

## The Acupuncture Evidence Project: Plain English Summary

The following is a plain English summary of the findings of the Acupuncture Evidence Project (McDonald J, and Janz S, 2017). The full document (81 pages) is available from the Australian Acupuncture and Chinese Medicine Association Ltd (AACMA) <http://www.acupuncture.org.au>.

### Bottom Line

Our study found evidence for the effectiveness of acupuncture for 117 conditions, with stronger evidence for acupuncture's effectiveness for some conditions than others. Acupuncture is considered safe in the hands of a well-trained practitioner and has been found to be cost effective for some conditions. The quality and quantity of research into acupuncture's effectiveness is increasing.

### Background

Acupuncture originated in China and is now practised throughout the world. Although acupuncture has been practised for thousands of years, evidence of its effectiveness is still controversial. The Australian Acupuncture and Chinese Medicine Association Ltd (AACMA) identified the need for an updated review of the evidence with greater rigour than was possible in the past and commissioned The Acupuncture Evidence Project.

We searched the literature with a focus on systematic reviews and meta analyses (the highest form of evidence available). We sorted the evidence to identify which conditions acupuncture has been found to be most effective for. We also looked for evidence of acupuncture's safety and cost-effectiveness, and we reported how the evidence for acupuncture's effectiveness has changed over an eleven-year time-frame.

### Key results

Of the 122 conditions identified, strong evidence supported the effectiveness of acupuncture for 8 conditions, moderate evidence supported the use of acupuncture for a further 38 conditions, weak positive/unclear evidence supported the use of acupuncture for 71 conditions, and little or no evidence was found for the effectiveness of acupuncture for five conditions (meaning that further research is needed to clarify the effectiveness of acupuncture in these last two categories).

In addition, research showed that acupuncture was cost effective for 10 conditions, and is safe in the hands of a well-trained practitioner. The level of evidence has increased over the 11-year period of this study for 24 conditions. Placebo-controlled clinical trials consistently

*It is no longer possible to say that the effectiveness of acupuncture is because of the placebo effect, or that it is useful only for musculoskeletal pain.*

underestimate the true effect size of acupuncture (which means that acupuncture is more effective than the type of trials used in this review show), yet they have still demonstrated National Health and Medical Research Council (NHMRC) Level I evidence for the effectiveness of acupuncture for 117 conditions.

## Summary of Findings

**Summary of Findings 1:** The following tables summarise the effectiveness of acupuncture for various conditions.

<b>Table 1. Conditions with strong evidence supporting the effectiveness of acupuncture</b>	
Reviews with consistent statistically significant positive effects and where authors have recommended the intervention. The quality of evidence is rated as moderate or high quality.	
<ul style="list-style-type: none"> <li>- Allergic rhinitis (perennial &amp; seasonal)</li> <li>- Chemotherapy-induced nausea and vomiting (with anti-emetics)</li> <li>- Chronic low back pain</li> <li>- Headache (tension-type and chronic)</li> </ul>	<ul style="list-style-type: none"> <li>- Knee osteoarthritis</li> <li>- Migraine prophylaxis</li> <li>- Postoperative nausea &amp; vomiting</li> <li>- Postoperative pain</li> </ul>

<b>Table 2. Conditions with moderate evidence supporting the effectiveness of acupuncture</b>	
Reviews reporting all individual RCTs or pooled effects across RCTs as positive, but the reviewers deeming the evidence insufficient to draw firm conclusions. The quality of evidence is rated as moderate or high quality.	
<ul style="list-style-type: none"> <li>- Acute low back pain</li> <li>- Acute stroke</li> <li>- Ambulatory anaesthesia</li> <li>- Anxiety</li> <li>- Aromatase-inhibitor-induced arthralgia</li> <li>- Asthma in adults</li> <li>- Back or pelvic pain during pregnancy</li> <li>- Cancer pain</li> <li>- Cancer-related fatigue</li> <li>- Constipation</li> <li>- Craniotomy anaesthesia</li> <li>- Depression (with antidepressants)</li> <li>- Dry eye</li> <li>- Hypertension (with medication)</li> <li>- Insomnia</li> <li>- Irritable bowel syndrome</li> <li>- Labour pain</li> <li>- Lateral elbow pain</li> <li>- Menopausal hot flushes</li> </ul>	<ul style="list-style-type: none"> <li>- Modulating sensory perception thresholds</li> <li>- Neck pain</li> <li>- Obesity</li> <li>- Perimenopausal &amp; postmenopausal insomnia</li> <li>- Plantar heel pain</li> <li>- Post-stroke insomnia</li> <li>- Post-stroke shoulder pain</li> <li>- Post-stroke spasticity</li> <li>- Post-traumatic stress disorder</li> <li>- Prostatitis pain/chronic pelvic pain syndrome</li> <li>- Recovery after colorectal cancer resection</li> <li>- Restless leg syndrome</li> <li>- Schizophrenia (with antipsychotics)</li> <li>- Sciatica</li> <li>- Shoulder impingement syndrome (early stage) (with exercise)</li> <li>- Shoulder pain</li> <li>- Smoking cessation (up to 3 months)</li> <li>- Stroke rehabilitation</li> <li>- Temporomandibular pain</li> </ul>

**Summary of Findings 1 (continued):** The following tables summarise the effectiveness of acupuncture for various conditions

**Table 3. Conditions with weak positive/unclear evidence supporting the effectiveness of acupuncture**

Reviews consisted mostly of weak positive evidence or conflicting evidence between reviews or between authors within a review, with reviewers summarising the evidence as inconclusive. Reviews are of low or very low quality; or there is conflicting levels of evidence within or between reviews.

- |   |  |
|---|--|
| - Acupuncture in Emergency Department                 | - Itch   |
| - Acute ankle sprain in adults                        | - Lumbar spinal stenosis                             |
| - Alzheimer's disease                                 | - Melasma  |
| - Angina pectoris                                     | - Meniere's disease/syndrome                         |
| - Assisted conception in ART                          | - Menopausal syndrome                                |
| - Asthma in children                                  | - Multiple sclerosis                                 |
| - Atopic dermatitis                                   | - Mumps in children                                  |
| - Attention Deficit Hyperactivity Disorder (ADHD)     | - Myelosuppression after chemotherapy                |
| - Autism spectrum disorder (ASD)                      | - Oocyte retrieval pain relief                       |
| - Bell's palsy  | - Opiate addiction                                   |
| - Bladder pain syndrome                               | - Opioid detoxification                              |
| - Cancer-related insomnia                             | - Parkinson's disease                                |
| - Cancer-related psychological symptoms               | - Polycystic ovarian syndrome                        |
| - Carpal tunnel syndrome                              | - Poor sperm quality                                 |
| - Chemotherapy-induced peripheral neuropathy          | - Postnatal depression                               |
| - Chronic fatigue syndrome                            | - Postoperative gastroparesis syndrome (PGS)         |
| - Chronic kidney disease                              | - Postoperative ileus                                |
| - Chronic obstructive pulmonary disease (COPD)        | - Post-stroke hiccoughs                              |
| - Chronic urinary retention due to spinal cord injury | - Premenstrual syndrome                              |
| - Chronic urticaria                                   | - Primary ovarian insufficiency                      |
| - Dysmenorrhoea                                       | - Primary Sjogren's syndrome                         |
| - Dyspepsia in diabetic gastroparesis (DGP)           | - Psoriasis vulgaris                                 |
| - Erectile dysfunction                                | - Rheumatoid arthritis Slowing progression of myopia |
| - Exercise performance & post-exercise recovery       | - Spinal cord injury                                 |
| - Fatigue in systemic lupus erythematosus             | - Stress urinary incontinence in adults              |
| - Fibromyalgia  | - Sudden sensorineural hearing loss                  |
| - Functional dyspepsia                                | - Surgery analgesia                                  |
| - Gag reflex in dentistry                             | - Tinnitus   |
| - Glaucoma  | - Traumatic brain injury                             |
| - Heart failure                                       | - Urinary incontinence                               |
| - Hot flushes in breast cancer                        | - Uterine fibroids                                   |
| - Hyperemesis gravidarum                              | - Vascular cognitive impairment without dementia     |
| - Hypoxic ischemic encephalopathy in neonates         | - Vascular dementia                                  |
| - Induction of labour                                 | - Whiplash associated disorder (WAD)                 |
| - Inflammatory bowel disease                          | - Xerostomia in cancer                               |

**Table 4. Conditions with little or no evidence supporting the effectiveness of acupuncture**

Reviews have consistently found little support for acupuncture. The quality of the evidence is consistently low or very low. Further research required.

- |                      |  |
|----------------------|--|
| - Alcohol dependence | - Nausea in pregnancy                    |
| - Cocaine addiction  | - Smoking cessation (more than 6 months) |
| - Epilepsy           |  |

**Summary of Findings 2:** Conditions with evidence of cost-effectiveness.

<b>Table 5. Conditions with evidence of cost effectiveness</b>	
- Allergic Rhinitis	- Low back pain
- Ambulatory Anaesthesia	- Migraine
- Chronic Pain	- Neck Pain (plus usual medical care)
- Depression	- Osteoarthritis
- Dysmenorrhoea	- Post-operative nausea and vomiting
- Headache	

**Summary of Findings 3:** Conditions with evidence of safety.

<b>Table 6. Conditions with evidence of safety</b>	
Condition	Comments
Acupuncture generally prior to this review	Acupuncture can be considered inherently safe in the hands of well-trained practitioners.
Allergic Rhinitis	<b>Safe</b> and cost-effective
Ambulatory Anaesthesia	Acupuncture <b>safe</b> , cost-effective and effective as an adjunctive therapy.
Alzheimers disease	Acupuncture is <b>Safe</b> .
Cancer-related psychological symptoms	Strong evidence for <b>safety</b> .
Depression	Strong evidence for <b>safety</b> . Effective and <b>safe</b> for major depressive disorder.
Low back pain	<b>Safe</b> and well tolerated.
Migraine	Moderate to high quality evidence Cost effective. Promise in <b>safety</b> and effectiveness. Serious adverse events were not reported in any trial.
Osteoarthritis of the Knee	Promise in <b>safety</b> and effectiveness.
Prostatitis pain/chronic pelvic pain syndrome	Acupuncture superior to both sham and to usual care and <b>safe</b> .

**Summary of Findings 4:** Changes in evidence levels over the eleven-year period covered by this review

<b>Table 7. Statistical summary of findings of this review</b>			
Evidence Level	Number of Conditions	Changes in Level of Evidence	Number of Conditions
Strong Evidence of effect	8	Increase to strong evidence	5
Moderate Evidence effect	38	Increase to moderate evidence	18
Unclear/mixed evidence	71	Increase to weak positive/unclear evidence	1
Little of no evidence of effect	5	Decreased evidence level	2
Total conditions with some evidence of effect (any level)	117	_____	_____
Total conditions reviewed	122	Total increases in evidence level since prior reviews	24

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