# Table des matières

# Pain

# douleur : evaluation de l'acupuncture

*Articles connexes*: - douleur aiguë - acupuncture expérimentale - qigong -

## 1. Systematic Reviews and Meta-Analysis

### 1.1. Generic Acupuncture

#### 1.1.1. Zhang 2026

Zhang Y, Zhao Y, Cheng Y, Liu L, Wang Z, Wu B. The impact of complementary interventions on pain and disability in patients with chronic non-cancer pain: A network meta-analysis. Complement Ther Clin Pract. 2026;63:102060. https://doi.org/10.1016/j.ctcp.2026.102060

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| **Background and purpose** | Chronic non-cancer pain (CNCP) imposes a substantial burden on individuals and healthcare systems worldwide. Limitations and risks of long-term pharmacological treatment have increased interest in complementary therapies; however, the lack of direct comparisons limits evidence-based decision-making. Therefore, this study aimed to compare complementary therapies for pain and disability using a network meta-analysis. |
| **Methods** | A network meta-analysis of randomized controlled trials was reported in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Network Meta-Analyses (PRISMA-NMA) guidelines. Four databases were searched from inception to December 2024, with an update in May 2025. Two reviewers independently performed study selection, data extraction, and risk-of-bias assessment. A Bayesian random-effects network meta-analysis was performed. Treatment rankings were evaluated using the surface under the cumulative ranking curve (SUCRA), and inconsistency and publication bias were assessed. |
| **Results** | Thirty-three randomized controlled trials involving 6196 participants were included. Dry needling ranked highest for pain and disability, but the evidence quality was very low because of substantial heterogeneity. Cognitive behavioral therapy and **acupuncture** showed moderate-quality evidence and consistent improvements in both outcomes versus wait control. Safety reporting was inconsistent, and reported adverse events were mostly mild and transient. |
| **Conclusion** | Cognitive behavioral therapy and **acupuncture** appear to be reliable options for improving pain and disability in chronic non-cancer pain, supported by moderate-quality evidence. Dry needling may provide short-term benefits but should be interpreted cautiously because of low certainty. |

#### 1.1.2. Zhou 2022

**RETRACTED** https://doi.org/10.1093/pm/pnac126
Zhou R, Zhu YJ, Chen X, Ma HC, Liu YH, Chang XS, Chen YD, Yu YY, Xiao ZZ, Liu LR, Li Y, Zhang HB. Effect of Sham Acupuncture on Chronic Pain: A Bayesian Network Meta-analysis. Pain Med. 2022 Aug

22:pnac126. https://doi.org/10.1093/pm/pnac126

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| **Background** | Along with increasing research on acupuncture for chronic pain, the validity of sham acupuncture (SA) has also been argued. |
| **Methods** | Nine databases were searched for randomized controlled trials (RCTs) from the inception date to July 5, 2022. Using Markov Chain Monte Carlo methods, a Bayesian multiple treatment network meta-analysis (NMA) with random-effects model was conducted. |
| **Results** | A total of **62 RCTs with 6806 patients** and four kinds of treatments (real acupuncture (RA), non-acupuncture (NA), penetrative SA (PSA) and non-penetrative SA (NPSA)) were included. The results indicated that both NPSA and PSA were not superior to NA in improving chronic pain (NPSA: MD -4.77 [95% CI, -11.09 to 1.52]; PSA: MD, -4.96 [95% CI, -10.38 to 0.48]). After combining NPSA and PSA into the SA group, the weak trend of pain relief from SA was still not statistically significant (MD, -4.91 [95% CI, -9.93 to 0.05]). NPSA and PSA had similar effects (MD, 0.18 [95% CI, -5.45 to 5.81]). RA was significantly associated with pain relief, compared with NPSA and PSA (NPSA: MD, -12.03 [95% CI, -16.62 to -7.41]; PSA: MD, -11.85 [95% CI, -15.48 to -8.23]). The results were generally consistent regardless of pain phenotype, frequency, duration, acupuncture methods, analgesic intake, or detection bias. |
| **Conclusion** | These results suggested that acupuncture was significantly associated with reduced chronic pain. The two kinds of placebo acupuncture, NPSA and PSA, have similar effects. Both NPSA and PSA, with a weak but not significant effect, are appropriate to be inert placebo controls in RCTs for chronic pain. |

#### 1.1.3. Li 2020 ☆☆

Li C, Pei Q, Chen Y et al. The response-time relationship and covariate effects of acupuncture for chronic pain: A systematic review and model-based longitudinal meta-analysis. Eur J Pain. 2020 Jun. [205776]. doi

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| **Background and Objective** | Critical clinical questions regarding how soon and how long the analgesic effect will be achieved by acupuncture, as well as who will be responsive to acupuncture, need further address. The aim of the study was to investigate the response-time relationship and covariate effects of acupuncture. |
| **Databases and Data Treatment** | PubMed and EMBASE were searched up to December 2018 for randomized controlled trials that involved sham acupuncture, true acupuncture and conventional therapy. We used a model-based longitudinal meta-analysis to characterize the response-time profile of these treatments. |
| **Results** | **Seventy-seven** randomized clinical trials involved **chronic shoulder, neck, knee and low back pain** were included. The response-time analysis suggested that the treatment duration of acupuncture will be 5 weeks or more to achieve 80% of maximum analgesic effect. Moreover a lower baseline pain intensity and the location of low back pain resulted in a lower pain relief of acupuncture intervention. The absolute maximum analgesic effects of sham acupuncture and conventional therapy were 22.6 and 15.8 points at a 0–100 NRS scale. The absolute effect of true acupuncture was 26.1 points for low back pain (relative effect of 3.5 and 9.4 points to sham and conventional therapy), 34.9 points for other pain body locations (relative effect of 12.3 and 19.1 points to sham and conventional therapy), in patients with a baseline pain intensity of 60 points. |
| **Conclusion** | The treatment duration of acupuncture will **not be less than 5 weeks to achieve 80% maximum analgesic effect.** Higher analgesic effect was related to higher baseline pain intensity and pain location of neck, shoulder and knee. |

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| **Significance** | Our systematic review and meta-analysis provides the clear evidence for the treatment duration and significant related covariates of acupuncture intervention for chronic pain. **These results provide useful suggestion for acupuncture intervention in clinical pain management.** |

### 1.1.4. Vickers 2018 ☆☆☆

Vickers AJ, Vertosick EA, Lewith G et al, Acupuncture Trialists' Collaboration. Acupuncture for Chronic Pain: Update of an Individual Patient Data Meta-Analysis. J Pain. 2018 May;19(5):455-474. [168043]

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| **Purpose** | Our objective was to update an individual patient data meta-analysis to determine the effect size of acupuncture for 4 chronic pain conditions. |
| **Methods** | We searched MEDLINE and the Cochrane Central Registry of Controlled Trials randomized trials published up until December 31, 2015. We included randomized trials of acupuncture needling versus either sham acupuncture or no acupuncture control for nonspecific musculoskeletal pain, osteoarthritis, chronic headache, or shoulder pain. Trials were only included if allocation concealment was unambiguously determined to be adequate. Raw data were obtained from study authors and entered into an individual patient data meta-analysis. |
| **Results** | The main outcome measures were pain and function. An additional 13 trials were identified, with data received for a total of 20,827 patients from 39 trials. **Acupuncture was superior to sham as well as no acupuncture control for each pain condition (all P < .001) with differences between groups close to .5 SDs compared with no acupuncture control and close to .2 SDs compared with sham. We also found clear evidence that the effects of acupuncture persist over time with only a small decrease, approximately 15%, in treatment effect at 1 year.** In secondary analyses, we found no obvious association between trial outcome and characteristics of acupuncture treatment, but effect sizes of acupuncture were associated with the type of control group, with smaller effects sizes for sham controlled trials that used a penetrating needle for sham, and for trials that had high intensity of intervention in the control arm. **We conclude that acupuncture is effective for the treatment of chronic pain, with treatment effects persisting over time.** Although factors in addition to the specific effects of needling at correct acupuncture point locations are important contributors to the treatment effect, decreases in pain after acupuncture cannot be explained solely in terms of placebo effects. Variations in the effect size of acupuncture in different trials are driven predominantly by differences in treatments received by the control group rather than by differences in the characteristics of acupuncture treatment. |
| **Perspective** | **Acupuncture is effective for the treatment of chronic musculoskeletal, headache, and osteoarthritis pain. Treatment effects of acupuncture persist over time and cannot be explained solely in terms of placebo effects.** Referral for a course of acupuncture treatment is a reasonable option for a patient with chronic pain.. |

### 1.1.5. Vickers 2012 ☆☆☆

Vickers AJ, Cronin AM, Maschino AC, et al; Acupuncture Trialists'Collaboration. Acupuncture for chronic pain: individual patient data meta-analysis. Arch Intern Med 2012;172:1444-53. 157530

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| **Purpose** | We aimed to determine the effect size of acupuncture for 4 chronic pain conditions: back and neck pain, osteoarthritis, chronic headache, and shoulder pain. |

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| **Methods** | We conducted a systematic review to identify randomized controlled trials (RCTs) of acupuncture for chronic pain in which allocation concealment was determined unambiguously to be adequate. Individual patient data meta-analyses were conducted using data from **29 of 31 eligible RCTs, with a total of 17 922 patients** analyzed. |
| **Results** | In the primary analysis, including all eligible RCTs, **acupuncture was superior to both sham and noacupuncture control for each pain condition** (P< .001 for all comparisons). After exclusion of an outlying set of RCTs that strongly favored acupuncture, the effect sizes were similar across pain conditions. Patients receiving acupuncture had less pain, with scores that were 0.23(95% CI, 0.13-0.33),0.16 (95% CI, 0.07-0.25), and 0.15 (95% CI, 0.07-0.24) SDs lower than sham controls for back and neck pain, osteoarthritis, and chronic headache, respectively; the effect sizes in comparison to noacupuncture controls were 0.55 (95% CI, 0.51-0.58), 0.57(95% CI, 0.50-0.64), and 0.42 (95% CI, 0.37-0.46) SDs. These results were robust to a variety of sensitivity analyses, including those related to publication bias. |
| **Conclusion** | **Acupuncture is effective for the treatment of chronic pain and is therefore a reasonable referral option. Significant differences between true and sham acupuncture indicate that acupuncture is more than a placebo**. However, these differences are relatively modest, suggesting that factors in addition to the specifice effects of needling are important contributors to the therapeutic effects of acupuncture.]. |

### 1.1.6. Madsen 2009 ☆

Madsen MV, Gøtzsche PC, Hróbjartsson A. Acupuncture treatment for pain: systematic review of randomised clinical trials with acupuncture, placebo acupuncture, and no acupuncture groups. BMJ. 2009;338:3115. [153138]

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| **Objective** | To study the analgesic effect of acupuncture and placebo acupuncture and to explore whether the type of the placebo acupuncture is associated with the estimated effect of acupuncture. |
| **Design** | Systematic review and meta-analysis of three armed randomised clinical trials. Data sources: Cochrane Library, Medline, Embase, Biological Abstracts, and PsycLIT. Data extraction and analysis Standardised mean differences from each trial were used to estimate the effect of acupuncture and placebo acupuncture. The different types of placebo acupuncture were ranked from 1 to 5 according to assessment of the possibility of a physiological effect, and this ranking was meta-regressed with the effect of acupuncture. |
| **Results** | Data synthesis: Thirteen trials (3025 patients) involving a variety of pain conditions were eligible. The allocation of patients was adequately concealed in eight trials. The clinicians managing the acupuncture and placebo acupuncture treatments were not blinded in any of the trials. One clearly outlying trial (70 patients) was excluded. A small difference was found between acupuncture and placebo acupuncture: standardised mean difference -0.17 (95% confidence interval -0.26 to -0.08), corresponding to 4 mm (2 mm to 6 mm) on a 100 mm visual analogue scale. No statistically significant heterogeneity was present (P=0.10, I(2)=36%). A moderate difference was found between placebo acupuncture and no acupuncture: standardised mean difference -0.42 (-0.60 to -0.23). However, considerable heterogeneity (P<0.001, I(2)=66%) was also found, as large trials reported both small and large effects of placebo. No association was detected between the type of placebo acupuncture and the effect of acupuncture (P=0.60). |
| **Conclusions** | A **small analgesic effect of acupuncture was found, which seems to lack clinical relevance and cannot be clearly distinguished from bias**. Whether needling at acupuncture points, or at any site, reduces pain independently of the psychological impact of the treatment ritual is unclear. |

### 1.1.7. Itoh 2007 (Japanese literature) ☆

Itoh K, Kitakoji H. Acupuncture for chronic pain in japan: a review. Evid Based Complement Alternat Med. 2007;4(supp1):431-8. (eng). [147966]

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| **Objective** | Many Japanese reports of acupuncture and moxibustion for chronic pain are not listed in medical databases such as Medline. Therefore, they are not easily accessible to researchers outside of Japan. |
| **Method** | To complement existing reviews of acupuncture and moxibustion for chronic pain and to provide more detailed discussion and analysis, we did a literature search using 'Igaku Chuo Zasshi Wed' (Japana Centra Revuo Medicina) and 'Citation Information by National Institute of Information' covering the period 1978-2006. Original articles and case reports of acupuncture and moxibustion treatment of chronic pain were included. Animal studies, surveys, and news articles were excluded. Two independent reviewers extracted data from located articles in a pre-defined structured way, and assessed the likelihood of causality in each case. |
| **Results** | We located 57 papers written in Japanese (20 full papers, 37 case reports). Conditions examined were headache (12 trials), chronic low back pain (9 trials), rheumatoid arthritis (8 trials), temporomandibular dysfunction (8 trials), katakori (8 trials) and others (12 trials). While 23 were described as clinical control trials (CCTs), 11 employed a quasi-random method. Applying the 5-point Jadad quality assessment scoring system, the mean score was 1.5 +/- 1.3 (SD). Eleven (52%) of the CCTs were conducted to determine a more effective procedure for acupuncture; these compared a certain type of acupuncture with another type of acupuncture or specific additional points. In particular, the trigger point acupuncture was widely used to treat chronic low back pain in Japan. Many reports of chronic pain treatment by acupuncture and moxibustion are listed in Japanese databases. |
| **Conclusion** | From the data, we conclude that there is **limited evidence that acupuncture is more effective than no treatment, and inconclusive evidence that trigger point acupuncture is more effective than placebo, sham acupuncture or standard care**. |

### 1.1.8. Ezzo 2000 ☆

Ezzo J et al. Is acupuncture effective for the treatment of chronic pain? a systematic review. Pain. 2000;86(3):217-225. [86311]

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| **Objective** | Pain is the major complaint of the estimated one million U.S. consumers who use acupuncture each year. Although acupuncture is widely available in chronic pain clinics, the effectiveness of acupuncture for chronic pain remains in question. Our aim was to assess the effectiveness of acupuncture as a treatment for chronic pain within the context of the methodological quality of the studies. |
| **Method** | MEDLINE (1966-99), two complementary medicine databases, 69 conference proceedings, and the bibliographies of other articles and reviews were searched. Trials were included if they were randomized, had populations with pain longer than three months, used needles rather than surface electrodes, and were in English. Data were extracted by two independent reviewers using a validated instrument. Inter-rater disagreements were resolved by discussion. |

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| **Results** | Fifty one studies met inclusion criteria. Clinical heterogeneity precluded statistical pooling. Results were positive in 21 studies, negative in 3 and neutral in 27. Three fourths of the studies received a low-quality score and low-quality trials were significantly associated with positive results (P=0.05). High-quality studies clustered in designs using sham acupuncture as the control group, where the risk of false negative (type II) errors is high due to large sample size requirements. Six or more acupuncture treatments were significantly associated with positive outcomes (P=0.03) even after adjusting for study quality. |
| **Conclusions** | We conclude there is **limited evidence that acupuncture is more effective than no treatment for chronic pain; and inconclusive evidence that acupuncture is more effective than placebo, sham acupuncture or standard care**. However, we have found an important relationship between the methodology of the studies and their results that should guide future research. |

#### 1.1.9. Ter Riet 1990 ∅

Ter Riet G et al. Acupuncture and chronic pain : a criteria-based meta-analysis. J Clin Epidemiol. 1990;43(11):1191-9. [35022]

> A literature search revealed 51 controlled clinical studies on the effectiveness of acupuncture in chronic pain. These studies were reviewed using a list of 18 predefined methodological criteria. A maximum of 100 points for study design could be earned in four main categories : (a) comparability of prognosis, (b) adequate intervention, © adequate effect measurement and (d) data presentation. The quality of even the better studies proved to be mediocre. No study earned more than 62% of the maximum score. The results from the better studies (> ou = 50% of the maximum score) are highly contradictory. The efficacy of acupuncture in the treatment of chronic pain remains doubtful.

#### 1.1.10. Patel 1989 ☆

Patel M et al. A meta-analysis of acupuncture for chronic pain. International Journal of Epidemiology. 1989;18(4):900-06. [83381]

> Results of 14 randomized controlled trials of acupuncture for chronic pain were pooled in a meta-analysis and analyzed in three subgroups according to site of pain; and in two subgroups each according to type of trial, type of treatment, type of control, “blindness” of participating agents, trial size, and type of journal in which results were published. While few individual trials had statistically significant results, pooled results of many subgroups attained statistical significance in favor of acupuncture. Various potential sources of bias, including problems with blindness, precluded a conclusive finding, although most results apparently favored acupuncture.

## 1.2. Special Acupuncture Techniques

### 1.2.1. Sham acupuncture

#### 1.2.1.1. Wan 2025

Wan R, Zheng Q, Zeng X, Luo Y, Sun L, Chen S, Luo F, Zhang Y, Zhu Z, Chen X, Zhao Y, Li Y. Differential placebo effect of sham acupuncture for chronic pain: a network meta-analysis of randomized controlled trials. BMC Complement Med Ther. 2025 Sep 1;25(1):323.

https://doi.org/10.1186/s12906-025-05055-x

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| **Backgound** | The clinical effects of acupuncture are often underestimated due to the placebo effect of sham acupuncture. While multiple sham acupuncture methods have been used in clinical practice, it is challenging to select the appropriate sham acupuncture technique due to the lack of head-to-head trials. Purpose: The purpose of this study was to compare the differential placebo effects of diverse sham acupuncture interventions, providing evidence-based guidance for selecting optimal placebo controls in clinical practice. |
| **Method** | PubMed, Embase, the Cochrane Central Register of Controlled Trials, and Web of Science were systematically searched for randomized controlled trials comparing acupuncture with sham acupuncture for the treatment of chronic non-cancer pain (from inceptions to May 1, 2025). The primary outcome measure was pain variation, while secondary outcome measures included adverse events and the assessment of acupuncture blinding. Frequentist random-effect models were employed to perform indirect treatment comparison meta-analysis, and Confidence in Network Meta-Analysis (CINeMA) was utilized to evaluate the level of evidence. |
| **Results** | A total of 45 randomized controlled trials (RCTs) were included, involving 7 sham acupuncture methods and 8287 participants. Regarding pain variation, the difference was noted between the waiting treatment group (mean difference 1.86 (95% confidence interval 1.36 to 2.35), SUCRA 97.4%; moderate confidence of evidence) and manual acupuncture group was most pronounced, followed by the difference between the acupoint and no penetration group (mean difference 1.14 (95% confidence interval 0.74 to 1.55), SUCRA 73.6%; low confidence of evidence) and the nonacupoint and no penetration group (mean difference 1.00 (95% confidence interval 0.35 to 1.65), SUCRA 64.8%; low confidence of evidence). Additionally, the rate of adverse events was comparable among the aforementioned sham acupuncture groups, and the blinding procedure was successfully implemented in the trials. |
| **Conclusions** | The placebo effect of sham acupuncture is significant, among which the no penetration (acupoint or nonacupoint) groups exhibited the lowest placebo effect. Nevertheless, further head-to-head trials are warranted to obtain direct evidence. |

### 1.2.2. Fu's subcutaneous needling

#### 1.2.2.1. Gong 2025

Gong X, Wu F, Guo Z, Li N, Wang Z, Liu D. Fu's subcutaneous needling for pain: A systematic review and meta-analysis of randomized controlled trials. J Pain Res. 2025 Oct 31;18:5739-5752. https://doi.org/10.2147/JPR.S544998

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| **Purpose** | To evaluate the efficacy and safety of Fu's subcutaneous needling (FSN) for pain management using randomized controlled trials (RCTs), to provide evidence-based guidance for clinical practice and future research. |
| **Methods** | A systematic literature search was conducted in PubMed, Embase, Scopus, Cochrane Library, ClinicalTrials.gov, and Web of Science databases for RCTs published up to May 15, 2025. Eligible studies compared FSN with control interventions for pain in adults. Study quality was assessed using the Cochrane Risk of Bias tool, and meta-analysis was performed using RevMan 5.4. Outcomes included pain intensity and pain-related or functional outcomes. |

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| **Results** | **Eight RCTs (519 participants) were included**. Compared with controls, FSN significantly reduced pain (MD = −1.14; 95% CI [−1.34, −0.95]; P < 0.001) on the visual analog scale, with sustained effects at 15 days (MD = −1.79; P < 0.001) and 1 month (MD = −1.08; P < 0.001). FSN also improved the Oswestry Disability Index (MD = −6.10; P < 0.001), range of motion (MD = 9.11; P < 0.001), Lysholm score (SMD = 0.66; P < 0.001), and SF-36 score (SMD = 0.78; P < 0.001). Adverse events were mild and transient, with no serious effects reported. |
| **Conclusion** | FSN is an effective and safe therapy for pain management, producing greater reductions in pain and functional limitations than other non-pharmacological interventions. Future multicenter RCTs with standardized protocols and longer follow-up are needed to confirm long-term efficacy. |

### 1.2.3. Acupression

#### 1.2.3.1. Chen YW 2014 ☆☆

Chen YW, Wang HH. The effectiveness of acupressure on relieving pain : a systematic review. Pain Managment Nursing. 2014;15(2):539-550. 155970

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| **Purpose** | The objective of this study was to review the application of acupressure in managing different pains and the effectiveness of acupressure on relieving pain in varions settings. |
| **Methods** | A systematic review of English articles using the databases of MEDLINE, PubMed, and Cumulative Index to Nursing and Allied Health literature (CINAHL) was performed using the search terms of “acupressure” and “pain.” Studies during whlch acupressure was a pp lied as an intervention and assessed for its effectiveness on relieving pain were selected. The studies selected were those published fromjanuary 1, 1996 to December 31, 2011 that met the inclusion and exclusion criteria. The participants included patients with dysmenorrhea, labor pain, low back pain, chronic headache, and other traumatic pains. The Oxford 2011 Levels of Evidence was used to appraise the literature. |
| **Results** | **Fifteen studies** were extracted for reducing dysmenorrhea (menstrual distress), labor pain, low back pain, chronic headache, and other traumatic pain. These papers were further reviewed for their study design, adequacy of randomization and conceaiment of allocation, blinding of participants, interventions, and outcome measurements. **Acupressure has been shown to be effective for relieving a variety of pains in different populations**. |
| **Conclusion** | **The review begins to establish a credible evidence base for the use of acupressure in pain relief**. The implication for health care providers would be incorporating acupressure into their practice as an alternative therapy to facilitate patients who suffer from pain. |

### 1.2.4. Auricular Acupuncture

#### 1.2.4.1. Yang 2026 (Battlefield Acupuncture)

Yang J, Zhou X, Lim KH, Barnett HJ, Weinman AF, Woods JT, Mohabbat AB, Wahner-Roedler DL, Chon TY, Bauer BA. The Role of Battlefield Acupuncture in Emergency Department Settings: A Systematic Review of Randomized Controlled Trials. J Integr Complement Med. 2026;27683605261435756. https://doi.org/10.1177/27683605261435756

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| **Objective** | Battlefield acupuncture (BFA) has gained widespread clinical use for patients presenting to emergency departments (EDs). This systematic review of randomized controlled trials (RCTs) aims to assess the efficacy and safety of BFA in ED settings. |
| **Methods** | A literature search was conducted in OVID and Scopus databases for RCTs involving BFA applied in ED settings. The risk of bias was evaluated using the Cochrane Collaboration risk of bias tool, while the methodological quality of RCTs was assessed using the Jadad score. Due to the heterogeneity of the included studies, a qualitative analysis was performed. |
| **Results** | **Seven studies involving 758 patients** met the eligibility criteria. Among these, five studies evaluated traditional BFA in conjunction with standard analgesia care, while two studies assessed modified BFA alongside standard care. Most of the included studies were found to have a high risk of bias, leading to an overall classification of low quality according to the Jadad criteria. A descriptive analysis was performed due to heterogeneity in the interventions, observational timepoints, and outcomes reported in the included studies. Positive results were demonstrated in 71% of the studies. The most common conditions documented as the primary ED presentation included back pain, acute abdominal pain, lower extremity pain, neck pain, and acute sore throat. Notably, no severe adverse events were reported. |
| **Conclusion** | BFA may offer a safe adjunct to standard care for pain management in ED settings. However, the limited methodological rigor and small number of existing RCTs reduce confidence in the current evidence. Well-designed, robust studies are needed to clarify their effectiveness and support stronger clinical recommendations. |

#### 1.2.4.2. Dai 2025 (battlefield acupuncture)

Dai N, Liu X, Wan H. Practical applications and safety of battlefield acupuncture for pain management: a systematic literature review. J Multidiscip Healthc. 2025 May 17;18:2749-2769. https://doi.org/10.2147/JMDH.S517946

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| **Background** | Pain is a complex and subjective experience that can cause significant physical and psychological distress. Conventional pharmacologic treatments often lead to dependence, gastrointestinal issues, and organ toxicity. Battlefield acupuncture (BFA), which integrates traditional Chinese medicine principles with modern military medical practice, has been developed as a rapid, non-pharmacological analgesic approach. Despite controversy, it has gained attention for its potential to manage various types of pain effectively. |
| **Objective** | To evaluate the clinical efficacy and safety of battlefield acupuncture (BFA) and to assess its practical application in pain management. |
| **Methods** | A systematic search of PubMed, Cochrane Library, Web of Science, and Embase was conducted for studies published between 2015 and 2025. Randomized controlled trials (RCTs) assessing BFA for pain were included. Primary outcomes were pain score reduction and adverse event rates. Two independent reviewers assessed methodological quality using the Cochrane Risk of Bias tool (RoB-1). Due to heterogeneity across studies, results were synthesized narratively. |
| **Results** | Of 800 screened articles, 11 RCTs (n = 1,232; 530 BFA participants) met inclusion criteria. Comparators included opioids, non-opioid medications, exercise, and physical therapies across various pain types. Four studies reported significantly lower pain scores with BFA compared to controls, while four found no difference. No severe adverse events occurred; mild transient reactions were reported. Risk of bias ratings: 2 low (A), 8 moderate (B), 1 high (C). |

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| **Conclusion** | Current evidence supports the efficacy and safety of battlefield acupuncture for managing acute pain, particularly mild to moderate forms. BFA may be especially beneficial when combined with electroacupuncture. However, limitations include small sample sizes, incomplete blinding, and protocol variability. Future studies should focus on specific pain subtypes and long-term outcomes to strengthen evidence quality. |

#### 1.2.4.3. Yang 2021 (Battlefield Acupuncture) Ø

Yang J, Ganesh R, Wu Q, Li L, Ogletree SP, Del Fabro AS, Wahner-Roedler DL, Xiong D, Bauer BA, Chon TY. Battlefield Acupuncture for Adult Pain: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Am J Chin Med. 2021;49(1):25-40. [220476]. doi

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| **Background** | Pain is a major public health problem, causing heavy social and economic burdens to patients and society while consuming tremendous medical resources at the same time. Thus, there is a critical need to find low-cost, efficacious, and therapeutic approaches to help manage pain. While acupuncture is increasingly recognized as a promising pain-relieving method, less is known about a specific form of auricular acupuncture known as Battlefield Acupuncture (BFA). The BFA technique involves the sequential placement of semi-permanent, single-use, French ASP[Formula: see text] golden needles to five specific acupoints in one or both ears, where they are left in place for 3-4 days or longer [Niemtzow, R.C., Battlefield acupuncture. Med. Acupunct. 19: 225-228, 2007]. The BFA needles (more accurately described as tiny conical darts) pierce the ear in designated locations in a particular order [Levy, C.E., N. Casler and D.B. FitzGerald. Battlefield acupuncture: an emerging method for easing pain. Am. J. Phys. Med. Rehabil. 97: e18-e19, 2018.]. (Figs. 4 and 5) It was developed by Dr. Richard C. Niemtzow in 2001, as a subgroup form of an auricular acupuncture technique based on the somatotopic arrangement of an inverted fetus pattern on the external ear [Romoli, M. Ear acupuncture: historical abstract-differences of ear cartography between the east and the west. Dtsch. Z. Akupunkt. 53: 24-33, 2010.]. Currently, BFA is widely used in the US military, but to our knowledge, there is no review which comprehensively synthesizes the current publications surrounding pain management. This review aims to investigate the effects and safety of BFA in adults with pain. |
| **Methods** | Electronic databases were searched for randomized controlled trials (RCTs) published in English evaluating efficacy and safety of BFA in adults with pain, from database inception to September 6, 2019. The primary outcome was pain intensity change, and the secondary outcome was safety. |
| **Results** | **Nine RCTs** were included in this review, and five trials involving 344 participants were analyzed quantitatively. Compared with no intervention, usual care, sham BFA, and delayed BFA interventions, BFA had no significant improvement in the pain intensity felt by adults suffering from pain. Few adverse effects (AEs) were reported with BFA therapy, but they were mild and transitory. BFA is a safe, rapid, and easily learned acupuncture technique, mainly used in acute pain management, but no significant efficacy was found in adult individuals with pain, compared with the control groups. |
| **Conclusions** | Given the poor methodological quality of the included studies, high-quality RCTs with rigorous evaluation methods are needed in the future. |

#### 1.2.4.4. Jan 2017 (acute pain)☆

Jan AL, Aldridge ES, Rogers IR, Visser EJ, Bulsara MK, Niemtzow RC.. Does Ear Acupuncture Have a Role for Pain Relief in the Emergency Setting? A Systematic Review and Meta-Analysis. Med Acupunct. 2017;29(5):276-289. [176734].

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| **Objective** | Ear acupuncture might be the form of acupuncture best suited to improving acute pain management in the emergency department (ED). The primary aim of this review was to assess the analgesic efficacy of ear acupuncture in the ED. Secondary outcomes included measures of patient satisfaction, adverse effects, cost, administration techniques, and reduction of medication usage. |
| **Methods** | Seven databases and Google Scholar were searched up to April 27, 2017, using MeSH descriptors for three overarching themes (ear acupuncture, pain management, and emergency medicine). Meta-analyses were performed in 3 comparator groups: (1) ear acupuncture versus sham; (2) ear acupuncture-as-adjunct to standard care; and (3) ear acupuncture (both as sole therapy and adjuvant) versus control to calculate the standardized mean difference (SMD) and weighted mean difference (WMD) for pain scores out of 10. |
| **Results** | **Six randomized controlled trials and 2 observational studies, totaling 458 patients**, were retrieved after exclusions. The meta-analysis used data from 4 randomized studies representing 286 patients. The above 3 comparator groups resulted in SMDs of 1.69, 1.68, and 1.66, and WMDs of 2.47, 2.84, and 2.61 respectively, all favoring acupuncture. Battlefield (ear) acupuncture was the most commonly used technique. There were no significant adverse effects and patient satisfaction improved. Results regarding if acupuncture reduced medication use were equivocal. Significant study bias and heterogeneity were found. |
| **Conclusions** | While study numbers are limited, ear acupuncture, either as stand-alone or as-an-adjunct technique, significantly reduced pain scores and has potential benefits for use in the ED. Further studies will define acupuncture's role and if it reduces use of analgesic medications. |

#### 1.2.4.5. Murakami 2017 ★★

Murakami M, Fox L, Dijkers MP. Ear Acupuncture for Immediate Pain Relief-A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Pain Med. 2017;18(3):551-564. [99627].

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| **Objective** | To systematically review the literature on the effectiveness of ear acupuncture (EA) for immediate pain relief |
| **Methods** | Data sources.: AMED, CINAHL, Cochrane Reviews, Embase, PsycINFO, PubMed, Scopus Web of Science, from inception through March 2015. Study selection.: English publications, randomized controlled trials on human subjects involving EA as a treatment for pain, with outcomes recorded within 48 hours. Data extraction and design.: Two authors independently assessed trial eligibility, quality, results, and side effects, and extracted data; a third author checked final data. Effect size (d), mean difference (MD), and 95% confidence interval (CI) were calculated. The Physiotherapy Evidence Database (PEDro) scoring system was used to assess study quality. Meta-analysis was performed for two primary outcomes measures-pain intensity score and analgesic requirements. |
| **Results** | Ten studies met inclusion criteria. Quality per PEDro scores: four excellent, four good, two fair. Based on their primary outcome measures, six studies showed EA being superior to its comparator, three showed no difference to comparators (which in all cases were analgesics), and one study showed significant pain decrease at the first time point and no significant decrease at the second. Meta-analysis was completed for the three studies that evaluated pain intensity as a primary outcome measure, and EA was superior to comparator (MD = -0.96, 95% CI = -1.82- -0.11), but the MD was small. Meta-analysis was completed for the six studies that evaluated analgesic requirements, and EA was superior (MD = -1.08, 95% CI = -1.78- -0.38]), again with a small MD. Six studies reported side effects; all were minor and transient. |

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| **Conclusions** | Ear acupuncture may be a promising modality to be used for pain reduction within 48 hours, with a low side effect profile. Rigorous research is needed to establish definitive evidence of a clinically significant difference from controls or from other pain treatments. |

#### 1.2.4.6. Zhao 2015 ☆

Zhao HJ, Tan JY, Wang T, Jin L. Auricular therapy for chronic pain management in adults: A synthesis of evidence. Complement Ther Clin Pract. 2015;21(2):68-78. [184960].

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| **Objectives** | To evaluate the efficacy and safety of auricular therapy (AT) on chronic pain. |
| **Methods** | A systematic review. Randomized controlled trials investigating AT for chronic pain were retrieved and RevMan 5.3 was used for meta-analysis. |
| **Results** | Fifteen trials were included. The overall assessment indicated that AT could be a promising intervention for chronic pain relief. Meta-analyses showed that AT decreased pain intensity, especially for chronic low back pain and chronic tension headache. The lasting effect of AT was not obvious, and it began to diminish 3 months after the completion of treatment. |
| **Conclusions** | **AT may positively control pain intensity for patients with chronic pain**. However, due to the significant heterogeneity and methodological flaws identified in the analyzed trials, the current evidence on AT for chronic pain management is still uncertain. More rigorously designed large-scale randomized controlled trials are required to evaluate the efficacy of AT for patients with chronic pain. |

#### 1.2.4.7. Yeh CH 2014 ☆☆

Yeh CH, Chiang YC, Hoffman SL, Liang Z, Klein ML, Tam WW, Chien LC, Suen LK.Efficacy of auricular therapy for pain management: a systematic review and meta-analysis. Evid Based Complement Alternat Med. 2014;2014:934670.doi:10.1155/2014/934670.174822

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| **Purpose** | The objective of this systematic review and meta-analysis was to assess the efficacy of auricular therapy by including a sham therapy control group. |
| **Methods** | Relevant, randomized clinical trials (RCTs) were identified by searching medical related databases from, depending on journal, 1900 (at the earliest) to 1994 (at the latest) through May 2013.The outcome measure was a pain intensity score. |
| **Results** | **Twenty-two RCTs were identified and 13 RCTs were included for meta-analysis**. In these studies, **auricular therapy provided significant pain relief when compared to a sham or control group**. The overall standardized mean différences (SMD) was 1.59 (95% CI [−2.36, −0.82]) (13 trials, total subject numbers = 806), indicating that, on average, the mean decrease in pain score for auricular therapy group was 1.59 standard deviations greater than the mean decrease for the sham control. In terms of the efficacy of the different treatment methods, **auricular acupressure boasts the largest strength of evidence for pain relief, followed by auricular acupuncture**. Electroacupuncture stimulation did not show significant evidence for efficacy, which may be due to the small sample size (i.e., only 19 subjects were included). |
| **Conclusion** | Further large-scale RCTs are needed to determine the efficacy of auricular therapy for pain. |

#### 1.2.4.8. Asher 2010 ☆

Asher GN, Jonas DE, Coeytaux RR, Reilly AC, Loh YI, Motsinger-Reif AA, Winham SJ. Auriculotherapy for pain management: a systematic review and meta-analysis of randomized controlled trials. J Altern Complement Med. 2010;16(10):1097-108. (eng). [160124]

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| **Objectives** | Side-effects of standard pain medications can limit their use. Therefore, nonpharmacologic pain relief techniques such as auriculotherapy may play an important role in pain management. Our aim was to conduct a systematic review and meta-analysis of studies evaluating auriculotherapy for pain management. |
| **Design** | MEDLINE,(®) ISI Web of Science, CINAHL, AMED, and Cochrane Library were searched through December 2008. Randomized trials comparing auriculotherapy to sham, placebo, or standard-of-care control were included that measured outcomes of pain or medication use and were published in English. Two (2) reviewers independently assessed trial eligibility, quality, and abstracted data to a standardized form. Standardized mean differences (SMD) were calculated for studies using a pain score or analgesic requirement as a primary outcome. |
| **Results** | Seventeen (17) studies met inclusion criteria (8 perioperative, 4 acute, and 5 chronic pain). Auriculotherapy was superior to controls for studies evaluating pain intensity (SMD, 1.56 [95% confidence interval (CI): 0.85, 2.26]; 8 studies). For perioperative pain, auriculotherapy reduced analgesic use (SMD, 0.54 [95% CI: 0.30, 0.77]; 5 studies). For acute pain and chronic pain, auriculotherapy reduced pain intensity (SMD for acute pain, 1.35 [95% CI: 0.08, 2.64], 2 studies; SMD for chronic pain, 1.84 [95% CI: 0.60, 3.07], 5 studies). Removal of poor quality studies did not alter the conclusions. Significant heterogeneity existed among studies of acute and chronic pain, but not perioperative pain. |
| **Conclusions** | Auriculotherapy may be **effective for the treatment of a variety of types of pain, especially postoperative pain**. However, a more accurate estimate of the effect will require further large, well-designed trials. |

### 1.2.5. Auricular acupression

#### 1.2.5.1. You 2019 ☆

You E, Kim D , Harris R , D'Alonzo K. Effects of Auricular Acupressure on Pain Management: A Systematic Review. Pain Manag Nurs. 2019;20(1):17-24. [198007].

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| **Objective** | Nearly half of hospitalized patients in the United States have reported experiencing pain even while undergoing treatment for pain. Analgesic use is the most common type of treatment for pain management. Many patients who experience pain seek nonpharmacologic interventions to manage their pain, including forms of complementary or alternative medicine such as auricular acupressure (AA). |
| **Methods** | DESIGN: This study conducted the first systematic review of the studies that have evaluated the effect of AA as an adjunct on pain management. DATA SOURCES: We searched PubMed, CINAHL, Embase, Google Scholar, and Wiley for randomized controlled trials on AA. REVIEW/ANALYSIS METHODS: The pain outcomes were pain severity and analgesic consumption. Methodologic quality was also evaluated. Fifteen randomized controlled trials were included in this analysis. |

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| **Results** | **Twelve studies** reported statistically significant improvement in the pain outcomes of AA treatment compared with the sham or standard care groups. When methodologic quality was assessed, the selected studies had medium quality, but there was a lack of high quality. This supports that the use of AA for patients may enhance self-management for their pain. However, the small number of studies and the lack of consistent rigorous methodology across the studies preclude definitive statements regarding the effectiveness of AA. |
| **Conclusion** | The nursing implications based on this review is that education about AA and complementary or alternative medicine therapies for health care providers may assist them in providing pain control for their patients. In addition, we need to continue research to build on evidence on the effect of AA on pain management. |

### 1.2.6. Wrist-Ankle Acupuncture

#### 1.2.6.1. Pan 2023

Pan M, Lan Y, Wang Z. Wrist-ankle acupuncture has a positive effect on chronic pain: a systematic review and meta-analysis. Acupunct Herb Med. 2023 Mar;3(1):7-19. https://doi.org/10.1097/HM9.0000000000000059

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| **Background** | An increasing number of practitioners are using acupuncture methods such as wrist-ankle acupuncture (WAA) to treat pain. We aimed systematically to evaluate the effects of WAA on cancer pain, primary pain, chronic musculoskeletal pain and pathological neuralgia pain. |
| **Methods** | Nine electronic databases were searched for randomized controlled trials (RCTs) on WAA from inception of the database to July 31, 2022. RCTs within the inclusion and exclusion criteria were included in the study. Outcomes included pain score, clinical efficacy (overall efficiency), and occurrence of adverse events. The risk of bias was evaluated using the Cochrane Collaboration criteria and meta-analysis was performed using RevMan 5.4.1 software to determine the effect of WAA intervention, with statistical significance set at $P < 0.05$. |
| **Results** | A total of **19 RCTs** were included in the meta-analysis, including **1,380 participants**: 673 who had received WAA alone or in combination with other treatments (WAA group, WG) and 707 who did not receive WAA (control group, CG). Subgroup analyses were performed according to different chronic pain types and occurrence of adverse events of WAA versus oral or non-oral drug therapy. The WG had better analgesic effects on various types of chronic pain than CG ($P < 0.00001$) and clinical efficacy ($P < 0.00001$). Additionally, WAA was shown to be safer than oral medication ($P = 0.09$). |
| **Conclusion** | WAA has good analgesic efficacy for several types of common chronic pain alone and in combination with other therapies, and it is safer than oral medication. However, more high-quality randomized controlled trials are needed in the future to support this evidence. |

#### 1.2.6.2. Zhu LB 2014 ☆

Zhu LB, Chan WC, Lo KC, Yum TP, Li L. Wrist Ankle Acupuncture for the treatment of pain symptoms : a systematic review and meta-analysis. Evidence Based Complementary and Alternative Médicine. 2014,Article ID 261709, 9 pages.177257

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| **Purpose** | This study aimed to assess the efficacy and possible adverse effects of wrist-ankle acupuncture (WAA) or WAA adjuvants in the treatment of pain symptoms. |

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| **Methods** | This study compared WAA orWAA adjuvant with the following therapies: western medication (WM), sham acupuncture (SA), or body acupuncture (BA). Randomized controlled trials (RCTs) were searched systematically in related electronic databases by two independent reviewers. |
| **Results** | **33 RCTs** were finally included, in which **7 RCTs were selected for meta-analysis**. It was found that WAA or WAA adjuvant was significantly more effective than WM, SA, or BA in pain relief. There was nothing different between WAA and SA in adverse events, but WAA was marginally significantly safer than WM. |
| **Conclusion** | Although **both WAA and WAA adjuvant appeared to be more effective than WM, SA, or BA in the treatment of pain symptoms** with few side effects, further studies with better and more rigorously designed are still necessary to ensure the efficacy and safety issue of WAA due to the poor methodology and small sample size of previous studies. |

#### 1.2.6.3. Sun 2011 ☆

Sun Ge, Zhou Zhiliang, Zhao Lei. [Systematic review on clinical efficacy of Wrist - ankle acupuncture therapy for pain syndrome]. Hebei Journal of Traditional Chinese Medicine. 2011;11:1715-171. [186980].

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| **Objectives** | To assess the efficacy of wrist-ankle acupuncture treatment for the pain syndrome. |
| **Methods** | PubMed database (1966—2010), Embase database (1986—2010), Cochrane Library (—2010), China HowNet database (1979—2010), VIP Journals Database (1989—2010), and Wanfang database (1998—2010) were retrieved. Randomized or quasi-randomized controlled studies were included. The priority was given to high-quality randomized, controlled trials. Statistical outcome indicators of shoulder pain, cancer pain, waist pain and migraine were measured using RevMan5. 0. 20 software. Indicators of herpes zoster, bone weakness and hemiplegic shoulder pain were measured using described evaluation. |
| **Results** | A total of 21 articles were included. Shoulder pain: Meta-analysis showed significant differences between the acupuncture therapy and Western medicine therapy (RR=1. 50, 95%CI (1. 27, 1. 78), Z=4. 67, P<0. 00001), indicating an obvious superior effect of the wrist-ankle acupuncture therapy; significant difference and heterogeneity also existed between the 6 comprehensive acupuncture therapy and acupuncture monotherapy and (RR=1. 07, 95%CI (0. 99, 1. 16), Z=1. 79, P=0. 07), wrist-ankle acupuncture efficacy of shoulder pain still lacks clinical evidence. Cancer pain: 3 studies existed heterogeneity, (RR=1. 15, 95%CI (1. 03, 1. 28), Z=2. 43, P=0. 02), therefore obvious superior efficacy of wrist-ankle acupuncture for cancer pain still lacks clinical evidence. Waist pain: 3 studies RR=1. 13, 95%CI (1. 04, 1. 23), Z=2. 91, P=0. 042, indicating a better effect of comprehensive wrist-ankle acupuncture therapy, as compared to the conventional body acupuncture monotherapy. one with Cochrane B level showed the following: **wrist-ankle acupuncture with three-edged needle prick blood in the treatment of herpes zoster and the medium-term efficacy, which was superior to the drug group; Four C-level evidence study demonstrated that wrist-ankle acupuncture improved migraine, bone weakness, and hemiplegic shoulder pain One C-level evidence study revealed that wrist-ankle acupuncture has more effective efficacy in the treatment of pain diseases than numbness diseases**. |
| **Conclusions** | The inclusion of limited and low quality clinical studies has verified the efficacy of wrist-ankle acupuncture in the treatment of pain syndrome, and most clinical studies have small sample sizes. Large sample size, randomized, controlled trials are needed in the future for more definitive Results. |

### 1.2.7. Buccal acupuncture

#### 1.2.7.1. Guo 2025

Guo L, Jia T, Yang Y, Feng H, Jiang P. Efficacy and safety of buccal acupuncture for pain management: A systematic review and meta-analysis. Complement Ther Med. 2025 Oct 31:103297. https://doi.org/10.1016/j.ctim.2025.103297

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| **Objective** | The objective of this study is to investigate the efficacy and safety of buccal acupuncture (BA) therapy for pain management through meta-analysis and systematic review. |
| **Methods** | A systematic search was conducted across eight databases (PubMed, Web of Science, Embase, Cochrane Library, etc) to identify randomized controlled trials (RCTs) evaluating the efficacy of BA in pain management. The search timeframe encompassed records from each database's inception through January 25, 2025. The Cochrane Risk of Bias Tool was utilized to assess the methodological quality of the included studies. Meta-analysis was performed using RevMan 5.3 and Stata 15. |
| **Results** | A total of **40 RCTs involving 3,009 patients** were included. Compared with the control intervention, BA improved the total effective rate [RR=1.19, 95%CI(1.13, 1.24), p<0.00001], reduced the incidence of adverse reactions [RR=0.46, 95%CI(0.37, 0.57), p<0.00001] and showed a better effect on Visual Analogue Scale (VAS) [SMD=-1.51, 95%CI(-1.98, -1.04), p<0.00001] scores. The VAS was used to assess pain intensity, where higher values indicate greater pain severity. |
| **Conclusion** | BA demonstrates certain advantages over conventional acupuncture and pharmacotherapy in pain management, with benefits including a lower incidence of adverse reactions and superior pain relief. It may serve as an adjunctive therapy to conventional analgesic treatments in clinical practice. However, further validation through higher-quality, large-sample clinical RCTs is required. |

### 1.2.8. Moxibustion

#### 1.2.8.1. Li 2016 (moxibustion vs acupuncture)

Li Han, Zhao Jimeng, Zheng Guizhi, Li Jing, Wu Huangan. [Meta-analysis on different analgesia of acupuncture and moxibustion on somatic pain]. World Science and Technology-Modernization of Traditional Chinese Medicine. 2016;18(3):381-388. [187069].

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| **Objectives** | This study was aimed to investigate the different analgesia effect of acupuncture and moxibustion on somatic pain. Clinical studies involved the comparison between acupuncture and moxibustion on the somatic pain were potential targets. |
| **Methods** | The visual analogue scale (VAS) was identified as the primary outcome. The research databases were the Pubmed, science citation index (SCI), Embase, The Cochrane Library, Google scholar, Chinese National Knowledge Infrastructure (CNKI), Wangfang Data, and VIP. The bias of risk tool in the Cochrane handbook was used to evaluate the quality of eligible studies. The changes of VAS between pre- and post-intervention were the main outcome. Meanwhile in view of different VAS values at different stages, the outcomes were categorized into four parts: Week 1, Week 2, Week 3 and Week 4. |

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| **Results** | The results showed that a total of 382 articles were collected, and after checked the full text, 8 articles including 10 studies were considered as potential targets. The total risk of bias was identified as unclear risk due to less information on the allocation and selective report. The random effect model was suggested to analyze the pooling results. The comparison between acupuncture and moxibustion performed no statistical difference at Week 1 (MD = 0. 19, 95%CI (-0. 13, 0. 5), P=0. 05), Week 2 (MD =-0. 12, 95%CI (-0. 91, 0. 68), P=0. 77), Week 4 (MD = 0. 00, 95%CI (-0. 71, 0. 07), P=0. 99), respectively. Based on the sensitivity analysis, every group performed less difference. |
| **Conclusions** | It was concluded that due to poor quality of included studies and less information about this area, there were **no positive results depending on the comparison between acupuncture and moxibustion**. More scientific and normative randomized controlled trials should be reported. |

### 1.2.9. Cupping

#### 1.2.9.1. Yiying 2025

Yiying W, Shuai D, Bo LI, Mei H, Huijuan C. Update evidence of effectiveness on pain relieving of cupping therapy: a systematic review and Meta-analysis of randomized controlled trials. J Tradit Chin Med. 2025 Apr;45(2):234-253. https://doi.org/10.19852/j.cnki.jtcm.2025.02.002

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| **Objective** | To update the current best evidence on the effectiveness and safety of cupping therapy in pain management. |
| **Methods** | The protocol of this systematic review was registered at PROSPERO (CRD42021261308). An updated literature searching in 7 databases was conducted from January 2014 to January 2023. Two authors extracted data and assessed the risk of bias independently. Statistical analysis was performed using RevMan 5.4.1 software (Cochrane Collaboration, London, UK). Meta-analysis with a random effect model was conducted when there was no serious statistical heterogeneity among trials (I2≤75%). Grading of Recommendations Assessment, Development, and Evaluation was also conducted to assess the quality of evidence. |
| **Results** | **Seventy-two trials with 5720 participants** were included. All included trials were assessed as having high risk of bias. The majority of the included trials reported the benefit of cupping plus other therapy or cupping alone on improving cure rate (average risk ratio more than 1.15) and reducing visual analogue scale [average mean difference (MD) reduction 0.16 to 7.0 cm], improving quality of life, quality of sleep or other symptoms related to pain condition. And there was low/very low quality evidence that the incidence of adverse events in the cupping groups were lower than that in the control groups. Although the heterogeneity between studies and the methodological quality of the study itself lead to the low evidence strength of the current conclusions, the results of this study are a valuable supplement to the founding of previous review. |
| **Conclusion** | Cupping therapy alone or combined with other therapy was considered benefit in relieving pain, improving the quality of life, and increasing the cure rate of patients with pain conditions, though supported by the low quality of evidence. According to the limited evidence, cupping therapy seems to have less harm than drugs when treating pain conditions. |

#### 1.2.9.2. Wang 2023 (Overviews of systematic reviews)

Wang L, Cai Z, Li X, Zhu A. Efficacy of cupping therapy on pain outcomes: an evidence-mapping study. Front Neurol. 2023 Oct 26;14:1266712. https://doi.org/10.3389/fneur.2023.1266712

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| **Objective** | Cupping therapy is an ancient technique of healing used to treat a variety of ailments. An evidence-mapping study was conducted to summarize the existing evidence of cupping therapy for pain-related outcomes and indicate the effect and the quality of evidence to provide a comprehensive view of what is known. |
| **Methods** | PubMed, Cochrane Library, Embase, and Web of Science were searched to collect the meta-analyses investigating the association between cupping therapy and pain-related outcomes. The methodological quality was assessed by using the AMSTAR 2 tool. Significant outcomes ($p < 0.05$) were assessed using the GRADE system. The summary of evidence is presented by bubble plots and human evidence mapping. |
| **Results** | **Fourteen meta-analyses covering five distinct pain-related conditions** were identified and assessed for methodological quality using the AMSTAR 2, which categorized the quality as critically low (36%), low (50.0%), moderate (7%), and high (7%). In accordance with the GRADE system, no high-quality evidence was found that demonstrates the efficacy of cupping therapy for pain-related outcomes. Specifically, for neck pain, there were two moderate-quality, four low-quality, and two very low-quality evidence, while only one very low-quality evidence supports its efficacy in treating herpes zoster and one low-quality evidence for chronic back pain. Additionally, for low back pain, there were two moderate-quality, one low-quality, and four very low-quality evidence, and for knee osteoarthritis, three moderate-quality evidence suggest that cupping therapy may alleviate pain score. |
| **Conclusion** | The available evidence of very low-to-moderate quality suggests that cupping therapy is effective in managing chronic pain, knee osteoarthritis, low back pain, neck pain, chronic back pain, and herpes zoster. Moreover, it represents a promising, safe, and effective non-pharmacological therapy that warrants wider application and promotion |

#### 1.2.9.3. Zhang 2017 (cupping vs acupuncture )

Zhang YJ, Cao HJ, Li XL, Yang XY, Lai BY, Yang GY, Liu JP. Cupping therapy versus acupuncture for pain-related conditions: a systematic review of randomized controlled trials and trial sequential analysis. Chin Med. 2017:12-21. [182131].

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| **Background** | Both cupping therapy and acupuncture have been used in China for a long time, and their target indications are pain-related conditions. There is no systematic review comparing the effectiveness of these two therapies. OBJECTIVES: To compare the beneficial effectiveness and safety between cupping therapy and acupuncture for pain-related conditions to provide evidence for clinical practice. |
| **Methods** | Protocol of this review was registered in PROSPERO (CRD42016050986). We conducted literature search from six electronic databases until 31st March 2017. We included randomized trials comparing cupping therapy with acupuncture on pain-related conditions. Methodological quality of the included studies was evaluated by risk of bias tool. Mean difference, risk ratio, risk difference and their 95% confidence interval were used to report the estimate effect of the pooled results through meta-analysis or the results from each individual study. Trial sequential analysis (TSA) was applied to adjust random errors and calculate the sample size. |

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| **Results** | **Twenty-three randomized trials with 2845 participants** were included covering 12 pain-related conditions. All included studies were of poor methodological quality. Three meta-analyses were conducted, which showed similar clinical beneficial effects of cupping therapy and acupuncture for the rate of symptom improvement in cervical spondylosis (RR 1.13, 95% CI 1.01 to 1.26; n = 646), lateral femoral cutaneous neuritis (RR 1.10, 95% CI 1.00 to 1.22; n = 102) and scapulohumeral periarthritis (RR 1.31, 95% CI 1.15 to 1.51; n = 208). Results from other outcomes (such as visual analogue and numerical rating scale) in each study also showed no statistical significant difference between these two therapies for all included pain-related conditions. The results of TSA for cervical spondylosis demonstrated that the current available data have not reached a powerful conclusion. No serious adverse events related to cupping therapy or acupuncture was found in included studies. |
| **Conclusion** | **Cupping therapy and acupuncture are potentially safe, and they have similar effectiveness in relieving pain.** However, further rigorous studies investigating relevant pain-related conditions are warranted to establish comparative effectiveness analysis between these two therapies. Cost-effectiveness studies should be considered in the future studies to establish evidence for decision-making in clinical practice. |

#### 1.2.9.4. Cramer 2020

Cramer H, Klose P, Teut M, Rotter G, Ortiz M, Anheyer D, Linde K, Brinkhaus B. Cupping for Patients With Chronic Pain: A Systematic Review and Meta-Analysis. J Pain. 2020 Sep-Oct;21(9-10):943-956. https://doi.org/10.1016/j.jpain.2020.01.002

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| **Background** | There is a growing interest in nonpharmacological pain treatment options such as cupping. |
| **Methods** | This meta-analysis aimed to assess the effectiveness and safety of cupping in chronic pain. PubMed, Cochrane Library, and Scopus were searched through November 2018 for randomized controlled trials on effects of cupping on pain intensity and disability in patients with chronic pain. Risk of bias was assessed using the Cochrane risk of bias tool. |
| **Results** | Of the **18 included trials (n =1,172)**, most were limited by clinical heterogeneity and risk of bias. Meta-analyses found large short-term effects of cupping on pain intensity compared to no treatment (standardized mean difference [SMD] = -1.03; 95% confidence interval [CI] = -1.41, -.65), but no significant effects compared to sham cupping (SDM = -.27; 95% CI = -.58, .05) or other active treatment (SMD = -.24; 95% CI = -.57, .09). For disability, there were medium-sized short-term effects of cupping compared to no treatment (SMD = -.66; 95% CI = -.99, -.34), and compared to other active treatments (SMD = -.52; 95% CI = -1.03, -.0028), but not compared to sham cupping (SMD = -.26; 95% CI = -.57,.05). Adverse events were more frequent among patients treated with cupping compared to no treatment; differences compared to sham cupping or other active treatment were not statistically significant. |
| **Conclusions** | Cupping might be a treatment option for chronic pain, but the evidence is still limited by the clinical heterogeneity and risk of bias. Perspective: this article presents the results of a meta-analysis aimed to assess the effectiveness and safety of cupping with chronic pain. The results suggest that cupping might be a treatment option; however, the evidence is still limited due to methodical limitations of the included trials. High-quality trials seem warranted. |

#### 1.2.9.5. Cao 2014

Cao Huijuan, Li Xun, Yan Xue, Wang NS, Liu Jianping. Cupping therapy for acute and chronic pain management: a systematic review of randomized clinical trials. Journal of Traditional Chinese Medical

Sciences. 2014;1(1):49-61. [151706].

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| **Objective** | Cupping as a traditional therapy is used to treat a myriad of health conditions, including pain. This systematic review assessed the effectiveness and safety of cupping for different types of pain. |
| **Methods** | Thirteen databases and four trial registries were searched for randomized clinical trials. Meta-analysis of data was conducted if there was non-significant clinical and statistical heterogeneity (measured by I2 test) among trials. |
| **Results** | Sixteen trials with 921 participants were eligible and included. Six trials were assessed as low risk of bias, another six trials were of unclear risk of bias, and the remaining four trials were of high risk of bias. Pain was related to three acute and seven chronic diseases. Meta-analysis showed a beneficial effect of cupping compared to wait-list control (visual analogue scale (VAS), MD −1.85 cm, 95%CI −2.66 to −1.04) and heat therapy (numerical rating scale, MD −2.05 cm, 95%CI −2.93 to −1.17). Cupping combined with acupuncture was superior to acupuncture alone on post-treatment pain intensity (VAS, MD −1.18 cm, 95%CI −1.68 to −0.68), however, no difference was found between this comparison based on changes in pain intensity (difference of VAS, MD 0.16 cm, 95%CI −0.54 to 0.87). Results from other single studies showed significant benefit of cupping compared with conventional drugs or usual care. Hematoma and pain at the treated site, increasing local pain or ¤tingling were reported as mild adverse effects of cupping. |
| **Conclusion** | This review suggests a potential positive short-term effect of cupping therapy on reducing pain intensity compared with no treatment, heat therapy, usual care, or conventional drugs. |

### 1.2.10. Foot Reflexology

#### 1.2.10.1. Lee 2011

Lee J Han M Chung Y Kim J and Choi J. Effects of foot reflexology on fatigue, sleep and pain: a systematic review and meta-analysis. J Korean Acad Nurs. 2011;41:821-33. [195764].

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| **Purpose** | The purpose of this study was to evaluate the effectiveness of foot reflexology on fatigue, sleep and pain. |
| **Methods** | A systematic review and meta-analysis were conducted. Electronic database and manual searches were conducted on all published studies reporting the effects of foot reflexology on fatigue, sleep, and pain. Forty four studies were eligible including 15 studies associated with fatigue, 18 with sleep, and 11 with pain. The effects of foot reflexology were analyzed using Comprehensive Meta-Analysis Version 2.0. The homogeneity and the fail-safe N were calculated. Moreover, a funnel plot was used to assess publication bias. |
| **Results** | The effects on fatigue, sleep, and pain were not homogeneous and ranged from 0.63 to 5.29, 0.01 to 3.22, and 0.43 to 2.67, respectively. The weighted averages for fatigue, sleep, and pain were 1.43, 1.19, and 1.35, respectively. No publication bias was detected as evaluated by fail-safe N. Foot reflexology had a larger effect on fatigue and sleep and a smaller effect on pain. |
| **Conclusion** | This meta-analysis indicates that foot reflexology is a useful nursing intervention to relieve fatigue and to promote sleep. Further studies are needed to evaluate the effects of foot reflexology on outcome variables other than fatigue, sleep and pain. |

## 1.3. Special Clinical Forms

### 1.3.1. Pain after surgery

#### 1.3.1.1. Wylde 2017

Wylde V, Dennis J, Beswick AD, Bruce J, Eccleston C, Howells N, Peters TJ, Gooberman-Hill R. Systematic review of management of chronic pain after surgery. Br J Surg. 2017;104(10):1293-130. [171505].

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| **Background** | Pain present for at least 3 months after a surgical procedure is considered chronic postsurgical pain (CPSP) and affects 10-50 per cent of patients. Interventions for CPSP may focus on the underlying condition that indicated surgery, the aetiology of new-onset pain or be multifactorial in recognition of the diverse causes of this pain. The aim of this systematic review was to identify RCTs of interventions for the management of CPSP, and synthesize data across treatment type to estimate their effectiveness and safety. |
| **Methods** | MEDLINE, Embase, PsycINFO, CINAHL and the Cochrane Library were searched from inception to March 2016. Trials of pain interventions received by patients at 3 months or more after surgery were included. Risk of bias was assessed using the Cochrane risk-of-bias tool. |
| **Results** | Some 66 trials with data from 3149 participants were included. Most trials included patients with chronic pain after spinal surgery (25 trials) or phantom limb pain (21 trials). Interventions were predominantly pharmacological, including antiepileptics, capsaicin, epidural steroid injections, local anaesthetic, neurotoxins, N-methyl-d-aspartate receptor antagonists and opioids. Other interventions included acupuncture, exercise, postamputation limb liner, spinal cord stimulation, further surgery, laser therapy, magnetic stimulation, mindfulness-based stress reduction, mirror therapy and sensory discrimination training. Opportunities for meta-analysis were limited by heterogeneity. For all interventions, there was insufficient evidence to draw conclusions on effectiveness. |
| **Conclusion** | There is a need for more evidence about interventions for CPSP. High-quality trials of multimodal interventions matched to pain characteristics are needed to provide robust evidence to guide management of CPSP. |

## 1.4. Special outcome

### 1.4.1. Patient-clinician relationship

#### 1.4.1.1. Pasini 2026

Pasini I, Donisi V, Veneziani E, De Lucia A, Humphris G, Schweiger V, Perlini C, Del Piccolo L. The role of the patient-clinician relationship in Chronic Pain Interventions: A systematic review. Review J Psychosom Res. 2026 Jul;206:112643. https://doi.org/10.1016/j.jpsychores.2026.112643

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| **Background** | This systematic review (PROSPERO 2024 CRD42024557180) aims to investigate the status of the current literature regarding the association between patient-clinician relationship and pain-related outcomes in clinical interventions targeting patients with chronic non-cancer pain (CNCP). |

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| **Methods** | Five electronic databases, PubMed, PsycINFO, Cochrane, Web of Science, and Scopus, were searched. All studies examining clinical interventions for CNCP that investigated the patient-clinician relationship-identified through MeSH terms such as interpersonal relationship, empathy, and therapeutic alliance- in relation to at least one pain outcome were included. The review adheres to the Joanna Briggs Institute methodology and adopts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to report data. All eligible studies were evaluated against the 16-item quality assessment tool QATSDD. |
| **Results** | The first step of the search process identified 3109 studies. After the screening, 37 articles, involving 10,281 patients, were included in the current review. Different clinical interventions were considered (psychological, physical or medical therapy, **acupuncture** or integrated and miscellaneous interventions). The clinician-patient relationship was measured through diverse quantitative scales to investigate different dimensions: therapeutic alliance, empathy, trust, clinician-patient interaction, and interpersonal dimensions. |
| **Conclusion** | Even if the population considered in the review, as well as the measures adopted to evaluate the relationship were highly heterogeneous, findings confirmed that in most cases clinician-patient relationship contributed to ameliorate different pain-related outcomes. |

### 1.4.2. Acupuncture responders

#### 1.4.2.1. Foster 2020

Foster NE, Vertosick EA, Lewith G, et al. Identifying patients with chronic pain who respond to acupuncture: results from an individual patient data meta-analysis. Acupuncture in Medicine. 2020. [205866]. doi

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| **Background** | In a recent individual patient data meta-analysis, acupuncture was found to be superior to sham and non-sham controls in patients with chronic pain. It has been suggested that a subgroup of patients has an exceptional response to acupuncture. We hypothesized the presence of exceptional acupuncture responders would lead to a different distribution of pain scores in acupuncture versus control groups, with the former being skewed to the right. |
| **Methods** | This individual patient data meta-analysis included 39 high-quality randomized trials of acupuncture for chronic headache, migraine, osteoarthritis, low back pain, neck pain and shoulder pain published before December 2015 (n = 20,827). In all, 25 involved sham acupuncture controls (n = 7097) and 25 non-acupuncture controls (n = 16,041). We analyzed the distribution of change scores and calculated the difference in the skewness statistic-which assesses asymmetry in the data distribution-between acupuncture and either sham or non-acupuncture control groups. We then entered the difference in skewness along with standard error into a meta-analysis. |
| **Findings** | Control groups were more right-skewed than acupuncture groups, although this difference was very small. The difference in skew was 0.124 for non-acupuncture-controlled trials (p = 0.047) and 0.141 for sham-controlled trials (p = 0.029). In a pre-specified sensitivity analysis excluding three trials with outlying results known a priori, the difference in skew between acupuncture and sham was no longer statistically significant (p = 0.2). |
| **Conclusion** | We did not find evidence to support the notion that there are exceptional acupuncture responders. The challenge remains to identify features of chronic pain patients that can be used to distinguish those that have a good response to acupuncture treatment. |

### 1.4.3. Reduction of prescribed opioid use

#### 1.4.3.1. Eccleston 2017

Eccleston C, Fisher E, Thomas KH, Hearn L, Derry S, Stannard C, Knaggs R, Moore RA. Interventions for the reduction of prescribed opioid use in chronic non-cancer pain. Cochrane Database Syst Rev. 2017. [52444].

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| **Background** | This is the first update of the original Cochrane Review published in 2013. The conclusions of this review have not changed from the 2013 publication. People with chronic non-cancer pain who are prescribed and are taking opioids can have a history of long-term, high-dose opioid use without effective pain relief. In those without good pain relief, reduction of prescribed opioid dose may be the desired and shared goal of both patient and clinician. Simple, unsupervised reduction of opioid use is clinically challenging, and very difficult to achieve and maintain. |
| **Objectives** | To investigate the effectiveness of different methods designed to achieve reduction or cessation of prescribed opioid use for the management of chronic non-cancer pain in adults compared to controls. |
| **Methods** | SEARCH METHODS: For this update we searched CENTRAL, MEDLINE, and Embase in January 2017, as well as bibliographies and citation searches of included studies. We also searched one trial registry for ongoing trials. SELECTION CRITERIA: Included studies had to be randomised controlled trials comparing opioid users receiving an intervention with a control group receiving treatment as usual, active control, or placebo. The aim of the study had to include a treatment goal of dose reduction or cessation of opioid medication. DATA COLLECTION AND ANALYSIS: Two review authors independently extracted data and assessed risk of bias. We sought data relating to prescribed opioid use, adverse events of opioid reduction, pain, and psychological and physical function. We planned to assess the certainty of the evidence using the GRADE approach, however, due to the heterogeneity of studies, we were unable to combine outcomes in a meta-analysis and therefore we did not assess the evidence with GRADE. |
| **Main Results** | Three studies are new to this update, resulting in five included studies in total (278 participants). Participants were primarily women (mean age 49.63 years, SD = 11.74) with different chronic pain conditions. We judged the studies too heterogeneous to pool data in a meta-analysis, so we have summarized the results from each study qualitatively. **The studies included acupuncture**, mindfulness, and cognitive behavioral therapy interventions aimed at reducing opioid consumption, misuse of opioids, or maintenance of chronic pain management treatments. We found mixed results from the studies. Three of the five studies reported opioid consumption at post-treatment and follow-up. Two studies that delivered 'Mindfulness-Oriented Recovery Enhancement' or 'Therapeutic Interactive Voice Response' found a significant difference between groups at post-treatment and follow-up in opioid consumption. The remaining study found reduction in opioid consumption in both treatment and control groups, and between-group differences were not significant. Three studies reported adverse events related to the study and two studies did not have study-related adverse events. We also found mixed findings for pain intensity and physical functioning. The interventions did not show between-group differences for psychological functioning across all studies. Overall, the risk of bias was mixed across studies. All studies included sample sizes of fewer than 100 and so we judged all studies as high risk of bias for that category. |

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| **Authors' Conclusions** | There is no evidence for the efficacy or safety of methods for reducing prescribed opioid use in chronic pain. There is a small number of randomised controlled trials investigating opioid reduction, which means our conclusions are limited regarding the benefit of psychological, pharmacological, or other types of interventions for people with chronic pain trying to reduce their opioid consumption. The findings to date are mixed: there were reductions in opioid consumption after intervention, and often in control groups too. |

#### 1.4.3.2. Windmill 2013

Windmill J, Fisher E, Eccleston C, Derry S, Stannard C, Knaggs R, Moore RA. Interventions for the Reduction of Prescribed Opioid use in Chronic Non-Cancer Pain. Bone Joint J. 2013;(9):1158-64. [170389].

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| **Objectives** | Patients with chronic non-cancer pain who are prescribed and are taking opioids can have a history of long term high dose opioid use without effective pain relief. In those without good pain relief, reduction of prescribed opioid dose may be the desired and shared goal of both patient and clinician. Simple unsupervised reduction of opioid use is clinically challenging, and very difficult to achieve and maintain. |
| **Methods** | To investigate the effectiveness of different methods designed to achieve reduction or cessation of prescribed opioid use for the management of chronic non-cancer pain.SEARCH METHODS: We searched the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, and EMBASE from inception to 8th April 2013, as well as bibliographies.SELECTION CRITERIA: Included studies had to be randomised controlled trials comparing opioid users receiving an intervention with a control group receiving treatment as usual, active control, or placebo. The aim of the study had to include a treatment goal of dose reduction or cessation of opioid medication.DATA COLLECTION AND ANALYSIS: We sought data relating to prescribed opioid use, adverse events of opioid reduction, pain, and psychological and physical function. |
| **Results** | Two studies provided information on 86 participants. One compared electroacupuncture with sham acupuncture for 20 minutes twice a week for six weeks; there was no difference between treatments. The other followed 11 weeks of cognitive behavioural therapy with either therapeutic interactive voice response through a computer for four months or usual treatment; the active group had a significant reduction in opioid use, while the usual care group had a significant increase. |
| **Conclusions** | Both included studies were at significant risk of bias because of their small size, together with other important issues, including blinding. Because of this risk and the paucity of relevant studies, **no conclusions can be drawn regarding the effectiveness of interventions for opioid withdrawal in chronic non-cancer pain.** |

### 1.4.4. Immediate Analgesic Effect

#### 1.4.4.1. Xiang 2017

Xiang A, Cheng K, Shen X, Xu P, Liu S. The Immediate Analgesic Effect of Acupuncture for Pain: A Systematic Review and Meta-Analysis. Evid Based Complement Alternat Med. 2017. [52268].

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| **Objective** | Although acupuncture is gaining popularity for the treatment of nonspecific pain, the immediate analgesic effect of acupuncture has never been reviewed. |

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| **Methods** | We conducted a systematic review and meta-analysis of randomized controlled trials (RCTs) on disease-related pain to critically evaluate the immediate effect of acupuncture for pain relief. The PubMed and Cochrane Central Register of Controlled Trials databases as well as three Chinese databases including the China National Knowledge Infrastructure (CNKI), Wanfang, and VIP platforms were searched through November 2016. The outcome was the extent of pain relief from baseline within 30 min of the first acupuncture treatment. We evaluated all RCTs comparing acupuncture with other interventions for disease-related pain. |
| **Results** | Real acupuncture showed statistically significantly greater pain relief effect compared to sham acupuncture (SMD, -0.56; 95% confidence interval [CI], -1.00 to -0.12; 9 RCTs) and analgesic injection (SMD, -1.33; 95% CI, -1.94 to -0.72; 3 RCTs). No serious adverse events were documented. |
| **Conclusions** | Acupuncture was associated with a greater immediate pain relief effect compared to sham acupuncture and analgesic injections. Further RCTs with stricter design and methodologies are warranted to evaluate the immediate pain relief effect of acupuncture for more disease-related pain. |

### 1.4.5. Duration of effect

#### 1.4.5.1. MacPherson 2017

MacPherson H, Vertosick EA, Foster NE, Lewith G, Linde K, Sherman KJ, Witt CM, Vickers AJ. The persistence of the effects of acupuncture after a course of treatment: a meta-analysis of patients with chronic pain. Pain. 2017;158(5):784-793. [195125].

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| **Objectives** | There is uncertainty regarding how long the effects of acupuncture treatment persist after a course of treatment. We aimed to determine the trajectory of pain scores over time after acupuncture, using a large individual patient data set from high-quality randomized trials of acupuncture for chronic pain. |
| **Methods** | The available individual patient data set included 29 trials and 17,922 patients. The chronic pain conditions included musculoskeletal pain (low back, neck, and shoulder), osteoarthritis of the knee, and headache/migraine. We used meta-analytic techniques to determine the trajectory of posttreatment pain scores. |
| **Results** | Data on longer term follow-up were available for **20 trials, including 6376 patients**. In trials comparing acupuncture to no acupuncture control (wait-list, usual care, etc), **effect sizes diminished by a nonsignificant 0.011 SD per 3 months (95% confidence interval: -0.014 to 0.037, P = 0.4) after treatment ended**. The central estimate suggests that approximately 90% of the benefit of acupuncture relative to controls would be sustained at 12 months. For trials comparing acupuncture to sham, we observed a reduction in effect size of 0.025 SD per 3 months (95% confidence interval: 0.000-0.050, P = 0.050), suggesting approximately a 50% diminution at 12 months. **The effects of a course of acupuncture treatment for patients with chronic pain do not seem to decrease importantly over 12 months**. |
| **Conclusions** | Patients can generally be reassured that treatment effects persist. Studies of the cost-effectiveness of acupuncture should take our findings into account when considering the time horizon of acupuncture effects. Further research should measure longer term outcomes of acupuncture. |

### 1.4.6. Neuroimaging evidence

#### 1.4.6.1. Ma 2026

Ma X, Wang X, Zhang W, Liu Y, Yang J, Wang Z. A meta-analysis of neuroimaging evidence for acupuncture-mediated modulation of altered central pain processing in patients with chronic pain. Front Neurol. 2026;17:1809628. https://doi.org/10.3389/fneur.2026.1809628

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| **Objective** | Chronic pain, a major global public health burden, is primarily driven by altered central pain processing, which conventional treatments rarely target directly. This systematic review and meta-analysis synthesized RCT evidence to quantify acupuncture's modulatory effects on brain networks associated with altered central pain processing, validate its clinical efficacy/safety, and explore brain network-clinical outcome associations. |
| **Methods** | Comprehensive searches of English/Chinese databases (2016-2025) identified RCTs of acupuncture for chronic pain with neuroimaging. Two researchers independently performed study selection, data extraction, and bias assessment. Meta-analysis used RevMan 5.4; heterogeneity was evaluated via I2/Q test, with correlation analysis and GRADE evidence quality assessment. |
| **Results** | **Seventeen high-quality RCTs comprising 750 patients**, with osteoarticular pain and migraine as main subtypes, were included. Acupuncture significantly improved neuroimaging indicators in the anterior cingulate cortex (ACC) and insula (MD = 0.27, $p < 0.00001$), primary somatosensory cortex (S1) and thalamus (MD = 0.30, $p < 0.00001$), and default mode network (DMN) (MD = 0.29, $p < 0.00001$). Clinically, acupuncture reduced Visual Analogue Scale (VAS) scores (MD = -2.31, $p < 0.00001$) and increased pain relief rate (OR = 4.30, $p < 0.00001$), with only mild adverse events reported. Osteoarticular pain demonstrated more pronounced efficacy. No significant publication bias was detected. The GRADE assessment rated the evidence for pain relief rate as high. |
| **Conclusion** | Acupuncture exerts dual effects by alleviating clinical pain - exceeding the minimal clinically important difference (MCID) for VAS - and modulating brain networks implicated in altered central pain processing. It is a safe and valuable non-pharmacological intervention, with standardized protocols and subtype-specific application recommended. However, the evidence is constrained by a limited number of studies, heterogeneity in pain subtypes and neuroimaging modalities, and short follow-up durations. Larger RCTs and multimodal neuroimaging studies are needed for further validation. |

### 1.4.7. Depression-associated chronic pain

#### 1.4.7.1. Zhao 2026

Zhao H, Gao Y, Zhang K, Tang C, Shen W. The efficacy of acupuncture for depression-associated chronic pain: a systematic review and meta-analysis. Front Psychiatry. 2026;17:1845974. https://doi.org/10.3389/fpsyt.2026.1845974

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| **Objective** | The comorbidity of pain and depression is prevalent, adding difficulty to the treatment of depression. This systematic review with meta-analysis aims to determine the efficacy and safety of acupuncture in treating depression-associated chronic pain (DACP). |

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| **Methods** | A comprehensive search was conducted across four international databases, namely PubMed, Embase, Web of Science, and the Cochrane Library, along with four regional databases, including Wanfang Data, CNKI, VIP database, and SinoMed, from inception to March 2025. The Cochrane Risk of Bias 2 tool was utilized to assess risk of bias in the included research articles, and the Grading of Recommendations Assessment, Development, and Evaluations system was employed to evaluate the certainty of evidence. Meta-regression analysis was performed to explore the influence of patient age and treatment duration on the study results, and sensitivity analysis was used to verify the stability of the results. The publication bias was evaluated when the number of included studies exceeded ten. All data analyses were completed using Stata15.1. |
| **Results** | **Ten randomized controlled trials involving 761 participants** were included. Acupuncture combined with conventional medications was more effective than medication alone in improving depressive symptoms (standardized mean difference (SMD): -0.72; 95% confidence interval (CI): -0.91 to -0.53; $P < 0.01$) and reducing pain (SMD: -0.85; 95% CI: -1.36 to -0.34; $P < 0.01$). Head-to-head comparisons revealed that acupuncture is similar to medication in improving the Hamilton Depression Rating Scale scores (SMD: -0.05; 95% CI: -0.61 to 0.51; $P > 0.05$) and the Visual Analogue Scale scores (SMD: -0.33; 95% CI: -0.94 to 0.29; $P > 0.05$), suggesting no statistically significant difference between the two treatments. In contrast, acupuncture was associated with a better safety profile (relative risk: 0.40; 95% CI: 0.27 to 0.60). Further subgroup analysis found the advantage of a 4-week acupuncture treatment in improving depressive symptoms, while longer-term treatment tended to be more effective in relieving pain. |
| **Conclusion** | Acupuncture appears to have comparable antidepressant and analgesic effects to conventional oral medications. When applied as an adjuvant therapy, acupuncture may enhance the clinical efficacy of monotherapy for DACP. Regarding treatment duration, a 4-week acupuncture intervention may be superior to a longer cycle (> 4 weeks) in alleviating depressive symptoms, while long-term acupuncture treatment may provide greater benefits in analgesia. |

# 2. Overviews of Systematic Reviews

## 2.1. Paley 2020

Paley CA, Johnson MI. Acupuncture for the Relief of Chronic Pain: A Synthesis of Systematic Reviews. Medicina (Kaunas). 2019;56(1). [209951]. doi

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| **Background and objectives** | It is estimated that 28 million people in the UK live with chronic pain. A biopsychosocial approach to chronic pain is recommended which combines pharmacological interventions with behavioural and non-pharmacological treatments. Acupuncture represents one of a number of non-pharmacological interventions for pain. In the current climate of difficult commissioning decisions and constantly changing national guidance, the quest for strong supporting evidence has never been more important. Although hundreds of systematic reviews (SRs) and meta-analyses have been conducted, most have been inconclusive, and this has created uncertainty in clinical policy and practice. There is a need to bring all the evidence together for different pain conditions. The aim of this review is to synthesise SRs of RCTs evaluating the clinical efficacy of acupuncture to alleviate chronic pain and to consider the quality and adequacy of the evidence, including RCT design. |
| **Materials and Methods** | Electronic databases were searched for English language SRs and meta-analyses on acupuncture for chronic pain. The SRs were scrutinized for methodology, risk of bias and judgement of efficacy. |

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| **Results** | : A total of 177 reviews of acupuncture from 1989 to 2019 met our eligibility criteria. The majority of SRs found that RCTs of acupuncture had methodological shortcomings, including inadequate statistical power with a high risk of bias. Heterogeneity between RCTs was such that meta-analysis was often inappropriate. |
| **Conclusions** | The large quantity of RCTs on acupuncture for chronic pain contained within systematic reviews provide evidence that is conflicting and inconclusive, due in part to recurring methodological shortcomings of RCTs. We suggest that an enriched enrolment with randomised withdrawal design may overcome some of these methodological shortcomings. It is essential that the quality of evidence is improved so that healthcare providers and commissioners can make informed choices on the interventions which can legitimately be provided to patients living with chronic pain. |

## 2.2. Nielsen 2019

Nielsen A , Wieland LS. Cochrane reviews on acupuncture therapy for pain: A snapshot of the current evidence. Explore (NY). 2019;8307(19):30454-9. [202439].

> Cochrane is an international non-profit organization established in 1993 to produce and disseminate high quality and unbiased systematic reviews of evidence on health care interventions. At the forefront of systematic review methodology, Cochrane is generally accepted to be among the most carefully prepared and rigorous sources of systematic review evidence. There are numerous Cochrane reviews on nonpharmacologic interventions for pain and multiple Cochrane reviews evaluating acupuncture therapy in pain conditions. But how complete and up to date are those reviews relative to other rigorous systematic reviews with meta-analyses of acupuncture therapy for pain published in the literature? In this 'snapshot' overview, we found 22 relevant Cochrane reviews, some concluding that acupuncture therapy is probably useful for treating specific pain conditions. However, many of the conditions for which acupuncture is most commonly used are either not represented in Cochrane reviews or the existing Cochrane reviews are seriously outdated and do not reflect current evidence. This creates confusion with the risks of adverse effects and addiction liability associated with pain medications, the prevalence of chronic pain, the ongoing opioid epidemic and the need for evidence-based options for pain as part of comprehensive pain care. Clinicians and patients want clarification on safe and effective options to treat pain. Issues involving reviewed trials' inadequate use of sham comparators, of acupuncture as a complex intervention with interactive components and a shift in research focus from efficacy trials to real-world pragmatic trials are discussed in relation to updating Cochrane reviews of acupuncture therapy for pain.

## 2.3. Ernst 2011 ☆

Ernst E, Lee MS, Choi TY. Acupuncture: does it alleviate pain and are there serious risks? a review of reviews. Pain. 2011;152(4):755-64. [156247].

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| **Aim** | Acupuncture is commonly used for pain control, but doubts about its effectiveness and safety remain. This review was aimed at critically evaluating systematic reviews of acupuncture as a treatment of pain and at summarizing reports of serious adverse effects published since 2000. |
| **Method** | Literature searches were carried out in 11 databases without language restrictions. Systematic reviews were considered for the evaluation of effectiveness and case series or case reports for summarizing adverse events. Data were extracted according to predefined criteria. |
| **Results** | Fifty-seven systematic reviews met the inclusion criteria. Four were of excellent methodological quality. Numerous contradictions and caveats emerged. Unanimously positive conclusions from more than one high-quality systematic review existed only for neck pain. Ninety-five cases of severe adverse effects including 5 fatalities were included. Pneumothorax and infections were the most frequently reported adverse effects. |

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| **Conclusion** | In conclusion, numerous systematic reviews have generated little truly convincing evidence that **acupuncture is effective in reducing pain**. Serious adverse effects continue to be reported. Numerous reviews have produced little convincing evidence that acupuncture is effective in reducing pain. Serious adverse events, including deaths, continue to be reported. |

## 2.4. Lee 2011 ☆☆

Lee Ms, Ernst E. Acupuncture for pain: an overview of Cochrane reviews. Chinese Journal of Integrated Medicine. 2011;17(3):187-9. [158621]

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| **Objective** | Cochrane reviews have the reputation for being more transparent and rigorous than other reviews. The aim of this overview was to evaluate and summarize Cochrane reviews of acupuncture for the treatment of any type of pain. |
| **Methods** | We searched the Cochrane Database and evaluated the Cochrane reviews that were concerned specifically with the effectiveness of acupuncture for pain. Data were extracted according to pre-defined inclusion criteria by two independent reviewers. |
| **Results** | Eight Cochrane reviews were included. They were all of high methodological quality. They related to a wide range of pain syndromes. Four reviews concluded that acupuncture is effective for migraines, neck disorders, tension-type headaches, and peripheral joint osteoarthritis; one review failed to demonstrate type the effectiveness of acupuncture for rheumatoid arthritis; and three reviews were inconclusive for shoulder pain, lateral elbow pain, and low back pain. |
| **Conclusion** | Several Cochrane reviews of acupuncture for a wide range of pain conditions have recently been published. All of these reviews were of high quality. Their results suggest that **acupuncture is effective for some but not all types of pain**. |

## 2.5. Hopton 2010 ☆☆☆

Hopton A, Macpherson H. Acupuncture for chronic pain: is acupuncture more than an effective placebo? a systematic review of pooled data from meta-analyses. Pain Pract. 2010;10(2):94-102. [22116].

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| **Objectives** | There is controversy as to whether or not acupuncture is more effective than placebo. To help clarify this debate, we synthesized the evidence gathered from systematic reviews on the pooled data of high-quality randomized controlled trials comparing acupuncture to sham acupuncture for chronic pain. |
| **Method** | Systematic reviews of acupuncture for the most commonly occurring forms of chronic pain (back, knee, and head) published between 2003 and 2008 were sourced from Ovid databases: Medline, Allied and Complementary Medicine database, Cochrane Library and Web of Science during December 2008. Eight systematic reviews with meta-analyses of pooled data were eligible for inclusion. Data were extracted for short- and longer-term outcomes for the most commonly occurring forms of pain. Two independent reviewers assessed methodological quality. |
| **Results** | For short-term outcomes, acupuncture showed significant superiority over sham for back pain, knee pain, and headache. For longer-term outcomes (6 to 12 months), acupuncture was significantly more effective for knee pain and tension-type headache but inconsistent for back pain (one positive and one inconclusive). In general, effect sizes (standardized mean differences) were found to be relatively small. |

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| **Discussion** | The accumulating evidence from recent reviews suggests that **acupuncture is more than a placebo for commonly occurring chronic pain conditions**. If this conclusion is correct, then we ask the question: is it now time to shift research priorities away from asking placebo-related questions and shift toward asking more practical questions about whether the overall benefit is clinically meaningful and cost-effective? |

# 3. Cost-Effectiveness Analysis

See corresponding item

# 4. Clinical Practice Guidelines

⊕ positive recommendation (regardless of the level of evidence reported)
Ø negative recommendation (or lack of evidence)

## 4.1. Centers for Disease Control and Prevention (CDC, USA) 2022 ⊕

Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R. CDC Clinical Practice Guideline for Prescribing Opioids for Pain - United States, 2022. MMWR Recomm Rep. 2022 Nov 4;71(3):1-95. https://doi.org/10.15585/mmwr.rr7103a1

Clinicians should recommend appropriate noninvasive nonpharmacologic approaches to help manage chronic pain, such as exercise (e.g., aerobic, aquatic, or resistance exercises) or exercise therapy (a prominent modality in physical therapy) for back pain, fibromyalgia, and hip or knee osteoarthritis; weight loss for knee osteoarthritis; manual therapies for hip osteoarthritis; psychological therapy, spinal manipulation, low-level laser therapy, massage, mindfulness-based stress reduction, yoga, **acupuncture**, and multidisciplinary rehabilitation for *low back pain;* mind-body practices (e.g., yoga, tai chi, or qigong), massage, and **acupuncture** for *neck pain*; cognitive behavioral therapy, myofascial release massage, mindfulness practices, tai chi, qigong, **acupuncture**, and multidisciplinary rehabilitation for *fibromyalgia*; and spinal manipulation for tension headache.

## 4.2. Department of Veterans Affairs Department of Defense (VA/DoD, USA) 2022 ⊕

VA/DoD clinical practice guideline for the use of opioids in the management of chronic pain. Department of Veterans Affairs Department of Defense. 2022:177P. https://www.healthquality.va.gov/guidelines/Pain/cot/VADoDOpioidsCPG.pdf

Complementary and integrative approaches, including: **Acupuncture/dry needling**, Biofeedback/neurofeedback, Clinical hypnosis, Massage therapy, Meditation, Relaxation techniques (e.g., deep breathing/diaphragmatic breathing, visualization, muscle relaxation, guided imagery), Tai Chi/Qigong, Yoga

## 4.3. Istituto Superiore di Sanità (ISS, Italy) 2022 ⊕

Agopuntura per la terapia del dolore. Linea guida pubblicata nel Sistema Nazionale Linee Guida Roma, 25 luglio 2022.
https://snlg.iss.it/wp-content/uploads/2022/07/LG-412_FISA_Agopuntura-per-terapia-dolore.pdf

**Quesito 1**: *Dovrebbe essere utilizzata l'agopuntura per la profilassi dell'emicrania cronica ed episodica rispetto al trattamento farmacologico?*
Raccomandazione clinica: Nei pazienti adulti a rischio di emicrania cronica o episodica si suggerisce di proporre la profilassi con agopuntura rispetto al trattamento farmacologico. Certezza nelle prove: moderata. Forza della raccomandazione: Condizionata a favore di agopuntura.
**Quesito 2**: *Dovrebbe essere utilizzata l'agopuntura in pazienti affetti da lombalgia cronica aspecifica rispetto al trattamento non farmacologico?*
Raccomandazione clinica: In pazienti adulti affetti da lombalgia cronica aspecifica è possibile utilizzare sia l'agopuntura che il trattamento non farmacologico. Certezza nelle prove: molto bassa. Forza della raccomandazione: Condizionata a favore di agopuntura o trattamento non farmacologico.
**Quesito 3:** *Dovrebbe essere utilizzata l'agopuntura in pazienti affetti da lombalgia cronica aspecifica rispetto al trattamento farmacologico?*
Raccomandazione clinica: In pazienti adulti affetti da lombalgia cronica aspecifica è possibile utilizzare l'agopuntura rispetto al trattamento farmacologico. Certezza nelle prove: molto bassa. Forza della raccomandazione: condizionata a favore di agopuntura.
**Quesito 4:** *Dovrebbe essere utilizzata l'agopuntura in pazienti affetti da lombalgia cronica aspecifica rispetto al trattamento combinato farmacologico e non farmacologico?*
Raccomandazione clinica: In pazienti adulti affetti da lombalgia cronica aspecifica è possibile utilizzare l'agopuntura rispetto al trattamento combinato farmacologico e non farmacologico. Certezza nelle prove: moderata. Forza della raccomandazione: condizionata a favore di agopuntura.
**Quesito 5:** *Dovrebbe essere utilizzata l'agopuntura in aggiunta al trattamento non farmacologico in pazienti affetti da lombalgia cronica aspecifica rispetto al trattamento non farmacologico?*
Raccomandazione clinica: In pazienti adulti affetti da lombalgia cronica aspecifica è possibile utilizzare l'agopuntura in aggiunta al trattamento non farmacologico rispetto al trattamento non farmacologico. Certezza nelle prove: molto bassa. Forza della raccomandazione: condizionata a favore di agopuntura. .
**Quesito 6:** *Dovrebbe essere utilizzata l'agopuntura in aggiunta al trattamento combinato farmacologico e non farmacologico in pazienti affetti da lombalgia cronica aspecifica rispetto al trattamento combinato farmacologico e non farmacologico?*
Raccomandazione clinica: In pazienti adulti affetti da lombalgia cronica aspecifica l'aggiunta dell'agopuntura al trattamento combinato farmacologico e non farmacologico migliora gli esiti clinici, rispetto al solo trattamento combinato farmacologico e non farmacologico. Certezza nelle prove: molto bassa. Forza della raccomandazione: condizionata a favore di agopuntura

## 4.4. Michigan Quality Improvement Consortium Guideline (MQIC, USA) 2022 ⊕

Opioid Prescribing in Adults Excluding Palliative and End-of-Life Care Guideline. Nov 2022. http://mqic.org/pdf/opioidprescribinginadultsexcludingpalliativeandendoflifecareFINAL2022.pdf

*Avoid starting opioids*. Opioid Use Disorder (OUD) often begins with initial opioid exposure in treatment of acute pain and is associated with a substantial risk of chronic use in some patients. Treat pain with non-drug therapy (e.g., physical [**acupuncture**, massotherapy] or behavioral modalities), and non-opioid medications (e.g., acetaminophen, NSAIDS), if possible. Opioids are rarely useful in chronic pain management. Risks usually outweigh benefits. Consider buprenorphine if an opioid is considered appropriate for chronic pain treatment. Discuss patient's wishes specific to opioid use. Consider opioid therapy only if expected realistic benefits for both pain and function are anticipated to outweigh risks to the patient.

## 4.5. American Academy of Family Physicians (AAFP, USA) 2021 ⊕

AAFP Chronic Pain Toolkit. American Academy of Family Physicians. 2021. [188191]. URL

Chronic pain : Non-opioid analgesics, physical therapy, cognitive behavioral therapy, rehabilitation, exercise, integrative medical therapies (e.g., yoga, relaxation, tai chi, massage, and **acupuncture**), opioids on a case-by-case basis.
Acupuncture : indications Low back pain, fibromyalgia, chronic headache, neck pain. Magnitude to benefit pain and function: small to moderate.

## 4.6. Japanese Association for the Study of Pain (JASP) Committee for Clinical Practice Guideline for the Management of Chronic Pain (Japan) 2021 ⊕

The Committee for Clinical Practice Guideline for the Management of Chronic Pain. Clinical Practice Guidelines For the Management of Chronic Pain . Tokyo: Publication Department of Medical Books, Shinko Trading Co. Ltd.; 2021 .
https://paincenter.gloomy.jp/paincenter/wp-content/uploads/2022/02/chronicpaintreatmentguide2021e.pdf

**CQ H-1:** Are acupuncture and moxibustion useful for chronic pain? **Answer:** We believe that acupuncture and moxibustion are useful for patients with chronic pain. However, when selecting a form of treatment, we recommend prioritizing the values of the patient after considering the effects and costs. An important element when opting for acupuncture and moxibustion treatment is ensuring that practitioners have appropriate knowledge of chronic pain. Recommendation Grade: 2 (weak) – Implementation is weakly recommended. Summary of Overall Evidence: C (low).

## 4.7. National Institute For Health And Care Excellence (NICE, UK) 2021 ⊕

National Institute for Health and Clinical Excellence. Guideline-Chronic pain in over 16s: assessment and management. Draft for consultation. April 2021. |URL|

**Acupuncture for chronic primary pain** 1.3.5 Consider a course of acupuncture or dry needling, within a traditional Chinese or Western acupuncture system, for people aged 16 years and over to manage chronic primary pain, but only if the course: is delivered in a community setting, and is delivered by a band 7 (or lower) healthcare professional, and is made up of no more than 5 hours of healthcare professional time (the number and length of sessions can be adapted within these boundaries).

## 4.8. University of Michigan Health System (UM-HS, USA) 2021 ⊕

Ambulatory Pain Management Guideline. University of Michigan Health System. 2021. [219372]. URL/

Acupuncture: Osteoarthritis, chronic neck and low back pain, Headache, Post-herpetic neuralgia, chemotherapy induced polyneuropathy, Fibromyalgia;

## 4.9. Agency for Healthcare Research and Quality (ARQ, USA) 2020 ⊕

Skelly AC, Chou R, Dettori JR, Turner JA, Friedly JL, Rundell SD, Fu R, Brodt ED, Wasson N, Kantner S, Ferguson AJR. Noninvasive Nonpharmacological Treatment for Chronic Pain: A Systematic Review Update [Internet]. . 2020;:607p. [208656]. doi/

Interventions that improved function and/or pain for ≥1 month:
- *Low back pain*: Exercise, psychological therapy, spinal manipulation, low-level laser therapy, massage, mindfulness-based stress reduction, yoga, **acupuncture**, multidisciplinary rehabilitation (MDR).
- *Neck pain*: Exercise, low-level laser, mind-body practices, massage, **acupuncture**
- *Knee osteoarthritis*: Exercise, cognitive behavioral therapy (CBT).
- *Hip osteoarthritis*: Exercise, manual therapies- *Fibromyalgia*: Exercise, CBT, myofascial release massage, mindfulness practices, tai chi, qigong, **acupuncture**, MDR.
- *Tension headache*: Spinal manipulation.
Some interventions did not improve function or pain.
Serious harms were not observed with the interventions.

## 4.10. Canadian Agency for Drugs and Technologies in Health (CADTH, Canada) 2019

Sutton D, McCormack S. Acupuncture for Chronic Non-Cancer Pain: A Review of Clinical Effectiveness, Cost Effectiveness and Guidelines [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2019. 94P. [203760]. DOI

A total of 23 systematic reviews, one economic study, and nine evidence-based guidelines were identified regarding the clinical effectiveness, cost-effectiveness, and recommendations for the use of acupuncture (including electroacupuncture, dry needling, manual acupuncture, and warm needle acupuncture) in patients with a variety of chronic non-cancer pain conditions. The identified systematic reviews were largely considered to be high-quality, and most evaluated the clinical effectiveness of acupuncture in general compared with sham interventions or medications. When specified, the most common type of comparator medications was non-steroidal anti-inflammatory drugs (NSAIDs). Many systematic reviews suggested evidence of acupuncture effectiveness for decreased pain, with some additionally reporting no difference in adverse events between acupuncture and comparator groups, but the results were inconsistent overall and often varied depending on the patient population. Likewise, recommendations regarding acupuncture were conflicting depending on the guideline group. Six evidence-based guidelines provided recommendations of varying strengths for the use of acupuncture in several chronic pain conditions (including chronic low back pain, different types of arthritis, and other pain disorders), two guidelines did not provide recommendations for acupuncture in patients with chronic low back pain and spinal cord-related neuropathic injuries due to insufficient evidence, and one guideline recommended against acupuncture for neck pain and associated disorders due to evidence of no effectiveness. One economic evaluation conducted in Iran found that electropuncture had a lower average cost-effectiveness ratio than NSAIDs for patients with chronic low back pain. However, firm conclusions regarding the relative costs and benefits of electroacupuncture and NSAIDs cannot be drawn as the incremental cost-effectiveness ratio was not reported in this study. Despite the number of high-quality systematic reviews and evidence-based guidelines identified regarding acupuncture for chronic non-cancer pain and their support for acupuncture, evidence demonstrating clinical effectiveness of acupuncture is limited because of the low-quality primary studies contributing to the evidence base. The STRICTA (Standards for Reporting Interventions in Clinical Trials of Acupuncture) criteria can be used while planning primary studies to increase the quality of these primary studies and to develop robust evidence. Additional high-quality economic studies conducted in Canada are also required to determine the cost-effectiveness of acupuncture for the treatment of chronic non-cancer pain in a Canadian context.

## 4.11. Scottish Intercollegiate Guidelines Network (SIGN) 2019 ⊕

Scottish Intercollegiate Guidelines Network (SIGN). Management of chronic pain. Edinburgh: SIGN. 2019. https://www.sign.ac.uk/media/1108/sign136_2019.pdf

Acupuncture should be considered for short-term relief of pain in patients with chronic low back pain or osteoarthritis grade of recommendation A/

## 4.12. Agency for Healthcare Research and Quality (ARQ, USA) 2018 ⊕

Skelly AC, Chou R, Dettori JR, Turner JA, Friedly JL, Rundell SD, Fu R, Brodt ED, Wasson N, Winter C, Ferguson AJR. Noninvasive Nonpharmacological Treatment for Chronic Pain: A Systematic Review. Agency for Healthcare Research and Quality (ARQ, USA). 2018. 1398P. [192680].

Exercise, multidisciplinary rehabilitation, **acupuncture**, CBT, and mind-body practices were most consistently associated with durable slight to moderate improvements in function and pain for specific chronic pain conditions. Our findings provided some support for clinical strategies that focused on use of nonpharmacological therapies for specific chronic pain conditions. Additional comparative research on sustainability of effects beyond the immediate post-treatment period is needed, particularly for conditions other than low back pain.
Interventions that improved function and/or pain for at least 1 month when used for:
- Chronic low back pain: Exercise, psychological therapies (primarily cognitive behavioral therapy [CBT]), spinal manipulation, low-level laser therapy, massage, mindfulness-based stress reduction, yoga, **acupuncture**, multidisciplinary rehabilitation (MDR).
- Chronic neck pain: Exercise, low-level laser, Alexander Technique, **acupuncture**.
- Knee osteoarthritis: Exercise, ultrasound.
- Hip osteoarthritis: Exercise, manual therapies.
- Fibromyalgia: Exercise, CBT, myofascial release massage, tai chi, qigong, **acupuncture**, MDR.

## 4.13. American Academy of Physical Medicine and Rehabilitation (AAPM&R, USA) 2018 ⊕

Shaw E, Braza DW, Cheng DS, Ensrud E, Friedman AS, Hamilton RG, Miller JJ, Nagpal AS, Sharma S. American Academy of Physical Medicine and Rehabilitation Position Statement on Opioid Prescribing. PM R. 2018 Jun;10(6):681-683. https://doi.org/10.1016/j.pmrj.2018.05.004

Acute, subacute, and chronic pain management should be multimodal. AAPM&R believes that evidence-based, pain management treatments should include cognitive behavioral therapy, integrative treatments (ie, mindfulness, **acupuncture**), nonopioid medications, physical therapy modalities, interventional procedures, and appropriate opioid medications when indicated.

## 4.14. Canadian Medical Association (CMA, Canada) 2017 ⊕

Lignes directrices canadiennes relatives à l'utilisation des opioïdes pour le traitement de la douleur chronique non cancéreuse, Canadian Medical Association. 2017:110P. [196698].

Recommandation 1: Lorsqu'on envisage le traitement d'un patient atteint de douleur chronique non cancéreuse nous recommandons l'optimisation de la pharmacothérapie non opioïde et du traitement non pharmacologique plutôt qu'un essai d'opioïdes (Recommandation Forte).
Le tableau 2 énumère certains des traitements spécifiques disponibles pour la prise en charge de la douleur chronique non cancéreuse ainsi que les données probantes appuyant chacun de ces traitements .
*Lombalgie chronique.* Qualité des données probantes : Faible à modérée Données probantes soutenant des bienfaits légers à modérés à court terme avec les stratégies suivantes : Tai-chi, méthode de réduction de stress fondée sur la pleine conscience, exercice, rééducation multidisciplinaire, manipulation rachidienne, massothérapie et acupuncture. Les effets sur la capacité fonctionnelle étaient en général moins importants que les effets sur la douleur.
*Douleurs dorsales, ostéo-arthrite du genou, douleurs cervicales, fibromyalgie, céphalées graves ou migraines.* Qualité des données probantes : Faible ou très faible. Thérapies dont l'efficacité est appuyée par certaines données probantes : acupuncture, yoga, massothérapie, manipulation rachidienne, manipulation ostéopathique, tai-chi et approches de relaxation peuvent aider certains patients à gérer leur douleur.

## 4.15. Société Scientifique de Médecine Générale (Belgique) 2017 ⊕

Henrard G, Cordyn S, Chaspierre A, Kessels T, Mingels S, Vanhalewyn M. Guide de Pratique Clinique - Prise en charge de la douleur chronique en première ligne de soins. Société Scientifique de Médecine Générale (Groupe de Travail Développement Recommandations de Bonne Pratique Première Ligne) Belgique. 2017; : 59p. [194983].

Les patients doivent être informés du fait que, pour le moment, il n'existe pas suffisamment de preuves pour élaborer une recommandation concernant l'utilisation de la phytothérapie et des autres médecines parallèles (**à l'exception de l'acupuncture**) dans la prise en charge de la douleur. (GRADE 1A)
L'acupuncture doit être envisagée pour soulager à court terme pendant une certaine période les patients souffrant de douleur chronique dans le bas du dos ou d'arthrose. (GRADE 2B)

## 4.16. Ministry of Health (MOH, Malaysia) 2017 ⊕

Traditional and Complementary Medicine Practice Guideline on Acupuncture. Traditional and Complementary Medicine (T&CM) Division, Ministry of Health (MOH). Kuala Lumpur, Malaysia. 2017. 41p. [180540].

Acupuncture services offered at the T&CM Units of public healthcare facilities are indicated for: a) Post stroke management; b) **Chronic pain management**; and c) Chemotherapy-induced nausea and vomiting.

## 4.17. Massachusetts Department of Industrial Accidents (DIA, USA) 2016 ⊕

Chronic pain treatment guideline. Massachusetts Department of Industrial Accidents (DIA). 2016. 11P. [181264].

Acupuncture–Must be ordered by a licensed MD, DC, DO, PA, NP, or PT and performed by an acupuncturist licensed in the state where the acupuncture service is provided. Six (6) visits allowed in first eight (8) weeks of acupuncture treatment. Thereafter, the ordering practitioner may request additional visits if there is documentation of objective improvement in functional activity or when the symptomatic benefit facilitates progression in the patient's treatment program. Maximum visits are not to exceed sixteen (16) visits in twelve (12) weeks. The ordering/treating practitioner cannot be the provider of the acupuncture service.

## 4.18. Australian and New Zealand College of Anaesthetists (ANZCA, Autralia-New Zealand) 2015 ⊕

Acute Pain Management: Scientific Evidence. Australian and New Zealand College of Anaesthetists. 2015:714P. [196721].

PC6 acupuncture, PC6 acupressure and PC6 electroacupoint stimulation reduce postoperative nausea and vomiting (N) (Level I [PRISMA]).
1. Acupuncture and acupressure for *labour pain* reduces pain, use of pharmacological pain relief, Caesarean delivery rates and may increase satisfaction with pain management compared to standard care or placebo (S) (Level I [Cochrane Review]). \\2. *For oocyte retrieval*, electroacupuncture when added to conscious sedation reduces procedural and postoperative pain more than sedation plus placebo or sedation alone, but not when added to paracervical block (N) (Level I [Cochrane Review]). \\3. Acupuncture or acupressure may be effective in the treatment of *primary dysmenorrhoea* (S) (Level I [Cochrane Review]).
4. Acupuncture may be effective in other acute pain settings (S) (Level I [PRISMA]), including *acute burns* and *back pain* (N) (Level I [PRISMA]), *tension-type headaches* and *migraine* (N) (Level I [Cochrane Review]).
5. Acupuncture (S) (Level I), specifically auricular acupuncture (N) (Level I [PRISMA] reduces *postoperative pain*, opioid requirements as well as opioid-related adverse effects compared to a variety of controls. Beneficial effects of acupuncture on postoperative pain have been confirmed after back surgery and ambulatory knee surgery (N) (Level I [PRISMA]) and total knee joint replacement (N) (Level II).

## 4.19. Department of Industrial Relations, California 2015 (USA) ⊕

Chronic pain medical treatment guidelines. Medical treatment utilization schedule (MTUS). Department of Industrial Relations, California. State of California code of regulations. 2015. [181262].

A. As used in this section, the following definitions apply: 1) “Acupuncture” is used as an option when pain medication is reduced or not tolerated, it may be used as an adjunct to physical rehabilitation and/or surgical intervention to hasten functional recovery. It is the insertion and removal of filiform needles to stimulate acupoints (acupuncture points). Needles may be inserted, manipulated, and retained for a period of time. Acupuncture can be used to reduce pain, reduce inflammation, increase blood flow, increase range of motion, decrease the side effect of medication-induced nausea, promote relaxation in an anxious patient, and reduce muscle spasm. (2) “Acupuncture with electrical stimulation” is the use of electrical current (micro-amperage or milli-amperage) on the needles at the acupuncture site. It is used to increase effectiveness of the needles by continuous stimulation of the acupoint. Physiological effects (depending on location and settings) can include endorphin release for pain relief, reduction of inflammation, increased blood circulation, analgesia through interruption of pain stimulus, and muscle relaxation. It is indicated to treat chronic pain conditions, radiating pain along a nerve pathway, muscle spasm, inflammation, scar tissue pain, and pain located in multiple sites. (3) “Chronic pain for purposes of acupuncture” means chronic pain as defined in section 9792.20.
B. Application : (1) These guidelines apply to acupuncture or acupuncture with electrical stimulation when referenced in the clinical topic medical treatment guidelines in the series of sections commencing with 9792.23.1 et seq., or in the chronic pain medical treatment guidelines contained in section 9792.24.2.
C. Frequency and duration of acupuncture or acupuncture with electrical stimulation may be performed as follows: (1) Time to produce functional improvement: 3 to 6 treatments. (2) Frequency: 1 to 3 times per week (3) Optimum duration: 1 to 2 months (d) Acupuncture treatments may be extended if functional improvement is documented as defined in Section 9792.20(f). (e) It is beyond the scope of the Acupuncture Medical Treatment Guidelines to state the precautions, limitations, contraindications or adverse events resulting from acupuncture or acupuncture with electrical stimulations. These decisions are left up to the acupuncturist.

## 4.20. British Columbia Cancer Agency (BCCA, Canada) 2014 ⊕

Symptom Management Guidelines: pain. BC Cancer Agency. 2014. 7P. [176727].

*Grade 1, non-urgent, Non-Pharmacological Management*, **Acupuncture**, therapeutic touch, reiki, massage, Transcutaneous electrical nerve stimulation (TENS), ultrasound. Possible Referrals: Patient Support Centre, Telephone Care for follow-up, Massage therapist, **Acupuncturist**, Physiotherapist.

## 4.21. Australian and New Zealand College of Anaesthetists (ANZCA, Autralia-New Zealand) 2013 ⊕

Guidelines on Acute Pain Management. Australian and New Zealand College of Anaesthetists (ANZCA). 2013:5p. [196737].

Psychological interventions, **acupuncture**, transcutaneous electrical nerve stimulation and physical therapy may be effective in some acute pain settings.

## 4.22. Scottish Intercollegiate Guidelines Network (SIGN, Ecosse) 2013 ⊕

Scottish Intercollegiate Guidelines Network (SIGN). Management of chronic pain. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN). 2013; 64P. [167517].

Acupuncture should be considered for short term relief of pain in patients with chronic low back pain or osteoarthritis.

## 4.23. U.S. Navy Bureau of Medicine and Surgery (USA) 2013 ⊕

Acupuncture. U.S. Navy Bureau of Medicine and Surgery. 2013.17p. [180539].

Category B (limited evidence): Authorized but not recommended for routine use (consider as adjunct). **Chronic pain**. **Acute pain including dental pain**

## 4.24. Health Care for the Homeless (HCH) Clinicians‘ Network (USA) 2011 ⊕

Recommendations for the Care of Homeless Adults with Chronic Non-Malignant Pain Chronic Pain Management. Health Care for the Homeless (HCH) Clinicians‘ Network. 2011:127p. [197696].

Develop relationships with outside partners and/or hire/train staff to provide services – e.g., pharmacy or program that can dispense medications weekly or more often, addiction medicine specialist, pain clinic, cognitive behavioral therapist, physical/occupational therapist, acupuncturist.
Consider using a member of the care team other than the primary care provider (behavioral health counselor, acupuncturist, panel manager, occupational therapist, nurse, social worker, case manager) as the primary contact person for the patient, to lower potential access/ communication barriers.
Although multiple studies have confirmed the use of acupuncture as analgesia, few have focused on chronic pain.
Physical Interventions: Items at left may be accompanied by acupuncture.
Acupuncture can be an effective tool in the treatment of many different types of pain, as a nonpharmacological approach to chronic pain management and/or to help patients gradually stop using pain medications. \\Moreover, acupuncture helps patients with stress, coping, and relapse prevention issues, and can help to alleviate grief, fear, insomnia, depression, and anxiety. An acupuncture treatment program can be a bridge to their other providers, encouraging the patient to pursue necessary medical follow-up.

## 4.25. Colorado Division of Workers' Compensation (USA) 2011 ⊕

Colorado Division of Workers' Compensation. Chronic pain disorder medical treatment guidelines. Denver (CO): Colorado Division of Workers' Compensation. 2011: 110P. [167400].

Acupuncture is commonly used as an alternative or in addition to traditional Western pharmaceuticals. It may be used when pain medication is reduced or not tolerated; as an adjunct to physical rehabilitation, surgical intervention; and/or as part of multidisciplinary treatment to hasten the return of functional activity. Acupuncture must be performed by practitioners with the appropriate credentials in accordance with state and other applicable regulations. Therefore, if not otherwise within their professional scope of practice and licensure, those performing acupuncture must have the appropriate credentials, such as L.A.c., R.A.c, or Dipl. Ac.

## 4.26. Swedish Council on Health Technology Assessment (Suède) 2010 Ø

Swedish Council on Health Technology Assessment. Rehabilitation of Patients with Chronic Pain Conditions: A Systematic Review [Internet]. SBU Yellow Report. 2010;98:26P. [178805].

Acupuncture stimulates using needles which penetrate the skin or the mucous membrane. The method is applied both within orthodox health care and in alternative and in alternative and complementary medicine. Compared with control methods involving some form of stimulation, acupuncture shows no difference with respect to either pain intensity or levels of activity three months after completion of treatment.

## 4.27. American Society of Anesthesiologists Task Force on Chronic Pain Management, American Society of Regional Anesthesia and Pain Medicine (USA) 2010 ⊕

Practice guidelines for chronic pain management: an updated report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. Anesthesiology. 2010;112(4):810-33. [155473].

Recommendations for acupuncture. Acupuncture may be considered as an adjuvant to conventional therapy (e.g., drugs, physical therapy, and exercise) in the treatment of nonspecific, noninflammatory low back pain.

## 4.28. Swedish Council on Health Technology Assessment (Suède) 2006 ⊕

Swedish Council on Health Technology Assessment. Methods of Treating Chronic Pain: A Systematic Review [Internet]. SBU Yellow Report. 2006;177:18p. [178804].

Acupuncture: Western acupuncture alleviates chronic low back pain more effectively than placebo (strong scientific evidence). There is strong scientific evidence that acupuncture alleviates low back pain, lateral epicondylitis (tennis elbow), neck and shoulder pain as effectively as other treatments.

## 4.29. Health Care Association of New Jersey (HCANJ, USA) 2006 ⊕

Pain management guidelines. Hamilton (NJ): Health Care Association of New Jersey (HCANJ). 2006; :23P. [167366].

Alternative Interventions: Acupuncture, reflexology, aroma therapy, music therapy, dance therapy, yoga, hypnosis, relaxation and imagery, distraction and reframing, psychotherapy, peer support group, spiritual, chiropractic, magnet therapy, bio-feedback, meditation, relaxation techniques.