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# Osteoarthritis

# Arthrose : évaluation de l'acupuncture

articles connexes : - genou douloureux - coxarthrose - taiji-qigong -

## 1. Systematic Reviews and Meta-Analysis

### 1.1. Generic Acupuncture

#### 1.1.1. Wang 2020 ☆☆

Wang L, Zhang XF, Zhang X, Guo DY, Duan YW, Wang ZC, Pei LS, Ru H, Cheng JX, Shi YJ, Zou JB. Evaluation of the Therapeutic Effect of Traditional Chinese Medicine on Osteoarthritis: A Systematic Review and Meta-Analysis. Pain Res Manag. 2020. [216102]. doi

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| **Background** | Osteoarthritis (OA) is a common degenerative disease of bone and joint characterized by the damage of articular cartilage and hypertonia, which often occurs in the middle-aged and elderly. Traditional Chinese medicine (TCM) therapy, including **acupuncture (ACU)**, oral administration, and external use of traditional Chinese medicines (TCMs), can significantly improve the therapeutic effect on OA and reduce the occurrence of side effects. We provide a latest meta-analysis on the treatment of OA with TCM. |
| **Materials and methods** | In the electronic database, appropriate articles without language restrictions on keywords were selected until August 1, 2019. All trajectories are screened according to certain criteria. The quality of qualified research was also assessed. We have made a detailed record of the results of the measurement. Meta-analysis was carried out with Revman 5.3 software. |
| **Results** | Forty-four articles involving 4014 patients (2012 cases in the experimental group and 2002 cases in the control group) with OA were selected. This article focuses on the study of the treatment of OA by using the general mode of TCM. The quality evaluation included in the study was evaluated independently according to the Cochrane intervention system evaluation manual. In this meta-analysis, 68.18% of the literature correctly described the conditions for the generation of random assignment sequences, only 6.82% of the literature correctly mentioned the hidden details of allocation, and all studies mentioned randomly assigned participants. Compared with Western medicine, the total effective rate (TER) of OA treatment in TCM was significantly increased and the recurrence rate (RR) was significantly decreased ($P < 0.00001$). In addition, the experimental group was also superior to the control group in terms of the indicators of joint activity function, inflammatory factor content, and various indicators affecting bone metabolism. It can be showed by the network analysis diagram that Aconiti Radix, Achyranthis Bidentatae Radix, and other TCMs can inhibit inflammatory stimulation and relieve the pain symptoms of patients with OA. ACU at Yinlingquan, Xiyan, and other acupoints can effectively improve the clinical symptoms of patients with OA. |

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| **Conclusion** | TCM therapy in treatment of patients with OA could effectively restore joint function, enhance the TER, and reduce RR. However, the results of this study should be handled with care due to the limitations existing. Some rigorous randomized controlled trials (RCTs) are needed to confirm these findings. |

### 1.1.2. 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 conditionss. |
| **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.. |

### 1.1.3. Manyanga 2014 ★★

Manyanga T, Froese M, Zarychanski R, Abou-Setta A, Friesen C, Tennenhouse M, Shay BL. Pain management with acupuncture in osteoarthritis: a systematic review and meta-analysis. BMC Complementary and Alternative Medicine 2014, 14:312. [174852]

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| **Purpose** | The utility of acupuncture in managing osteoarthritis symptoms is uncertain. Trial results are conflicting and previous systematic reviews may have overestimated the benefits of acupuncture. |

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| **Methods** | Two reviewers independently identified randomized controlled trials (up to May 2014) from multiple electronic sources (including PubMed/Medline, EMBASE, and CENTRAL) and reference lists of relevant articles, extracted data and assessed risk of bias (Cochrane's Risk of Bias tool). Pooled data are expressed as mean differences (MD), with 95% confidence intervals (CI) (random-effects model). |
| **Results** | We included **12 trials (1763 participants)** comparing acupuncture to sham acupuncture, no treatment or usual care. We adjudicated most trials to be unclear (64%) or high (9%) risk of bias. Acupuncture use was associated with significant reductions in pain intensity (MD −0.29, 95% CI −0.55 to −0.02, I2 0%, 10 trials, 1699 participants), functional mobility (standardized MD −0.34, 95% CI −0.55 to −0.14, I2 70%, 9 trials, 1543 participants), health-related quality of life (standardized MD −0.36, 95% CI −0.58 to −0.14, I2 50%, 3 trials, 958 participants). Subgroup analysis of pain intensity by intervention duration suggested greater pain intensity reduction with intervention periods greater than 4 weeks (MD −0.38, 95% CI −0.69 to −0.06, I2 0%, 6 trials, 1239 participants). |
| **Conclusion** | **The use of acupuncture is associated with significant reductions in pain intensity, improvement in functional mobility and quality of life**. While the differences are not as great as shown by other reviews, current evidence supports the use of acupuncture as an alternative for traditional analgesics in patients with osteoarthritis. |

### 1.1.4. 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. |
| **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.]. |

### 1.1.5. Jagua 2012 ☆

Jagua Gualdrón, André. Medicina alternativa en el tratamiento de la osteoartrosis y artritis reumatoide. Revisión sistemática de la literatura y meta-análisis. Rev. colomb. Reumato.

2012;19(4):234-44. [99710].

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| **Antecedentes** | Las medicinas y terapias alternativas son empleadas con frecuencia en los pacientesque padecen de osteoartrosis y artritis reumatoide como tratamientos únicos o alternativos. No se ha realizado una revisión sistemática que explore la mejor evidencia disponible, hasta laactualidad, sobre la eficacia de medicinas y terapéuticas alternativas de uso frecuente. |
| **Objetivo** | Analizar la evidencia disponible sobre el uso de las medicinas y terapéuticas alternativas(acupuntura, homeopatía, terapia neural, campos electromagnéticos, medicina ayurveda,cartílago de tiburón, osteopatía, yoga, meditación) en el manejo de pacientes con osteoartritisy artritis reumatoide. |
| **Materiales y métodos** | Se realizó una revisión sistemática de la literatura. La búsqueda se efectuóen las bases de datos Pubmed, Ovid, Cochrane library y LiLacs, además se incluyeron revisionessistemáticas y ensayos clínicos publicados entre los años 1998 y 2012 en idiomas inglés y español.Se realizó un análisis de calidad de los estudios utilizando el instrumento SIGN y se analizó lainformación con un enfoque cualitativo y cuantitativo. Se tuvieron en cuenta desenlaces clínicosy paraclínicos. Se realizó un análisis por subgrupos para la osteoartrosis y la artritis reumatoide. |
| **Resultados** | A través de la búsqueda se identificaron 11 estudios en los que se evaluaron la **acupuntura**,la homeopatía y la medicina ayurveda. No se encontró evidencia sobre el uso de otras delas alternativas terapéuticas evaluadas en esta revisión. **La acupuntura mostró algunos beneficiosen el manejo de pacientes con osteoatrosis**, sin embargo, no se encontraron comparaciones con analgésicos. Algunos geles homeopáticos tienen una eficacia similar al gel de piroxicam en el manejo del dolor en pacientes con osteoartrosis. Algunos medicamentos de la medicina ayurveda son superiores al placebo en el manejo de pacientes con osteoartrosis. El efecto de los tratamientos en pacientes con artritis reumatoide no mostró beneficios significativos. |
| Conclusión: | No existe evidencia que permita recomendar el uso del yoga, meditación, cartílago de tiburón, terapia de campos electromagnéticos y terapia neural en el manejo de pacientes con osteoartrosis y artritis reumatoide. La acupuntura no es eficaz en el manejo de pacientes con artritis reumatoide. Se requieren más estudios para evaluar la recomendación del uso de la acupuntura y de la medicina ayurveda en el manejo de pacientes con osteoartrosis. |

### 1.1.6. Manheimer 2010 ★★ (peripheral joints)

Manheimer E, Cheng K, Linde K, Lao L, Yoo J, Wieland S, van der Windt DAWM, Berman BM, Bouter LM. Acupuncture for peripheral joint osteoarthritis. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD001977. DOI:10.1002/14651858.CD001977.pub2. [154497]

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| **Purpose** | To assess the effects of acupuncture for treating peripheral joint osteoarthritis. |
| **Methods** | We searched the Cochrane Central Register of Controlled Trials (The Cochrane Library 2008, Issue 1), MEDLINE, and EMBASE (both through December 2007), and scanned reference lists of articles. Randomized controlled trials (RCTs) comparing needle acupuncture with a sham, another active treatment, or a waiting list control group in people with osteoarthritis of the knee, hip, or hand. |

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| **Results** | **Sixteen trials involving 3498 people** were included. Twelve of the RCTs included only people with OA of the knee, 3 only OA of the hip, and 1 a mix of people with OA of the hip and/or knee. **In comparison with a sham control, acupuncture showed statistically significant, short-term improvements in osteoarthritis pain** (standardized mean difference -0.28, 95% confidence interval -0.45 to -0.11; 0.9 point greater improvement than sham on 20 point scale; absolute percent change 4.59%; relative percent change 10.32%; 9 trials; 1835 participants) and function (-0.28, -0.46 to -0.09; 2.7 point greater improvement on 68 point scale; absolute percent change 3.97%; relative percent change 8.63%); however, these pooled short-term benefits did not meet our predefined thresholds for clinical relevance (i.e. 1.3 points for pain; 3.57 points for function) and there was substantial statistical heterogeneity. In comparison with sham acupuncture at the six-month followup, acupuncture showed borderline statistically significant, clinically irrelevant improvements in osteoarthritis pain (-0.10,-0.21 to 0.01; 0.4 point greater improvement than sham on 20 point scale; absolute percent change 1.81%; relative percent change 4.06%;4 trials;1399 participants) and function (-0.11, -0.22 to 0.00; 1.2 point greater improvement than sham on 68 point scale; absolute percent change 1.79%; relative percent change 3.89%). In a secondary analysis versus a waiting list control, acupuncture was associated with statistically significant, clinically relevant short-term improvements in osteoarthritis pain (-0.96, -1.19 to -0.72; 14.5 point greater improvement than sham on 100 point scale; absolute percent change 14.5%; relative percent change 29.14%; 4 trials; 884 participants) and function (-0.89, -1.18 to -0.60; 13.0 point greater improvement than sham on 100 point scale; absolute percent change 13.0%;relative percent change 25.21%). |
| **Conclusion** | **Sham-controlled trials show statistically significant benefits**; however, these benefits are small, do not meet our pre-defined thresholds for clinical relevance, and are probably due at least partially to placebo effects from incomplete blinding. Waiting list-controlled trials of acupuncture for peripheral joint osteoarthritis suggest statistically significant and clinically relevant benefits, much of which may be due to expectation or placebo effects. |

### 1.1.7. Kwon 2006 ★★★ (peripheral joints)

Kwon YD, Pittler MH, Ernst E. Acupuncture for peripheral joint osteoarthritis : a systematic review and meta-analysis. Rheumatology (Oxford).2006;45(11):1331-7. [141385]

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| **Purpose** | To evaluate the evidence for the effectiveness of acupuncture in peripheral joint osteoarthritis (OA). |
| **Methods** | Systematic searches were conducted on Medline, Embase, AMED, Cochrane Library, CINAHL, British Nursing Index, PsychiNFO and CAMPAIN until July 2005. Hand-searches included conference proceedings and our own files. There were no restrictions regarding the language of publication. All randomized controlled trials (RCTs) of acupuncture for patients with peripheral joint OA were considered for inclusion. Trials assessing needle acupuncture with or without electrical stimulation were considered if sham- or placebo-controlled or controlled against a comparator intervention. Trials testing other forms of acupuncture were excluded. Methodological quality was assessed and, where possible, meta-analyses were performed. |

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| **Results** | Thirty-one possibly relevant studies were identified and 18 RCTs were included (**14 RCTs in knee OA, 1735 patients**). Ten trials tested manual acupuncture and eight trials tested electro-acupuncture. Overall, ten studies demonstrated greater pain reduction in acupuncture groups compared with controls. The meta-analysis of homogeneous data showed a **significant effect of manual acupuncture compared with sham acupuncture (standardized mean difference 0.24, 95% confidence interval 0.01-0.47, P = 0.04, n=329), which is supported by data for knee OA**. The extent of heterogeneity in trials of electro-acupuncture prevented a meaningful meta-analysis. |
| **Conclusion** | **Sham-controlled RCTs suggest specific effects of acupuncture for pain control** in patients with peripheral joint OA. Considering its favourable safety profile acupuncture seems an option worthy of consideration particularly for knee OA. |

#### 1.1.8. Ernst 1997 ∅

Ernst E. Acupuncture as a symptomatic treatment of osteoarthritis. a systematic review. Scand J Rheumatol. 1997;26(6):444-447.[58462].

> Acupuncture is a popular complementary treatment for osteoarthritis. In order to define its effectiveness, a systematic review of the literature was undertaken. Independent literature searches identified eleven studies of acupuncture for osteoarthritis. **Their results are highly contradictory.** Most trials suffer from methodological flaws. The most rigorous studies suggest that **acupuncture is not superior to sham-needling in reducing pain of osteoarthritis**: both alleviate symptoms to roughly the same degree. This could either mean sham-needling has similar specific effects as acupuncture or that both methods are associated with considerable non-specific effects. Future research should clarify which explanation applies.

## 1.2. Special outcome

### 1.2.1. Preclinical and mechanistic systematic reviews

#### 1.2.1.1. Kamau 2026

Kamau VN, Kim JH, Lee G. The NLRP3 inflammasome in osteoarthritis: a systematic review of traditional, complementary, and integrative medicine efficacy and underlying mechanisms. Daru. 2026;34(1):25. https://doi.org/10.1007/s40199-026-00604-2

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| **Background** | Osteoarthritis (OA) is a degenerative joint condition mostly affecting the knees characterized by cartilage degradation, synovial inflammation, and chronic pain, with limited effective treatments with minimal side effects. Traditional, complementary, and integrative medicine (TCIM), such as numerous medicinal plants, acupuncture, and folk herbalism, among others, have been historically used to treat symptoms associated with OA, which include joint pain, stiffness, and inflammation. Several herbs and their bioactive constituents have shown potential to modulate key inflammatory pathways like the NLRP3 inflammasome, which is an important regulator of innate immune responses in OA pathophysiology. |
| **Objective** | This review aims to investigate the underlying mechanisms and potential of TCIM to alleviate OA-related pain by modulating the NLRP3 inflammasome. |

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| **Methods** | A comprehensive literature search across multiple databases, including PubMed, Cochrane Library, Embase, Google Scholar, Scopus, and Web of Science by using a set of MESH and relevant keywords like “NLRP3”, “TCIM”, “OA”, and “Animal” for articles published from January 2000 to August 2024. |
| **Results** | Twenty-two in vivo studies met the inclusion criteria for the systematic review, and 21 studies for the meta-analysis. Across these studies, TCIM interventions consistently reduced NLRP3, IL-1β, IL-18, and Caspase-1 expression compared with OA controls. Pooled effects were consistently moderate-to-large across all molecular, with low between-study heterogeneity ($I^2 \approx 0\%$). Subgroup analyses by OA model, intervention type, and species indicated broadly similar directions of effect. |
| **Conclusion** | TCIM shows potential therapeutic approaches for managing OA-related pain by targeting the NLRP3 inflammasome in preclinical OA models. Further research should investigate the clinical translation of these findings to address the unmet need for effective analgesics in OA. |

## 1.3. Special Acupuncture Techniques

### 1.3.1. Moxibustion

### 1.3.2. Choi 2017 ★★★

Choi TY, Lee MS, Kim JI, Zaslawski C. Moxibustion for the treatment of osteoarthritis: An updated systematic review and meta-analysis. Maturitas. 2017; 100: 33-48. [194779].

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| **Objective** | The aim of this study was to update previous reviews and examine recent evidence from randomised clinical trials (RCTs) of the use of moxibustion for osteoarthritis (OA). |
| **Method** | Twelve databases were searched from inception through to September 2016 with no language limits applied. Data extraction and risk-of-bias assessments were performed by two independent reviewers. |
| **Results** | A total of **19 RCTs** met all inclusion criteria and were evaluated. Three RCTs compared the effects of moxibustion with those of sham moxibustion in patients with knee OA (KOA) and found favourable effects of moxibustion on pain reduction (n=305; SMD, -0.46; 95% CI: -0.86 to -0.06, P=0.02, I2=65%), including at follow-up (n=305; SMD, -0.36; 95% CI: -0.70 to -0.01, P=0.04, I2=54%). Eleven RCTs compared the effects of moxibustion with those of conventional oral drug therapies. Eight RCTs reported a total symptom score and the meta-analysis showed superior effects of moxibustion compared with drug therapies for this measure (n=691; SMD, -0.24; 95% CI: -0.78 to 0.29; P=0.37, I2=91%) and response rate (n=758 knees; RR, 1.10; 95% CI: 1.05-1.16, P <0.0001, I2=0%). Three RCTs found superior or equivalent effects of moxibustion on symptom score compared with intra-articular injection or topical drug therapy. |
| **Conclusion** | **The existing trial evidence is sufficiently convincing to suggest that moxibustion, compared with sham moxibustion and oral drugs, is effective for pain reduction and symptom management in KOA**. The level of evidence is moderate, given the high risk of bias and small sample size. |

### 1.3.3. Choi 2012 ★

Choi TY, Choi J, Kim KH, Lee MS. Moxibustion for the treatment of osteoarthritis: a systematic review and meta-analysis. Rheumatol Int. 2012;32(10):2969-78. [117643]

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| **Objective** | The aim of this review was to summarise and critically evaluate the evidence from randomised clinical trials (RCTs) of moxibustion as a treatment for patients with osteoarthritis (OA). |
| **Method** | Twelve databases were searched from their inception through July 2011. RCTs were considered whether they assessed any type of clinical outcome from moxibustion therapy for patients with OA localised to any joints. Two reviewers independently performed the selection of studies, data abstraction and validations. The risk of bias was assessed using the Cochrane criteria. |
| **Results** | **Eight RCTs** met our inclusion criteria, and most of them had significant methodological weaknesses. Six RCTs tested the effects of moxibustion against conventional oral drug therapies in patients with knee OA (KOA). Meta-analysis showed favourable effects of moxibustion on the response rate (n = 540; RR, 1.09; 95 % CI 1.03-1.17; P = 0.005; heterogeneity: $\chi(2) = 5.48$, P = 0.36, I (2) = 9 %). Two RCTs tested the effects of moxibustion on response rate after 2 months. The meta-analysis failed to show favourable effects of moxibustion (n = 180; RR, 1.10; 95 % CI 0.97-1.24; P = 0.13; heterogeneity: $\chi(2) = 0.03$, P = 0.87, I (2) = 0 %). |
| **Conclusion** | In conclusion, consistent results show that **moxibustion may be effective in symptom management in patients with KOA**. However, because of the number of eligible RCTs and the high risk of bias in the assessment of the available RCTs, the evidence supporting this conclusion is limited. |

## 1.4. Laser Acupuncture

### 1.4.1. Wen 2025

Wen X, Zhang G, Cui J, Tang Y, Meng Q, Su Y, An S, Sun S. Efficacy and safety of laser acupuncture on osteoarthritis: a systematic review and meta-analysis. Front Aging Neurosci. 2025 Jan 8;16:1462411. https://doi.org/10.3389/fnagi.2024.1462411

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| **Objectives** | To perform a meta-analysis of previous studies investigating the effects of laser acupuncture on osteoarthritis. |
| **Study design** | Systematic review and meta-analysis. |
| **Methods** | Randomized controlled trials (RCTS) on laser acupuncture for osteoarthritis were searched in the databases of PubMed, Embase, Cochrane Library, and Web of Science with a search deadline of 24 December 2023. After identifying 11 studies, we used Stata 15.0 to analyze the data. |
| **Results** | In the **11 studies identified, 931 patients** were analyzed. Results showed that laser acupuncture significantly improved patients' pain and function compared to the placebo laser group. There were significant differences in VAS pain scores[SMD = -0.924, 95% CI (-1.200, -0.649), p = 0.000], WOMAC pain scores[SMD = -0.425, 95% CI (-0.652, -0.199), p = 0.000], WOMAC function scores[SMD = -0.307, 95% CI (-0.548, -0.065), p = 0.013], WOMAC stiffness scores[SMD = -0.235, 95% CI (-0.388, -0.083), p = 0.002] between the laser acupuncture group and the placebo laser group. The therapeutic effect of laser acupuncture disappeared at 8 weeks. In subgroup analysis, patients who received laser acupuncture with specific parameters had better VAS scores and WOMAC scores than patients in other subgroups. |
| **Conclusion** | The application of laser acupuncture can improve knee pain and function in patients with osteoarthritis in the short term. It is recommended to use a laser with a power greater than 100 mW and a wavelength greater than 1,000 nm. CO2 lasers and solid-state lasers were shown to be more effective in the results than other types of lasers. |

## 1.5. Acupotomy

### 1.5.1. Zhang 2026

Zhang Z, Li H, Zhai M, Duan Y, Zhang X, Liu B, Zhao D. Acupotomy combined with oral pharmacotherapy for osteoarthritis: A systematic review and Bayesian network meta-analysis. Technol Health Care. 2026;34(2):154-166. https://doi.org/10.1177/09287329251392395

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| **Background** | Osteoarthritis (OA), a prevalent degenerative joint disease causing pain and disability, burdens global health. Acupotomy offers a minimally invasive alternative to surgery but faces limitations like variable efficacy. Combining acupotomy with oral pharmacotherapy (conventional or herbal medicine) may optimize outcomes through synergistic effects. |
| **Objective** | To systematically evaluate the efficacy and safety of acupotomy combined with oral medication for the treatment of osteoarthritis through a Bayesian network meta-analysis (NMA). |
| **Methods** | This study followed PRISMA-P guidelines. Randomised controlled trials (RCTs)were selected through 6 databases. Primary outcomes included overall effective rate, WOMAC score, VAS pain score, and adverse events. |
| **Results** | 31 RCTs (3323 patients and 8 interventions) included. NMA revealed that Combinations outperformed other interventions in most comparisons. SUCRA represents the probability that an intervention ranks among the best. Notably, “acupotomy + herbal medicine” consistently ranked among the best across all three outcomes. |
| **Conclusion** | Acupotomy combined with oral medications demonstrated superior clinical efficacy and significant application potential. In clinical, acupotomy combined with conventional medications (e.g., NSAIDs) may be prioritised to alleviate acute symptoms, whereas acupotomy combined with herbal medicine shows more promising potential in long-term functional recovery. Treatment protocols should be tailored to individual patient conditions to maximise therapeutic outcomes. |

## 1.6. Acupressure

### 1.6.1. Kou 2026

Kou H, Liu H, Lai L, Yang S, Zhang X, Sun Y, et al. Self-acupressure for osteoarthritis self-management and nursing care outcomes: A systematic review and meta-analysis. Geriatr Nurs. 2026;73:104288. https://doi.org/10.1016/j.gerinurse.2026.104288

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| **Background** | Self-acupressure is a low-cost, non-pharmacological intervention that may support self-management in patients with osteoarthritis (OA). This systematic review and meta-analysis evaluated its effectiveness and safety for pain, function, sleep, and quality of life, with particular attention to its potential role in nursing care. |
| **Methods** | The review followed PRISMA guidelines. PubMed, Embase, Cochrane Library, Web of Science, and Google Scholar were searched from inception to October 2025 for randomized controlled trials and clinical trials evaluating self-acupressure in patients with OA. Data were pooled using RevMan 5.4 and Stata 18. Risk of bias was assessed using the Cochrane Risk of Bias tool, and certainty of evidence using GRADE. |

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| **Results** | **Twenty-three studies involving 2,639 participants** were included. Low-to-moderate certainty evidence showed that self-acupressure was associated with reduced pain, including VAS at week 1 (SMD = -0.52, 95% CI -1.00 to -0.05; *p* = 0.03) and WOMAC pain at week 4 (SMD = -0.39, 95% CI -0.69 to -0.08; *p* = 0.01). Sleep quality improved at week 8 as measured by PSQI (SMD = -0.86, 95% CI -1.25 to -0.46; *p* < 0.0001), and health-related quality of life improved modestly on SF-6D at week 8 (SMD = 0.17, 95% CI 0.01 to 0.32; *p* = 0.04). Reported adverse events were minor and transient, although safety reporting was inconsistent across trials. |
| **Conclusion** | Self-acupressure may reduce pain, improve sleep, and modestly improve selected quality-of-life outcomes in patients with osteoarthritis. It appears feasible and low cost and may have a role as an adjunct to nursing-led self-management strategies. However, moderate heterogeneity, risk-of-bias concerns, inconsistent safety reporting, and limited long-term data mean that standardized, high-quality trials are needed before broader implementation. |

# 2. Overview of systematic reviews

## 2.1. Jun 2023 (warm needle]

Jun JH, Choi TY, Park S, Lee MS. Warm needle acupuncture for osteoarthritis: An overview of systematic reviews and meta-analysis. Front Med (Lausanne). 2023 Mar 14;10:971147. https://doi.org/10.3389/fmed.2023.971147

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| **Background** | Osteoarthritis (OA) is a chronic disease that is a major cause of pain and functional disability. Warm needle acupuncture (WA) therapy has been widely used to treat OA. This overview summarizes the evidence from systematic reviews (SRs) and assesses the methodological quality of previous SRs that evaluated the use of WA therapy for OA. |
| **Methods** | We searched electronic databases to identify SRs that evaluated the efficacy of WA therapy for OA. Two reviewers independently extracted data and assessed the methodological quality of the reviews according to the A Measurement Tool to Assess Systematic Reviews (AMSTAR 2) tool. The reporting quality was assessed using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis 2020 (PRISMA 2020) guidelines. The quality of evidence was assessed according to the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach. |
| **Results** | Fifteen SRs were included in this study. WA therapy was more effective than control conditions for the treatment of OA. The results of the AMSTAR 2 tool showed that the methodological quality of all included studies was critically low. The items with the lowest scores were item 2 (reporting the protocol), item 7 (listing excluded studies and justifying the exclusions), and item 16 (including conflicts of interest). Regarding the PRISMA guidelines, 2 SRs exhibited greater than 85% compliance. The overall quality of evidence in the included SRs ranged from “very low” to “moderate.” |
| **Conclusion** | This overview shows that WA therapy was more effective than the control treatment for OA. However, the methodological quality of the reviews was low, indicating the need for improvements in the collection of evidence. Future studies are needed to collect high-quality evidence regarding the use of WA for OA. |

# 3. Clinical Practice Guidelines

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| ⊕ positive recommendation (regardless of the level of evidence reported)<br>Ø negative recommendation (or lack of evidence) |

## 3.1. National Institute For Health And Care Excellence (NICE, UK) 2022 Ø

National Institute for Health and Clinical Excellence. Osteoarthritis in over 16s: diagnosis and management. https://www.nice.org.uk/guidance/ng226/chapter/Recommendations#non-pharmacological-managementDo

Not offer **acupuncture** or **dry needling** to manage osteoarthritis. The available evidence was predominantly for knee osteoarthritis. This showed a lack of benefits of acupuncture and some evidence of harm. Economic evidence also showed that using acupuncture for osteoarthritis is not cost effective, so the committee did not recommend using acupuncture or dry needling. There was some evidence of clinical benefit and cost effectiveness for electroacupuncture but this was of very low quality because of small study sizes and inconsistency between studies. The evidence for **electroacupuncture** suggested it showed a benefit compared with sham acupuncture but not compared with acupuncture or no treatment. The committee considered that the inconsistent evidence could be the result of some people responding more to electroacupuncture than others. Because there is uncertainty about who might benefit from electroacupuncture, the committee made a recommendation for research on electroacupuncture for osteoarthritis.

## 3.2. American College of Rheumatology (ACR, USA) 2020 ⊕

Kolasinski SL, Neogi T, Hochberg MC, Oatis C, Guyatt G, Block J, Callahan L, et al. 2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee. Arthritis Rheumatol. 2020;Jan 6:. [175069]. CrossRef.

Acupuncture is conditionally recommended for patients with knee, hip, and/or hand OA.

## 3.3. Ministry of Public Health of Qatar (MOPH, Qatar) 2020 Ø

The management of ostearthritis in adults. National Clinical Guidelines. Ministry of Public Health of Qatar (MOPH). 2020;:35P. [221386]. URL

The following treatments have insufficient evidence of benefit and are not recommended for routine use: .../ Acupuncture. [L1, RGB].

## 3.4. American Chronic Pain Association (ACPA, USA) 2019 ⊕

American Chronic Pain Association Resource Guide to Chronic Pain management, An Integrated Guide to Medical, Interventional, Behavioral Pharmacologic and Rehabilitation Therapies. Feinberg S (ed.) American Chronic Pain Association Inc., Rocklin, California. 2019:156p. [219425]. URL

Acupuncture has been gaining popularity in the United States since the 1970s, and, in wake of increasing acceptance by both the public and medical professionals, it is now covered by many insurance policies. In the field of chronic pain medicine, there is a strong body of research supporting the efficacy of acupuncture for headache, **osteoarthritis**, and musculoskeletal conditions, such as neck and lower back pain

## 3.5. Osteoarthritis Research Society International (OARSI) 2019 Ø

*Polyarticular Osteoarthritis*. Recommendation against: Balneotherapy, **Conventional Acupuncture**, Massage, Mobilization & Manipulation, Therapeutic Ultrasound, Thermotherapy (hot), Wedge Insoles
*Knee Osteoarthritis*. Recommendation against : Balneotherapy, **Conventional Acupuncture**, **Electroacupuncture**, Electromagnetic Therapies, Mobilization & Manipulation.
*Hip Osteoarthritis*. Recommendation against : Aquatic Exercise, Balneotherapy, Cognitive Behavioral Therapy with Exercise, Conventional, **Acupuncture**, Mobilization & Manipulation, Thermotherapy (hot or cold)

## 3.6. 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/

## 3.7. Instituto de Evaluación de Tecnologías en Salud e Investigación (IETSI, Spain) 2018 Ø

Guía de práctica clínica para el diagnóstico y manejo de pacientes con osteoartritis: guía en versión extensa. Instituto de Evaluación de Tecnologías en Salud e Investigación. 2017. http://www.essalud.gob.pe/ietsi/pdfs/guias/GPC_Osteoartritis_v_extensa.pdf

Recomendación: 1. En adultos con OA, sugerimos no usar acupuntura para el manejo de la OA. Recomendación débil en contra. Calidad de evidencia: baja ⊕⊕⊖⊖

## 3.8. National Institute for Health and Clinical Excellence (NICE, UK) 2018 Ø

National Clinical Guideline Centre. Osteoarthritis; London (UK): National Institute for Health and Clinical Excellence (NICE). 2018. [192646].

Advise that there is no evidence for the use of acupuncture.

## 3.9. 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].

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)

## 3.10. Emblemhealth (insurance provider, USA) 2017 ⊕

Acupuncture — Medicare Dual-Eligible Members Emblemhealth. 2017. [111547].

Members with the Medicare Dual-Eligible benefit are eligible for acupuncture when performed by an individual licensed by New York State to perform acupuncture and when performed for the following diagnoses: 1. Adult postoperative nausea and vomiting 2. Chemotherapy related nausea and vomiting 3. Pregnancy related nausea and vomiting 4. Carpal tunnel syndrome 5. Epicondylitis (tennis elbow) 6. Headache 7. Low back pain 8. Menstrual pain 9. Myofascial pain 10. **Osteoarthritis**

### 3.11. National Institute for Health and Clinical Excellence (NICE, UK) 2014 Ø

National Clinical Guideline Centre. Osteoarthritis: care and management; London (UK): National Institute for Health and Clinical Excellence (NICE). 2014. [188816].

1.4.6 Do not offer acupuncture for the management of osteoarthritis. [2014]

### 3.12. Malaysia Health Technology Assessment Section (MaHTAS, Malaysia) 2013 ⊕

Malaysia Health Technology Assessment Section (MaHTAS). Management of Osteoarthritis (2nd Edition). Ministry of Health (MoH). 2013:102p. [172338]. URL

Recommendation 14. **Acupuncture** and avocado soybean unsaponifiables may be used as an adjunct short-term therapy in osteoarthritis. (Grade A)

### 3.13. 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.

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

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

Category A (fair to high quality evidence): Authorized and recommended for routine use. **Osteoarthritis (OA)**.

## 4. Overviews of Clinical Practice Guidelines

### 4.1. Brosseau 2014 ⊕

Brosseau L, Rahman P, Toupin-April K, Poitras S, King J, De Angelis G, Loew L, Casimiro L, Paterson G, Mcewan J. A systematic critical appraisal for non-pharmacological management of osteoarthritis using the appraisal of Guidelines Research And Evaluation II Instrument. Plos One. 2014;9(1). [170137].

Clinical practice CPGs (CPGs) have been developed to summarize evidence related to the management of

osteoarthritis (OA). CPGs facilitate uptake of evidence-based knowledge by consumers, health professionals, health administrators and policy makers. The objectives of the present review were: 1) to assess the quality of the CPGs on non-pharmacological management of OA; using a standardized and validated instrument–the Appraisal of Guidelines Research and Evaluation (AGREE II) tool–by three pairs of trained appraisers; and 2) to summarize the recommendations based on only high-quality existing CPGs. Scientific literature databases from 2001 to 2013 were systematically searched for the state of evidence, with 17 CPGs for OA being identified. Most CPGs effectively addressed only a minority of AGREE II domains. Scope and purpose was effectively addressed in 10 CPGs on the management of OA, stakeholder involvement in 12 CPGs, rigour of development in 10 CPGs, clarity/presentation in 17 CPGs, editorial independence in 2 CPGs, and applicability in none of the OA CPGs. The overall quality of the included CPGs, according to the 7-point AGREE II scoring system, is 4.8 ± 0.41 for OA. Therapeutic exercises, patient education, transcutaneous electrical nerve stimulation, acupuncture, orthoses and insoles, heat and cryotherapy, patellar tapping, and weight control are commonly recommended for the non-pharmacological management of OA by the high-quality CPGs. The general clinical management recommendations tended to be similar among high-quality CPGs, although interventions addressed varied. Non-pharmacological management interventions were superficially addressed in more than half of the selected CPGs. For CPGs to be standardized uniform creators should use the AGREE II criteria when developing CPGs. Innovative and effective methods of CPG implementation to users are needed to ultimately enhance the quality of life of arthritic individuals.

**Acupuncture was recommended or strongly recommended by 9 CPGs and 2 CPGs found insufficient evidence** to recommend it for the management of osteoarthritis.
According to the AGREE II instrument, ten CPGs were recognized as good quality CPGs with high scores for rigor of development and because they effectively targeted four to five domains. Therapeutic exercises, patient education, Transcutaneous Electrical Nerve Stimulation, **acupuncture,** orthoses and insoles, heat and cryotherapy, patellar tapping and weight control are commonly recommended for the non-pharmacological management of OA by the high-quality CPGs. It was noted that common recommendations were found by the majority of the CPGs; however, the strength of the recommendations varied between the CPGs.

## 4.2. Nelson 2014 Ø

Nelson AE, Allen KD, Golightly YM, Goode AP, Jordan JM. A systematic review of recommendations and guidelines for the management of osteoarthritis: The chronic osteoarthritis management initiative of the U.S. bone and joint initiative. Semin Arthritis Rheum.;43(6):701-12. [148776]

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| **Objectif** | Although a number of osteoarthritis (OA) management guidelines exist, uptake has been suboptimal. Our aim was to review and critically evaluate existing OA management guidelines to better understand potential issues and barriers. |
| **Methods** | A systematic review of the literature in MEDLINE published from January 1, 2000 to April 1, 2013 was performed and supplemented by bibliographic reviews, following PRISMA guidelines and a written protocol. Following initial title and abstract screening, 2 authors independently reviewed full-text articles; a third settled disagreements. Two independent reviewers extracted data into a standardized form. Two authors independently assessed guideline quality using the AGREE II instrument; three generated summary recommendations based on the extracted guideline data. |
| **Results** | Overall, 16 articles were included in the final review. There was broad agreement on recommendations by the various organizations. For non-pharmacologic modalities, education/self-management, exercise, weight loss if overweight, walking aids as indicated, and thermal modalities were widely recommended. For appropriate patients, joint replacement was recommended; arthroscopy with debridement was not recommended for symptomatic knee OA. Pharmacologic modalities most recommended included acetaminophen/paracetamol (first line) and NSAIDs (topical or oral, second line). Intra-articular corticosteroids were generally recommended for hip and knee OA. **Controversy remains about the use of acupuncture**, knee braces, heel wedges, intra-articular hyaluronans, and glucosamine/chondroitin. |

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| **Conclusions** | The relative agreement on many OA management recommendations across organizations indicates a problem with dissemination and implementation rather than a lack of quality guidelines. Future efforts should focus on optimizing implementation in primary care settings, where the majority of OA care occurs. |

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