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# Approach to low back pain – acupuncture

This article forms part of our allied health series for 2014, which aims to provide information about the management approach of different allied health professionals, using the case example of uncomplicated, mechanical low back pain.

## Keywords

acupuncture; low back pain

## Case

A man aged 42 years, who works as a police officer, presented with severe lower back pain, which he had experienced for 24 hours after spending the previous day helping his brother to move house. He had difficulty ambulating and most movements aggravated the pain. There were no lower limb symptoms and no red flags present on history or examination. He was otherwise well and was not taking any regular medications.

Acupuncture is a Chinese medical treatment involving insertion of thin sterile metal needles into specific areas of the body.<sup>1</sup> Broadly, acupuncture stimulates the release of endogenous opioids and serotonin, activates glutamate and diffuse noxious inhibitory control systems,<sup>2-4</sup> and has local segmental effects.<sup>3</sup> These effects are thought to contribute to pain relief. Evidence suggests that acupuncture may be an effective treatment for chronic pain conditions.<sup>5</sup>

Acupuncture is practised either by Chinese medicine practitioners, who diagnose and treat according to theories of Chinese medicine, or by medical acupuncturists, who are medical practitioners practising 'an adaptation of Chinese acupuncture using current knowledge of anatomy, physiology and pathology, and the principles of evidence-based medicine'.<sup>6</sup> In Australia, Chinese medicine acupuncturists

are required to be registered with the Australian Health Practitioners Regulation Agency (AHPRA) and medical acupuncturists require endorsement by AHPRA.

## Initial assessment

A full history and examination by a medical practitioner is required to exclude serious causes of low back pain (LBP). History should include radicular pain, neurological symptoms, bladder and bowel function, unexplained weight loss, fever, pain unrelieved by rest and history of trauma.<sup>7</sup> Chinese medicine practitioners may ask about energy levels, sleep quality, dizziness, tinnitus or pain in other areas of the body.

Examination should include assessment of range of motion, tenderness and neurological assessment of the lower limb, including a straight leg test. Acupuncturists usually palpate for tender points, which may then be needled. Chinese medicine practitioners assess the colour, coating and shape of the tongue, and character of the radial pulse, which inform the Chinese medicine diagnosis. Imaging is usually not warranted in the case of uncomplicated acute LBP.<sup>7</sup>

## Management

### Immediate

It is essential to educate patients to keep active and reassure them that LBP is usually benign and self-limiting. Non-steroidal anti-inflammatory drugs (NSAIDs) and opioids offer modest analgesia but can cause adverse effects.<sup>8-10</sup> Spine stabilisation exercises, application of heat and physiotherapist-directed home exercise programs may improve pain and function.<sup>7</sup>

Acupuncture may be offered as an adjunct or alternative to these approaches. One systematic review on acupuncture for acute LBP suggested that it is more effective than medications or sham acupuncture for relief of pain but not for

improvement of function. The studies included in the review, however, have methodological limitations.<sup>11</sup>

There is no guidance as to the frequency and number of treatments required. It is generally believed that acute conditions require fewer treatments.<sup>12</sup> In clinical trials of acupuncture for acute LBP, participants were treated for up to 6 weeks.<sup>11</sup> One sham-controlled clinical trial on acupuncture for acute LBP reported a greater improvement in the real acupuncture group after one treatment.<sup>13</sup> Treatments usually last 25–35 minutes and may be combined with electrical stimulation of the needles (electro-acupuncture), heat treatment or transcutaneous electrical nerve stimulation (TENS).

Chinese medicine practitioners typically individualise treatments, choosing relevant acupuncture points according to the Chinese medicine diagnosis reached.

## Short term

Treatment with acupuncture usually continues until pain subsides or pain control is satisfactory. The aims are to relieve pain, improve function and reduce time away from work.<sup>7</sup> If patients are treated by Chinese medicine practitioners, they should have a planned review with their general practitioner after 6 weeks of treatment.

## Medium-to-long term

While acute LBP is usually self-limiting, one-third of patients will not have fully recovered after 6 months and up to two-thirds will have a recurrence of back pain within 2 years.<sup>7</sup> Chronic LBP refers to back pain lasting for more than 3 months.<sup>14</sup>

Patients with chronic LBP should be reassessed by a medical practitioner to determine whether their back pain is associated with radiculopathy, spinal stenosis, any other spinal pathology or a non-spinal cause. Evaluation of yellow flags or psychosocial predictors of long-term disability is also important.<sup>14</sup>

There is some evidence that acupuncture may improve pain and function in patients with chronic LBP as effectively as medications and more so than sham acupuncture; however, the studies had methodological limitations.<sup>15</sup> Again there is no guidance as to the treatment schedule. Treatment protocols in clinical trials on acupuncture for

chronic LBP ranged from 1–20 treatments over a period of 1 day to 12 weeks. Effects of acupuncture may persist for up to 3 months.<sup>15</sup> In clinical practice, patients will usually have a course of treatment and then present again if pain recurs.

## Safety

Acupuncture has the advantage of being a safe treatment when practiced by a trained professional; 90% of patients do not experience any adverse events. Common adverse events include bruising, soreness, tiredness, fainting or drowsiness. Serious adverse events such as pneumothorax are extremely rare.<sup>16,17</sup> There are no absolute contraindications to acupuncture, but relative contraindications include immunocompromised states, increased bleeding tendency and heart valve disease.<sup>12,18</sup>

## Conclusion

Management of LBP includes a comprehensive assessment and review by a medical practitioner. Acupuncture can be considered as an evidence-based therapeutic option. Acupuncture has a favourable safety profile and may be a viable alternative if the use of pharmacological analgesics is undesirable.

## Resources

- Australian Medical Acupuncture College. [www.amac.org.au](http://www.amac.org.au)
- Australian Acupuncture and Chinese Medicine Association. [www.acupuncture.org.au](http://www.acupuncture.org.au)

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