantar fasciitis
- Carpal tunnel and RSI

## The Research on Acupuncture and Pain Relief

Many high-level studies have demonstrated that acupuncture is an effective method for relief of pain associated with various disorders.

- **Migraine**  
A narrative review of high quality randomised controlled trials and two systematic reviews including a Cochrane systematic review update, have confirmed that acupuncture is superior to sham acupuncture and seems to be at least as effective as conventional preventative medication in reducing migraine frequency (1-3).
- **Headache**  
The most recent Cochrane systematic review update confirmed that acupuncture is effective for frequent episodic and chronic tension-type headaches with moderate to low quality evidence (4). A brief review of systematic reviews and meta-analyses described acupuncture as having a 'potentially important role as part of a treatment plan for migraine, tension-type headache, and several different types of chronic headache disorders' (5).
- **Low back pain**  
A review of 32 randomised control trials (7) has shown acupuncture has a positive effect in the treatment of chronic non-specific low back pain in comparison to placebo and improved function. Another review (8) showed acupuncture was found to be superior to NSAIDS in effect when treating acute low back pain.
- **Sciatica**  
A review (9) found acupuncture to be 2<sup>nd</sup> in effectiveness out of 21 interventions for pain intensity related to sciatica. The review showed acupuncture may be superior in effect to drugs and may also increase the effectiveness of drugs when used in conjunction (10, 11).
- **Knee osteoarthritis**  
A systematic review relating to osteoarthritis of the knee showed acupuncture to provide significant pain relief, improved mobility and quality of life (12). Acupuncture was also shown to have a stronger effect than standard care suggesting an effective alternative to pain relief medication for people with knee osteoarthritis. The reviewers concluded that 'current evidence supports the use of acupuncture as an alternative for traditional analgesics in patients with osteoarthritis'.
- **Post-operative pain**  
A systematic review and meta-analysis of 13 RCTs in 2016, found that acupuncture, electroacupuncture (EA) and transcutaneous electrical acupoint stimulation (TEAS) improved pain on day one after surgery and reduced opioid use (13)
- **Neck pain**  
Acupuncture was found to be superior to controlled intervention or inactive treatment neck pain relief (14).
- **Frozen Shoulder**  
At early stage of Shoulder Impingement Syndrome (SIS), exercise combined with therapies such as kinesio taping, specific exercises, and acupuncture can be considered a first choice of intervention (15)

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