



CADTH Reference List

# Acupuncture for Chronic Non-Cancer Pain

June 2023

**Authors:** Candice Madakadze, Carolyn Spry

**Contributor:** Weiyi Xie

**Cite As:** *Acupuncture for Chronic Non-Cancer Pain*. (CADTH reference list: summary of abstracts). Ottawa: CADTH; 2023 Jun.

**Disclaimer:** The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up to date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners' own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein do not necessarily reflect the views of Health Canada, Canada's provincial or territorial governments, other CADTH funders, or any third-party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user's own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian *Copyright Act* and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

**About CADTH:** CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

**Funding:** CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

Questions or requests for information about this report can be directed to [requests@cadth.ca](mailto:requests@cadth.ca)

## Key Message

We found 25 systematic reviews about the clinical effectiveness of acupuncture for people with chronic non-cancer pain.

## Research Question

What is the clinical effectiveness of acupuncture for people with chronic non-cancer pain?

## Methods

### Literature Search Methods

An information specialist conducted a literature search on key resources including MEDLINE, the Cochrane Database of Systematic Reviews, the International HTA Database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search approach was customized to retrieve a limited set of results, balancing comprehensiveness with relevancy. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. Search concepts were developed based on the elements of the research questions and selection criteria. The main search concepts were acupuncture and pain. CADTH-developed search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or indirect treatment comparisons. The search was completed on June 9, 2023, and limited to English-language documents published since January 1, 2018. Internet links were provided, where available.

### Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in [Table 1](#). Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications.

**Table 1: Selection Criteria**

Criteria	Description
<b>Population</b>	People with chronic non-cancer pain
<b>Intervention</b>	Acupuncture, including needle and electroacupuncture (as adjunctive or monotherapy)
<b>Comparator</b>	No treatment (e.g., waitlist, sham therapy), usual care (e.g., pharmacotherapy, psychotherapy, exercise, physical therapy)
<b>Outcomes</b>	Clinical benefits (e.g., pain, psychological symptoms, function, quality of life, patient satisfaction) and harms (e.g., adverse events)
<b>Study designs</b>	Health technology assessments and systematic reviews

## Results

Twenty-five systematic reviews were identified regarding the clinical effectiveness of acupuncture for people with chronic non-cancer pain.<sup>1-25</sup> No relevant health technology assessments were identified.

Additional references of potential interest that did not meet the inclusion criteria are provided in [Appendix 1](#).

## Overall Summary of Findings

Twenty-five systematic reviews were identified regarding the clinical effectiveness of acupuncture for people with chronic non-cancer pain.<sup>1-25</sup> Six studies focused on chronic low-back pain,<sup>2,6,12,13,17,24</sup> 3 on chronic prostatitis/chronic pelvic pain syndrome (CP/CPSP),<sup>4,8,21</sup> 3 on osteoarthritis (OA),<sup>5,9,22</sup> 3 on neck pain,<sup>11,12,24</sup> 3 on fibromyalgia,<sup>12,19,24</sup> 2 on trigeminal neuralgia,<sup>1,16</sup> 2 on chronic pelvic pain (CPP),<sup>3,25</sup> 2 on migraines,<sup>14,20</sup> 1 on neuropathic pain,<sup>7</sup> 1 on chronic spinal pain,<sup>10</sup> 1 on rheumatoid arthritis,<sup>18</sup> 1 on symptomatic endometriosis,<sup>23</sup> and 1 study on general chronic pain.<sup>15</sup>

### People With Back and Spinal Pain

Six studies focused on acupuncture for people with chronic low-back pain.<sup>2,6,12,13,17,24</sup> Of these, 4 studies found that acupuncture was more effective at pain relief compared to sham intervention,<sup>2</sup> no treatment,<sup>13</sup> usual care,<sup>12,13,24</sup> or inactive controls.<sup>12,24</sup> One study found acupuncture relieved pain compared to sham intervention in the immediate term.<sup>13</sup> In addition, 2 studies found that acupuncture as an adjunct to standard treatment was effective in treating pain.<sup>6,17</sup> Three studies reported improved function in the acupuncture group compared with usual care<sup>12,13,24</sup> or inactive controls.<sup>12,24</sup> One study found that acupuncture led to better quality of life (QoL) than usual care immediately after treatment and similar QoL as the sham intervention in the short term.<sup>13</sup> One study found that combined therapy and the control intervention led to similar changes in disability.<sup>6</sup> The study by Mu and colleagues<sup>13</sup> found that adverse events occurred at a similar rate among the treatment and control groups. Adverse events reported were pain at the insertion point as well as pain in the leg and shoulder, hematoma, bleeding, bruising, and increased pain in the low back.<sup>13</sup>

One study focusing on acupuncture for people with chronic spinal pain found that acupuncture reduced pain and improved physical function compared to the control.<sup>10</sup>

### People With Pelvic Pain

Five studies focused on acupuncture for people with CPP<sup>3,25</sup> or CP/CPSP.<sup>4,8,21</sup> Of these, 2 studies found that acupuncture as a standalone<sup>3</sup> or adjunctive therapy<sup>25</sup> was better able to relieve pain compared to the controls for people with CPP. One study found that acupuncture with conventional therapy was associated with better pain reduction in women with CPP.<sup>25</sup> Likewise, a study focused on women with symptomatic endometriosis found that acupuncture was more effective in reducing pain compared to the placebo.<sup>23</sup> Four studies reported that acupuncture as a standalone<sup>4,8,21</sup> or as an adjunct<sup>8</sup> was more effective in reducing pain and symptom severity compared to sham interventions,<sup>4,8,21</sup> or medication<sup>4,8</sup> for men with CP/CPSP. One study

also found that acupuncture was superior to sham interventions and Western medicine for improving urinary symptoms.<sup>4</sup> Additionally, 1 study found that sexual dysfunction was similar with acupuncture and sham interventions.<sup>21</sup>

One study<sup>21</sup> reported that adverse events were similar between treatment and control groups, and another reported no serious adverse events associated with acupuncture.<sup>8</sup> Pan and colleagues<sup>4</sup> reported that mild hematoma and pain were adverse events associated with acupuncture.

### People With Head and Neck Pain

Five studies focused on acupuncture for people with head and neck pain, including chronic neck pain,<sup>12,24</sup> migraines,<sup>14,20</sup> and myofascial head and neck pain.<sup>11</sup> Skelly and colleagues<sup>12,24</sup> found that acupuncture improved function in the short and intermediate term compared to controls but did not improve chronic neck pain. Two studies also concluded that acupuncture was more effective at reducing pain and safer than control interventions for people with migraines.<sup>14,20</sup> Ou et al also found that acupuncture reduced the frequency of migraine attacks.<sup>14</sup>

### People With Arthritis

Four studies focused on acupuncture for people with arthritis, including rheumatoid arthritis,<sup>18</sup> knee OA,<sup>5,9</sup> and hip OA.<sup>22</sup> A systematic review found that acupuncture relieved pain and improved physical function and health-related quality of life for people with rheumatoid arthritis.<sup>18</sup> Two studies found that acupuncture improved pain intensity and function compared to control interventions for people with knee OA.<sup>5,9</sup> Tian et al. found that acupuncture showed similar improvements in QoL and physical health as sham acupuncture and was not able to significantly improve stiffness.<sup>9</sup> Manheimer and colleagues<sup>22</sup> found little to no difference in pain reduction between acupuncture and sham acupuncture for patients with hip OA. This same study found that acupuncture as an adjunct to routine care led to better pain reduction and physical QoL compared to primary care alone.<sup>22</sup> The systematic review reported acupuncture resulted in minor adverse events.<sup>22</sup>

### People With General Chronic Pain

Three studies focusing on people with fibromyalgia found that acupuncture was associated with better pain relief<sup>19</sup> and improved QoL<sup>19</sup> and function<sup>12,24</sup> than usual care or sham intervention. One systematic review found that acupuncture did not result in serious adverse effects.<sup>19</sup>

One study focusing on people with chronic pain reported that acupuncture was associated with reduced pain intensity compared to no treatment or usual care.<sup>15</sup>

### People With Pain Related to Nervous System Disorders

Two studies focusing on trigeminal neuralgia found that acupuncture<sup>1,16</sup> and electroacupuncture<sup>16</sup> led to a reduction in pain intensity and improvement on response rates compared to carbamazepine. Hu et al. found that acupuncture combined with carbamazepine had a better effect on response rate compared to carbamazepine alone.<sup>16</sup>

One study focusing on people with neuropathic pain found that acupuncture reduced pain.<sup>7</sup>

A detailed summary of the included systematic reviews can be found in [Table 2](#).

**Table 2: Summary of Included Systematic Reviews**

Study citation	Study design, population	Interventions and comparators	Relevant outcomes	Authors' conclusions
Ang et al. (2023) <sup>1</sup>	SR and MA with 30 RCTs <b>Population:</b> Patients with trigeminal neuralgia <b>N = 2,295</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Carbamazepine	Pain scores, response rates, frequency of pain attacks, and AE	Compared to carbamazepine, acupuncture led to improvements in pain scores, response rates, frequency of pain attacks, and AE.
Feise et al. (2023) <sup>2</sup>	SR and MA with 8 RCTs <b>Population:</b> Adults with chronic nonspecific low-back pain without radiculopathy <b>N: NR</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Sham intervention	Pain intensity (at immediate- and short-term), serious AE (Benefit-Harm Scale)	Acupuncture was effective at reducing pain intensity compared to sham intervention. Harm level warnings were the lowest for acupuncture.
Lin et al. (2023) <sup>3</sup>	SR and MA with 17 RCTs <b>Population:</b> People with CPP <b>N = 1,455</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Control group	VAS/NRS, total pain scores of NIH-CPSI	The total pain scores of NIH-CPSI and VAS/NRS were significantly lower in the treatment group compared to the control.
Pan et al. (2023) <sup>4</sup>	SR and MA with 10 RCTs <b>Population:</b> People with CP/CPSP <b>N = 798</b>	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Sham acupuncture, WM	Pain score, NIH-CPSI score, QoL score, urinary symptom, efficacy rate, and AE	Acupuncture was superior to sham acupuncture and WM in pain, NIH-CPSI, and QoL scores, as well as urinary symptom, and efficacy rate. AE reported in the acupuncture group were mild hematoma and pain.
Araya-Quintanilla et al. (2022) <sup>5</sup>	Overview of 15 SRs <b>Population:</b> Patients with knee OA <b>N: NR</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Control interventions	Pain intensity, knee function	There were significant differences in pain intensity and knee function between acupuncture and control interventions in the short-term, favouring acupuncture.
Asano et al. (2022) <sup>6</sup>	SR and MA with 5 RCTs <b>Population:</b> People with nonspecific chronic low-back pain <b>N: NR</b>	<b>Intervention:</b> Acupuncture with standard therapy <b>Comparator:</b> Standard therapy	Pain intensity, disability	Acupuncture with standard therapy had a clinically meaningful reduction in self-reported pain immediately after treatment and at intermediate term compared with standard therapy alone. Levels of disability in both the treatment and control groups showed similar and clinically meaningful reductions.
He et al. (2022) <sup>7</sup>	SR and MA with 6 RCTs <b>Population:</b> People with neuropathic pain induced by spinal cord injury <b>N = 286</b>	<b>Intervention:</b> Acupuncture (including EA) <b>Comparators:</b> Controls	Pain severity (VAS, NRS), the present pain intensity index, and the pain region index.	Acupuncture had a positive effect on pain severity, the present pain intensity, and the pain region index. EA had better effects on pain.

Study citation	Study design, population	Interventions and comparators	Relevant outcomes	Authors' conclusions
Qin et al. (2022) <sup>8</sup>	SR and MA with 12 RCTs <b>Population:</b> Men with CP/CPPS <b>N:</b> NR	<b>Interventions:</b> Acupuncture, acupuncture plus medication <b>Comparators:</b> Sham acupuncture, medication	NIH-CPSI total score, NIH-CPSI pain domain score, NIH-CPSI urinary domain score, QoL domain score, serious AE	Acupuncture was significantly more effective at reducing the NIH-CPSI total score compared to sham acupuncture and medication. Acupuncture plus medication was significantly more effective in reducing the NIH-CPSI total score compared to medication alone. Compared to sham acupuncture and medication, acupuncture significantly decreased the NIH-CPSI pain domain score. There was a significant difference in reducing the NIH-CPSI pain domain score with acupuncture plus medication compared to medication alone. There were no meaningful differences in the NIH-CPSI urinary domain score between the treatment and control groups. No serious AE were reported for acupuncture.
Tian et al. (2022) <sup>9</sup>	SR and MA with 11 RCTs <b>Population:</b> Patients with knee OA <b>N = 2,484</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Sham acupuncture	Pain, function activities, stiffness, mental QoL, and physical health	Acupuncture reduced pain and improved patients' function activities. Acupuncture was not able to significantly improve stiffness. There was no significant difference in mental QoL improvement and physical health with acupuncture compared to sham acupuncture. Trial sequential analysis favoured acupuncture in pain and function improvements.
Huang et al. (2021) <sup>10</sup>	SR and MA with 22 RCTs <b>Population:</b> Patients with chronic spinal pain <b>N = 2,588</b>	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Sham acupuncture, medication, no treatment, and usual care	Pain, functional disability	Acupuncture reduced chronic spinal pain compared to sham acupuncture, medication, usual care, and no treatment. Acupuncture improved physical function at immediate-, short- and long-term follow up.
Farag et al. (2020) <sup>11</sup>	SR and MA with 6 RCTs <b>Population:</b> People with localized persistent myofascial head and neck pain <b>N:</b> NR	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Sham needling/no intervention	Mean pain intensity (VAS), safety, and adherence	Compared to sham needling/no intervention, there was a decrease in VAS pain intensity scores with acupuncture. There were low rates of side effects/withdrawal.

Study citation	Study design, population	Interventions and comparators	Relevant outcomes	Authors' conclusions
Skelly et al. (2020) <sup>12</sup>	SR with 233 RCTs <b>Population:</b> People with chronic pain <b>N:</b> NR	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Usual care, sham acupuncture	Function, improvement in pain	Chronic low-back pain: function improved over short- and/or intermediate-term. There were improvements in pain at short-term for people treated with acupuncture. Chronic neck pain: Compared with sham acupuncture, acupuncture improved function in the short- and intermediate-term. Fibromyalgia: Compared with usual care, attention control, or sham treatment, functional improvements were seen with acupuncture at short- and intermediate-term.
Mu et al. (2020) <sup>13</sup>	SR and MA with 16 RCTs <b>Population:</b> People with chronic nonspecific low back pain <b>N = 8,270</b>	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Sham intervention, no treatment, and usual care	Pain (VAS), back-specific functional status (HFAQ), QoL (SF-12), pain-related disability, global assessment, and AE	Compared to sham intervention, acupuncture may have relieved pain in the immediate term, although the difference in VAS was not clinically meaningful. Acupuncture and sham intervention had similar effectiveness at improving back-specific function in the immediate term. In the short term, acupuncture was not better at improving QoL compared to sham intervention. Compared to no treatment, acupuncture resulted in greater and clinically meaningful pain relief and improved back function, in the immediate term. Compared to usual care, acupuncture may have reduced pain and improved back-specific function immediately after treatment. Acupuncture was more effective in improving physical QoL but not mental QoL when compared to usual care. There was a similar incidence of AE in the acupuncture, sham intervention, and usual care groups. Most common AE in the acupuncture group were insertion point pain, bruising, hematoma, bleeding, worsening of low-back pain, and pain in leg and shoulder.
Ou et al. (2020) <sup>14</sup>	SR and MA with 28 RCTs <b>Population:</b> People with migraines <b>N = 2,874</b>	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Medication, sham acupuncture	Treatment effectiveness (therapeutic efficiency), improvement in VAS, and adverse reaction rate	Treatment was more effective with acupuncture compared to sham acupuncture and medication. Acupuncture resulted in greater improvements in VAS score compared to sham acupuncture. Adverse reaction rate was lower with acupuncture than with medication. Acupuncture reduced the frequency of migraine attacks.



Study citation	Study design, population	Interventions and comparators	Relevant outcomes	Authors' conclusions
Chen et al. (2019) <sup>15</sup>	SR with 61 RCTs <b>Population:</b> People with chronic pain <b>N:</b> NR	<b>Intervention:</b> Acupuncture <b>Comparators:</b> No treatment/waitlist, conventional or usual care	Pain intensity (VAS, WOMAC, NRS)	Acupuncture was better than no treatment, waitlist, and conventional/usual care at reducing pain intensity.
Hu et al. (2019) <sup>16</sup>	SR and MA with 33 RCTs <b>Population:</b> People with primary trigeminal neuralgia <b>N:</b> NR	<b>Interventions:</b> Manual acupuncture, EA, acupuncture with carbamazepine <b>Comparator:</b> Carbamazepine	Response rate, recurrence rate, pain intensity	MA showed that manual acupuncture and EA both improved response and recurrence rate, which was significant compared to carbamazepine. Manual acupuncture also achieved a more significant effect on reducing pain intensity. Acupuncture with carbamazepine had a more positive effect on response rate compared to carbamazepine alone.
Nishishinya et al. (2019) <sup>17</sup>	SR with 4 global reviews (45 SRs and 70 clinical trials) <b>Population:</b> People with chronic low-back pain <b>N:</b> NR	<b>Intervention:</b> Acupuncture, acupuncture with conventional treatments <b>Comparator:</b> Placebo	Treatment effect	Acupuncture proved to be effective in treating chronic low-back pain as the first-line therapy and as an adjunct to conventional treatments.
Seca et al. (2019) <sup>18</sup>	SR with 13 RCTs <b>Population:</b> Patients with rheumatoid arthritis <b>N = 974</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Controls	Pain relief, physical function, HRQoL	Acupuncture showed statistical significance in relieving symptoms of rheumatoid arthritis compared with controls. Acupuncture may have a positive effect on pain relief, physical function, and HRQoL.
Zhang et al. (2019) <sup>19</sup>	SR and MA with 12 RCTs <b>Population:</b> Patients with fibromyalgia <b>N:</b> NR	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Sham acupuncture, conventional medication	Pain relief, QoL, serious AE	Acupuncture was significantly better at pain relief and improving QoL than sham acupuncture, in the short-term. Effects of acupuncture were superior to sham acupuncture in long-term. No serious AE were reported for acupuncture.
Zhang et al. (2019) <sup>20</sup>	Overview of 15 SRs <b>Population:</b> People with migraines <b>N:</b> NR	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Blank control, sham acupuncture, drug treatments	Pain improvement, efficacy, and safety	Acupuncture had a significant advantage of pain improvement, efficacy, and safety compared to blank control, sham acupuncture, or drug treatment.

Study citation	Study design, population	Interventions and comparators	Relevant outcomes	Authors' conclusions
Franco et al. (2018) <sup>21</sup>	SR with 3 RCTs <b>Population:</b> Men with CP/CPPS <b>N = 204</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Sham procedure, standard medical therapy,	Prostatitis symptoms (NIH-CPSI total score) AE, sexual dysfunction (IIEF scale)	Acupuncture resulted in clinically meaningful reduction in prostatitis symptoms compared to sham procedure. There was little to no difference in AE between the treatment and control group. Compared to sham procedure, acupuncture may not reduce sexual dysfunction. Compared to standard medical therapy, acupuncture also resulted in a clinically meaningful reduction in prostatitis.
Manheimer et al. (2018) <sup>22</sup>	SR with 6 RCTs <b>Population:</b> Patients with hip OA <b>N = 413</b>	<b>Interventions:</b> Acupuncture, acupuncture with routine primary care <b>Comparators:</b> Sham acupuncture, routine primary care alone, alternative active treatment, and no specific treatment.	Pain reduction, function, QoL (mental and physical), and safety	There was little to no difference in pain reduction with acupuncture compared to sham acupuncture. Acupuncture with routine primary care resulted in better pain reduction and function compared to routine primary care alone. There were no significant differences in improvement of mental QoL between acupuncture with routine primary care and primary care alone; however, acupuncture showed a significant benefit in physical QoL. Minor side effects included minor bruising, bleeding, pain at the needle insertion sites.
Mira et al. (2018) <sup>23</sup>	SR and MA with 8 RCTs <b>Population:</b> Women with symptomatic endometriosis <b>N: NR</b>	<b>Intervention:</b> Acupuncture <b>Comparator:</b> Placebo	Pain reduction	MA showed that acupuncture resulted in significant pain reduction compared to placebo.
Skelly et al. (2018) <sup>24</sup>	SR with RCTs <b>Population:</b> People with chronic pain <b>N: NR</b>	<b>Intervention:</b> Acupuncture <b>Comparators:</b> Usual care or inactive controls, sham acupuncture, sham laser, Alexander Technique	Function, pain	Chronic back pain: Acupuncture improved function and pain compared with usual care or inactive controls at short-term. Acupuncture was able to improve pain at long-term. Chronic neck pain: Acupuncture was associated with improved function compared to usual care, sham acupuncture, or sham laser at short and intermediate term. However, acupuncture did not improve pain at any time during the study time period. Fibromyalgia: Acupuncture was associated with improvements in function compared to sham, no treatment, or usual care, at short-term. For chronic pain conditions, acupuncture was associated with (slight) improvements in function and pain.

Study citation	Study design, population	Interventions and comparators	Relevant outcomes	Authors' conclusions
Sung et al. (2018) <sup>25</sup>	SR and MA with 4 RCTs <b>Population:</b> Women with CPP <b>N = 474</b>	<b>Intervention:</b> Acupuncture with conventional therapy <b>Comparator:</b> Conventional therapy alone	Pain reduction (total effectiveness rate)	Acupuncture with conventional therapy was associated with significantly reduced CPP compared to conventional therapy alone.

AE = adverse events; CP/CPSP = chronic prostatitis/chronic pelvic pain syndrome; CPP = chronic pelvic pain; EA = electroacupuncture; HFAQ = Hannover Function Ability Questionnaire; HRQoL = health-related quality of life; IIEF = International Index of Erectile Function; JOA = Japanese Orthopedic Association; MA = meta-analysis; NIH-CPSI = National Institute of Health Chronic Prostatitis Symptom Index; NR = not reported; NRS = numerical rating scale; OA = osteoarthritis; QoL = quality of life; RCT = randomized controlled trial; SF-12 = 12 Item Short Form Health Survey; SR = systematic review; VAS = visual analogue scale; VAS/NRS = visual analogue scale/numerical rating scale; WM = Western medicine; WOMAC = Western Ontario and McMaster Universities Osteoarthritis Index.

## References

### Health Technology Assessments

No literature identified.

### Systematic Reviews

1. Ang L, Kim HJ, Heo JW, et al. Acupuncture for the treatment of trigeminal neuralgia: a systematic review and meta-analysis. *Complement Ther Clin Pract*. May 02 2023; 52:101763. [PubMed](#)
2. Feise RJ, Mathieson S, Kessler RS, Witenko C, Zaina F, Brown BT. Benefits and harms of treatments for chronic nonspecific low back pain without radiculopathy: systematic review and meta-analysis. *Spine J*. 05 2023; 23(5):629-641. [PubMed](#)
3. Lin KY, Chang YC, Lu WC, Kotha P, Chen YH, Tu CH. Analgesic efficacy of acupuncture on chronic pelvic pain: a systemic review and meta-analysis study. *Healthcare*. Mar 11 2023; 11(6):830. [PubMed](#)
4. Pan J, Jin S, Xie Q, et al. Acupuncture for chronic prostatitis or chronic pelvic pain syndrome: an updated systematic review and meta-analysis. *Pain Res & Manag*. 2023; 7754876. [PubMed](#)
5. Araya-Quintanilla F, Cuyul-Vasquez I, Gutierrez-Espinoza H. Does acupuncture provide pain relief in patients with osteoarthritis knee? An overview of systematic reviews. *J Bodyw Mov Ther*. 01 2022; 29:117-126. [PubMed](#)
6. Asano H, Plonka D, Weeger J. Effectiveness of acupuncture for nonspecific chronic low back pain: a systematic review and meta-analysis. *Med Acupunct*. Apr 01 2022; 34(2):96-106. [PubMed](#)
7. He K, Hu R, Huang Y, Qiu B, Chen Q, Ma R. Effects of acupuncture on neuropathic pain induced by spinal cord injury: a systematic review and meta-analysis. *Evid Based Complement Alternat Med*. 2022; 6297484. [PubMed](#)
8. Qin Z, Guo J, Chen H, Wu J. Acupuncture for chronic prostatitis/chronic pelvic pain syndrome: a GRADE-assessed systematic review and meta-analysis. *Eur Urol Open Sci*. Dec 2022; 46:55-67. [PubMed](#)
9. Tian H, Huang L, Sun M, et al. Acupuncture for knee osteoarthritis: a systematic review of randomized clinical trials with meta-analyses and trial sequential analyses. *Biomed Res Int*. 2022; 6561633. [PubMed](#)
10. Huang JF, Zheng XQ, Chen D, et al. Can acupuncture improve chronic spinal pain? A systematic review and meta-analysis. *Global Spine J*. Oct 2021; 11(8):1248-1265. [PubMed](#)
11. Farag AM, Malacarne A, Pagni SE, Maloney GE. The effectiveness of acupuncture in the management of persistent regional myofascial head and neck pain: a systematic review and meta-analysis. *Complement Ther Med*. Mar 2020; 49:102297. [PubMed](#)
12. Skelly AC, Chou R, Dettori JR, et al. Noninvasive nonpharmacological treatment for chronic pain: a systematic review update. *Report No.: 20-EHC009*. Rockville (MD): Agency for Healthcare Research and Quality. 2020 Apr. [PubMed](#)
13. Mu J, Furlan AD, Lam WY, Hsu MY, Ning Z, Lao L. Acupuncture for chronic nonspecific low back pain. *Cochrane Database Syst Rev*. 12 11 2020; 12(12):CD013814. [PubMed](#)
14. Ou MQ, Fan WH, Sun FR, et al. A systematic review and meta-analysis of the therapeutic effect of acupuncture on migraine. *Front Neurol*. 2020; 11:596. [PubMed](#)
15. Chen YJ, Shimizu Bassi G, Yang YQ. Classic Chinese acupuncture versus different types of control groups for the treatment of chronic pain: review of randomized controlled trials (2000-2018). *Evid Based Complement Alternat Med*. 2019; 6283912. [PubMed](#)
16. Hu H, Chen L, Ma R, Gao H, Fang J. Acupuncture for primary trigeminal neuralgia: a systematic review and PRISMA-compliant meta-analysis. *Complement Ther Clin Pract*. Feb 2019; 34:254-267. [PubMed](#)
17. Nishishinya Aquino MB, Pereda CA, Munoz-Ortego J. Efficacy of acupuncture in rheumatic diseases with spine involvement: systematic review. *Med Clin (Barc)*. 09 27 2019; 153(6):250-255. [PubMed](#)
18. Seca S, Miranda D, Cardoso D, et al. Effectiveness of acupuncture on pain, physical function and health-related quality of life in patients with rheumatoid arthritis: a systematic review of quantitative evidence. *Chin J Integr Med*. Sep 2019; 25(9):704-709. [PubMed](#)

19. Zhang XC, Chen H, Xu WT, Song YY, Gu YH, Ni GX. Acupuncture therapy for fibromyalgia: a systematic review and meta-analysis of randomized controlled trials. *J Pain Res.* 2019; 12:527-542. [PubMed](#)
20. Zhang XT, Li XY, Zhao C, et al. An overview of systematic reviews of randomized controlled trials on acupuncture treating migraine. *Pain Res Manag.* 2019; 5930627. [PubMed](#)
21. Franco JV, Turk T, Jung JH, et al. Non-pharmacological interventions for treating chronic prostatitis/chronic pelvic pain syndrome. *Cochrane Database Syst Rev.* 2018; 5(5):CD012551. [PubMed](#)
22. Manheimer E, Cheng K, Wieland LS, et al. Acupuncture for hip osteoarthritis. *Cochrane Database Syst Rev.* 2018; 5(5):CD013010. [PubMed](#)
23. Mira TAA, Buen MM, Borges MG, Yela DA, Benetti-Pinto CL. Systematic review and meta-analysis of complementary treatments for women with symptomatic endometriosis. *Int J Gynaecol Obstet.* 2018; 143(1):2-9. [PubMed](#)
24. Skelly AC, Chou R, Dettori JR, et al. Noninvasive nonpharmacological treatment for chronic pain: a systematic review. *Report No.: 18-EHC013-EF.* Rockville (MD): Agency for Healthcare Research and Quality. 2018 Jun. [PubMed](#)
25. Sung, S. H., Sung, A. D., Sung, H. K., An, T. E., Kim, K. H., Park, J. K. Acupuncture treatment for chronic pelvic pain in women: a systematic review and meta-analysis of randomized controlled trials. *Evid Based Complement Alternat Med.* 2018; 9415897. [PubMed](#)

## Appendix 1: References of Potential Interest

### Previous CADTH Reports

Non-opioid options for managing adult chronic pain. Ottawa (ON): CADTH; 2020: [https://www.cadth.ca/sites/default/files/pdf/non\\_opioid\\_options\\_for\\_managing\\_adult\\_chronic\\_pain.pdf](https://www.cadth.ca/sites/default/files/pdf/non_opioid_options_for_managing_adult_chronic_pain.pdf). Accessed 2023 Jun 19.

Sutton D, McCormack S. Acupuncture for chronic non-cancer pain: a review of clinical effectiveness, cost effectiveness and guidelines. Ottawa (ON): CADTH; 2019 Oct. (CADTH rapid response report: summary with critical appraisal). <https://www.cadth.ca/sites/default/files/pdf/htis/2019/RC1202%20Acupuncture%20for%20Pain%20Final.pdf>. Accessed 2023 Jun 19.

### Health Technology Assessment

#### *Unclear Comparator*

Fatin NM, Izzuna MMG. Acupuncture for headache, refractory neuralgia, Bell's palsy, post-stroke, Guillain barre and transverse myelitis. Putrajaya (MY): Malaysian Health Technology Assessment. <https://database.inahta.org/article/20794>. Accessed 2023 Jun 19.

### Systematic Reviews

#### *Chronic Pain Not Specified*

Zhang Z, Hu T, Huang P, et al. The efficacy and safety of acupuncture therapy for sciatica: a systematic review and meta-analysis of randomized controlled trials. *Front Neurosci*. 2023; 17:1097830. [PubMed](#)

Jo HR, Noh EJ, Oh SH, et al. Comparative effectiveness of different acupuncture therapies for neck pain. *Medicine (Baltimore)*. Aug 19 2022; 101(33):e29656. [PubMed](#)

Kelly NF, Mansfield CJ, Schneider E, et al. Functional connectivity patterns are altered by low back pain and cause different responses to sham and real dry needling therapies: a systematic review of fMRI studies. *Physiother Theory Pract*. Dec 09 2022:1-18. [PubMed](#)

Xu L, Sun Z, Casserly E, Nasr C, Cheng J, Xu J. Advances in interventional therapies for painful diabetic neuropathy: a systematic review. *Anesth Analg*. 06 01 2022; 134(6):1215-1228. [PubMed](#)

Yang J, Wang Y, Xu J, et al. Acupuncture for low back and/or pelvic pain during pregnancy: a systematic review and meta-analysis of randomised controlled trials. *BMJ Open*. 11 21 2022; 12(12):e056878. [PubMed](#)

Koukoulithras I, Sr., Stamouli A, Kolokotsios S, Plexousakis M Sr., Mavrogiannopoulou C. The effectiveness of non-pharmaceutical interventions upon pregnancy-related low back pain: a systematic review and meta-analysis. *Cureus*. Jan 30 2021; 13(1):e13011. [PubMed](#)

Li T, Li X, Huang F, Tian Q, Fan ZY, Wu S. Clinical efficacy and safety of acupressure on low back pain: a systematic review and meta-analysis. *Evid Based Complement Alternat Med*. 2021; 8862399. [PubMed](#)

Navarro-Santana MJ, Sanchez-Infante J, Gomez-Chiguano GF, Cummings M, Fernandez-de-Las-Penas C, Plaza-Manzano G. Effects of manual acupuncture and electroacupuncture for lateral epicondylalgia of musculoskeletal origin: a systematic review and meta-analysis. *Acupunct Med*. Oct 2021; 39(5):405-422. [PubMed](#)

Qureshi AR, Jamal MK, Rahman E, et al. Non-pharmacological therapies for pain management in Parkinson's disease: a systematic review. *Acta Neurol Scand*. Aug 2021; 144(2):115-131. [PubMed](#)

Trinh K, Belski N, Zhou F, Kuhad A, Luk D, Youn E. The efficacy of acupuncture on foot and ankle for pain intensity, functional status, and general quality of life in adults: a systematic review. *Med Acupunct*. Dec 01 2021; 33(6):386-395. [PubMed](#)

Yang J, Ganesh R, Wu Q, et al. Battlefield acupuncture for adult pain: a systematic review and meta-analysis of randomized controlled trials. *Am J Chin Med*. 2021; 49(1):25-40. [PubMed](#)

Amaral LKB, Souza MB, Campos MGM, et al. Efficacy of conservative therapy in older people with nonspecific low back pain: a systematic review with meta-analysis and GRADE recommendations. *Arch Gerontol Geriatr*. Sep-Oct 2020; 90:104177. [PubMed](#)

Li YX, Yuan SE, Jiang JQ, Li H, Wang YJ. Systematic review and meta-analysis of effects of acupuncture on pain and function in non-specific low back pain. *Acupunct Med*. 08 2020; 38(4):235-243. [PubMed](#)

- Amaniti A, Sardeli C, Fyntanidou V, et al. Pharmacologic and non-pharmacologic interventions for HIV-neuropathy pain. A systematic review and a meta-analysis. *Medicina*. Nov 28 2019; 55(12):28. [PubMed](#)
- Nash J, Armour M, Penkala S. Acupuncture for the treatment of lower limb diabetic peripheral neuropathy: a systematic review. *Acupunct Med*. 02 2019; 37(1):3-15. [PubMed](#)
- Choi GH, Wieland LS, Lee H, Sim H, Lee MS, Shin BC. Acupuncture and related interventions for the treatment of symptoms associated with carpal tunnel syndrome. *Cochrane Database Syst Rev*. 12 02 2018; 12:CD011215. [PubMed](#)
- Hu HT, Gao H, Ma RJ, Zhao XF, Tian HF, Li L. Is dry needling effective for low back pain?: A systematic review and PRISMA-compliant meta-analysis. *Medicine (Baltimore)*. Jun 2018; 97(26):e11225. [PubMed](#)

### **Unclear Comparator**

- Argueta-Figueroa L, Flores-Mejia LA, Avila-Curiel BX, Flores-Ferreira BI, Torres-Rosas R. Nonpharmacological interventions for pain in patients with temporomandibular joint disorders: a systematic review. *Eur J Dent*. Jul 2022; 16(3):500-513. [PubMed](#)
- Valera-Calero JA, Fernandez-de-Las-Penas C, Navarro-Santana MJ, Plaza-Manzano G. Efficacy of dry needling and acupuncture in patients with fibromyalgia: a systematic review and meta-analysis. *Int J Environ Res Public Health*. 08 11 2022; 19(16):9904. [PubMed](#)
- Zheng C, Zhou T. Effect of acupuncture on pain, fatigue, sleep, physical function, stiffness, well-being, and safety in fibromyalgia: a systematic review and meta-analysis. *J Pain Res*. 2022; 15:315-329. [PubMed](#)
- Falk J, Thomas B, Kirkwood J, et al. PEER systematic review of randomized controlled trials: management of chronic neuropathic pain in primary care. *Can Fam Physician*. 05 2021; 67(5):e130-e140. [PubMed](#)
- Kolber MR, Ton J, Thomas B, et al. PEER systematic review of randomized controlled trials: management of chronic low back pain in primary care. *Can Fam Physician*. 01 2021; 67(1):e20-e30. [PubMed](#)
- Moura CC, Chaves ECL, Cardoso A, Nogueira DA, Azevedo C, Chianca TCM. Auricular acupuncture for chronic back pain in adults: a systematic review and metanalysis. *Rev Esc Enferm USP*. Aug 19 2019; 53:e03461. [PubMed](#)
- Paley CA, Johnson MI. Acupuncture for the relief of chronic pain: a synthesis of systematic reviews. *Medicina*. Dec 24 2019; 56(1):6. [PubMed](#)
- Qin Z, Wu J, Xu C, et al. Long-term effects of acupuncture for chronic prostatitis/chronic pelvic pain syndrome: systematic review and single-arm meta-analyses. *Ann Transl Med*. Mar 2019; 7(6):113. [PubMed](#)

### **Unclear Population**

- Baumler P, Zhang W, Stubinger T, Irnich D. Acupuncture-related adverse events: systematic review and meta-analyses of prospective clinical studies. *BMJ Open*. 09 06 2021; 11(9):e045961. [PubMed](#)

### **Alternative Intervention — Auricular Point Acupressure**

- Liu M, Tong Y, Chai L, et al. Effects of auricular point acupressure on pain relief: a systematic review. *Pain Manag Nurs*. 06 2021; 22(3):268-280. [PubMed](#)

### **Alternative Population — People With Chronic Pain-Related Depression**

- You J, Li H, Xie D, Chen R, Chen M. Acupuncture for chronic pain-related depression: a systematic review and meta-analysis. *Pain Res Manag*. 2021:6617075. [PubMed](#)
- Yan B, Zhu S, Wang Y, Da G, Tian G. Effect of acupuncture on chronic pain with depression: a systematic review. *Evid Based Complement Alternat Med*. 2020; 7479459. [PubMed](#)

### **Alternative Comparators**

- Chen FQ, Ge JF, Leng YF, Li C, Chen B, Sun ZL. Efficacy and safety of moxibustion for chronic low back pain: A systematic review and meta-analysis of randomized controlled trials. *Complement Ther Clin Pract*. May 2020; 39:101130. [PubMed](#)
- Sun J, Zhao Y, Zhu R, et al. Acupotomy therapy for knee osteoarthritis pain: systematic review and meta-analysis. *Evid Based Complement Alternat Med*. 2020; 2168283. [PubMed](#)

### **Mixed Population — Acute and Chronic Non-Specific Low Back Pain**

Xiang Y, He JY, Tian HH, Cao BY, Li R. Evidence of efficacy of acupuncture in the management of low back pain: a systematic review and meta-analysis of randomised placebo- or sham-controlled trials. *Acupunct Med*. 02 2020; 38(1):15-24. [PubMed](#)

### **Review Articles**

- Al-Moraissi EA, Goddard G, Christidis N. Are acupuncture and dry needling effective in the management of masticatory muscle pain: a network meta-analysis of randomised clinical trials. *J Oral Rehabil*. Jan 2023; 50(1):87-97. [PubMed](#)
- Zhou R, Zhu YJ, Chen X, et al. Retracted: effect of sham acupuncture on chronic pain: a Bayesian network meta-analysis. *Pain Medicine*. Apr 03 2023; 24(4):382-396. [PubMed](#)
- Baroncini A, Maffulli N, Eschweiler J, Molsberger F, Klimuch A, Migliorini F. Acupuncture in chronic aspecific low back pain: a Bayesian network meta-analysis. *J Orthop Surg Res*. Jun 20 2022; 17(1):319. [PubMed](#)
- Feng Z, Cui S, Yang H, et al. Acupuncture for neuropathic pain: a meta-analysis of randomized control trials. *Front Neurol*. 2022; 13:1076993. [PubMed](#)
- Khodaie F, Abbasi N, Kazemi Motlagh AH, Zhao B, Naser Moghadasi A. Acupuncture for multiple sclerosis: a literature review. *Mult Scler Relat Disord*. Apr 2022; 60:103715. [PubMed](#)
- Zhao W, Huang H, Liu K, et al. Acupuncture and moxibustion for peripheral neuropathic pain: a frequentist network meta-analysis and cost-effectiveness evaluation. *Evid Based Complement Alternat Med*, 2022; 6886465. [PubMed](#)
- Zheng J, Lai X, Zhu W, Huang Y, Chen C, Chen J. Effects of acupuncture combined with rehabilitation on chronic pelvic pain syndrome in females: a meta-analysis running head-acupuncture combined with rehabilitation on chronic pelvic pain. *J Healthc Eng*. 2022; 8770510. [PubMed](#)
- Edwards JW, Shaw V. Acupuncture in the management of trigeminal neuralgia. *Acupunct Med*. 06 2021; 39(3):192-199. [PubMed](#)
- Kang Y, Song P, Cao D, et al. The efficacy and safety of extracorporeal shockwave therapy versus acupuncture in the management of chronic prostatitis/chronic pelvic pain syndrome: evidence based on a network meta-analysis. *Am J Mens Health*. Nov-Dec 2021; 15(6):15579883211057998. [PubMed](#)
- Shi X, Yu W, Zhang W, et al. A comparison of the effects of electroacupuncture versus transcutaneous electrical nerve stimulation for pain control in knee osteoarthritis: a Bayesian network meta-analysis of randomized controlled trials. *Acupunct Med*. 06 2021; 39(3):163-174. [PubMed](#)
- Zhang W, Fang Y, Shi M, Zhang M, Chen Y, Zhou T. Optimal acupoint and session of acupuncture for patients with chronic prostatitis/chronic pelvic pain syndrome: a meta-analysis. *Transl Androl Urol*. Jan 2021; 10(1):143-153. [PubMed](#)
- Al-Moraissi EA, Alradom J, Aladashi O, Goddard G, Christidis N. Needling therapies in the management of myofascial pain of the masticatory muscles: a network meta-analysis of randomised clinical trials. *J Oral Rehabil*. Jul 2020; 47(7):910-922. [PubMed](#)
- Li J, Dong L, Yan X, et al. Is acupuncture another good choice for physicians in the treatment of chronic prostatitis/chronic pelvic pain syndrome? Review of the latest literature. *Pain Res Manag*. 2020; 5921038. [PubMed](#)
- Li S, Xie P, Liang Z, et al. Efficacy comparison of five different acupuncture methods on pain, stiffness, and function in osteoarthritis of the knee: a network meta-analysis. *Evid Based Complement Alternat Med*. 2018; 1638904. [PubMed](#)
- Ramos A, Dominguez J, Gutierrez S. Acupuncture for rheumatoid arthritis. *Medwave*. Oct 10 2018; 18(6):e7284. [PubMed](#)
- Vickers AJ, Vertosick EA, Lewith G, et al. Acupuncture for chronic pain: update of an individual patient data meta-analysis. *J Pain*. 05 2018; 19(5):455-474. [PubMed](#)

### **Additional References**

#### **Rapid Review**

WorkSafeBC Evidence-Based Practice Group. Acupuncture as treatment for chronic pain from epicondylitis: a rapid systematic review. Richmond (BC): WorkSafeBC; 2019: <https://www.worksafebc.com/en/resources/health-care-providers/guides/acupuncture-treatment-chronic-pain-from-epicondylitis?lang=en>. Accessed 2023 Jun 19.