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menopause sleep disorders

Insomnies de la ménopause : évaluation de l'acupuncture

1. Systematic Reviews and Meta-Analysis

1.1. Generic Acupuncture

1.1.1. Jiang 2025 (combined with medication)

Jiang S, Zhang Y, Sun Y. The effectiveness and safety of acupuncture combined with medication in the treatment of perimenopausal insomnia: a systematic review and meta-analysis. Front Neurol. 2025 Mar 13;16:1476719. https://doi.org/10.3389/fneur.2025.1476719

Introduction	The aim of this study is to evaluate the effectiveness and safety of the combination therapy of acupuncture and medication in the treatment of perimenopausal insomnia (PMI). This research seeks to provide scientific evidence for clinical practice, optimize treatment protocols, and enhance the sleep quality and overall quality of life for women experiencing perimenopausal insomnia.
Methods and analysis	A comprehensive search was conducted across 8 databases, including the China National Knowledge Infrastructure (CNKI), Wanfang Academic Journal Full-text Database (Wanfang), Chongqing VIP Database (CQVIP), China Biology Medicine Disc (CBM), PubMed, Web of Science, Excerpta Medica Database (EMBASE), and Cochrane Library, from their establishment to July 1, 2024. Outcome measures were analyzed using Review Manager 5.4 and Stata 15.0 software. The included randomized controlled trials (RCTs) involved 1,187 patients with perimenopausal sleep disorders (596 in the experimental group and 591 in the control group). The analysis indicated that compared to Western medication alone, the combination therapy showed better efficacy [risk ratio (RR) = 1.24, 95% confidence interval (CI) (1.17, 1.31), $p < 0.00001$] and safety [RR = 0.31, 95%CI (0.18, 0.53), $p < 0.0001$]. It also demonstrated more significant improvements in Pittsburgh Sleep Quality Index (PSQI) [mean difference (MD) = -2.77, 95%CI (-4.11, -1.43), $p < 0.0001$], Hamilton Anxiety Rating Scale (HAMA) scores [MD = -3.45, 95%CI (-3.94, -2.97), $p < 0.00001$], Kupperman Menopausal Index (KMI) [MD = -1.46, 95%CI (-2.23, -0.70), $p = 0.0002$], Traditional Chinese Medicine Syndromes (TCMS) scores [MD = -2.45, 95%CI (-3.85, -1.04), $p = 0.0006$], and hormone levels, including Luteinizing Hormone (LH) [MD = -4.17, 95%CI (-7.42, -0.93), $p = 0.01$], Follicle-Stimulating Hormone (FSH) [MD = -10.50, 95%CI (-14.80, -6.20), $p < 0.00001$], and Estradiol (E2) [MD = 12.15, 95%CI (6.79, 17.51), $p < 0.00001$].
Discussion	The combination therapy demonstrates great efficacy and safety for PMI patients, representing an innovative integrative alternative treatment with high clinical application value.

1.1.2. Zhang 2025

Zhang X, Liu C, Qin S, Chen C, Wang X, Jiang Y, Wu W. Acupuncture as an independent or adjuvant therapy to standard management for menopausal insomnia: A systematic review and meta-analysis. PLoS One. 2025 Feb 6;20(2):e0318562. https://doi.org/10.1371/journal.pone.0318562

Objective	This systematic review aimed to clarify if acupuncture is more effective for menopausal insomnia compared with sham acupuncture, standard care (sedative hypnotics and/or MHT) or waitlist control.
Methods	Seven literature databases were searched on April 30, 2024, to identify RCTs assessing the effectiveness of acupuncture. The methodological quality was assessed by the Cochrane Collaboration, and meta-analyses were conducted to calculate comparative effects using Rev Man software.
Results	**28 RCTs** were analyzed. Six sham acupuncture-controlled RCTs were notable because of their high quality, and they showed that acupuncture significantly lowered PSQI scores, increased TST, sleep efficiency, and reduced WASO. The effect of acupuncture was maintained at a 4-week follow-up. Sixteen RCTs compared acupuncture with standard care, which showed acupuncture significantly reduced PSQI scores, KI scores, HAMD and HAMA scores. However, the subgroup analysis showed that there was no obviously difference between acupuncture and western medication in the treatment duration >8 weeks. Five RCTs assessed acupuncture combined with standard care and showed a favorable reduction in the PSQI score than standard care. One RCT showed that acupuncture significantly reduced PSQI and KI scores than a waitlist control. The GRADE assessment demonstrated that the level of evidence was very low to moderate, probably for the poor methodological quality and substantial heterogeneity among studies.

1.1.3. Li 2023 (combined with Chinese herbal medicine)

Li Z, Yin S, Feng J, Gao X, Yang Q, Zhu F. Acupuncture combined with Chinese herbal medicine in the treatment of perimenopausal insomnia: A systematic review and meta-analysis. Medicine (Baltimore). 2023 Nov 10;102(45):e35942. https://doi.org/10.1097/MD.0000000000035942

Background	Perimenopausal insomnia (PMI) is a relatively common menopausal symptom that can cause serious problems for the women themselves and their families. Today, the world is facing the trend and challenges of an aging population. It is reported that about 1.5 million women worldwide enter menopause every year, with sleep disorder identified as a core symptom. The efficacy of acupuncture combined with traditional Chinese medicine for treating PMI has been recognized by patients and doctors.
Methods	We searched 8 databases to identify 15 randomized controlled trials evaluating the effects of acupuncture combined with traditional Chinese medicine on sleep in patients with PMI compared with Western medicine alone. Subsequently, data extraction and analysis were performed to assess the quality and risk of bias of the study method design, and a meta-analysis of the data was performed.
Results	This study included **15 randomized controlled trials involving 1188 patients** with PMI. The results show that acupuncture combined with traditional Chinese medicine seems to be more effective than Western medicine in the treatment of PMI: efficiency (RR: 1.18; 95% CI: 1.08, 1.29; P = .001); the Pittsburgh Sleep Quality Index (PSQI) (WMD: -2.77; 95% CI: 4.15-1.39; P < .0001); follicle-stimulating hormone (FSH) (WMD: -31.45; 95% CI: 42.7-20.2; P < .001) and the Hamilton Anxiety Score (HAMA) (WMD: -2.62, 95% CI: -3.93, -1.32; P < .0001). Compared with western medicine, E2 (WMD: 5.07; 95% CI: 5.78-15.92; P = .36) and LH (WMD: -4.86; 95% CI: 11.5-1.78; P = .151) had no difference.

Conclusion	The current analysis results show that acupuncture combined with Chinese medicine seems to have a more positive effect than western medicine alone in improving sleep and FSHF in PMI patients, but no difference has been found in improving E2 and LH. This study provides a basis for acupuncture combined with Chinese medicine to treat PMI. However, due to the higher risk of evaluation in included studies, more rigorous randomized controlled trials and higher quality studies are needed to validate included studies.

1.1.4. Zhao 2021

Zhao FY, Fu QQ, Kennedy GA, Conduit R, Wu WZ, Zhang WJ, Zheng Z. Comparative Utility of Acupuncture and Western Medication in the Management of Perimenopausal Insomnia: A Systematic Review and Meta-Analysis. Evid Based Complement Alternat Med. 2021. [218689]. doi

Background	Many women with perimenopausal insomnia (PMI) have sought alternative therapies such as acupuncture because of concerns about risks associated with hormone replacement therapy (HRT) and/or psychotropic drugs. This systematic review aimed to clarify if acupuncture alone or combined with standard Western pharmacotherapy (HRT and/or psychotropic drugs) is more effective in ameliorating PMI in comparison to pharmacotherapy alone.
Methods	Randomized controlled trials (RCTs) of PMI treatment via acupuncture alone or combined with Western pharmacotherapy versus Western pharmacotherapy were searched for from eleven databases from inception to March 2020. Cochrane criteria were followed.
Results	**Fifteen studies involving 1410 women** were analyzed. Meta-analysis indicated that acupuncture significantly reduced the global scores of Pittsburgh Sleep Quality Index (PSQI) [MD = -2.38, 95% CI (-3.38, -1.37), $p < 0.01$] and Kupperman Index [MD = -5.95, 95% CI (-10.68, -1.21), $p = 0.01$], compared with hypnotics. Acupuncture combined with hypnotics was more effective than hypnotics alone in decreasing PSQI scores [MD = -3.13, 95% CI (-5.43, -0.83), $p < 0.01$]. Too few RCTs were available to investigate the clinical efficacy differences between acupuncture and HRT/psychotropic drugs other than hypnotics.
Conclusions	Despite limited evidence, in comparison to hypnotics, acupuncture was associated with significant improvements in PMI, and reductions of other menopausal symptoms. This finding suggests that acupuncture may be a useful addition to treatment for PMI.

1.1.5. Chiu 2016 ☆☆

Chiu HY, Hsieh YJ, Tsai PS. Acupuncture to Reduce Sleep Disturbances in Perimenopausal and Postmenopausal Women: A Systematic Review and Meta-analysis. Obstet Gynecol:. 2016;127(3):507-15. [176627].

Objectives	To examine the association of acupuncture with sleep disturbances and serum sex hormone levels in perimenopausal and postmenopausal women and whether there are associated changes in sex hormone levels.
Methods	DATA SOURCES: We systematically searched electronic databases (EMBASE, PubMed, PsycINFO, CINAHL, ClinicalTrials.gov, Wanfang Data Chinese Database, and China Knowledge Resource Integrated Database) and the reference lists of the identified studies. METHODS OF STUDY SELECTION: Randomized controlled trials that examined the effects of acupuncture on sleep disturbances in perimenopausal and postmenopausal women were included. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis statement was followed.

Results	We identified **31 randomized controlled trials with 34 effect sizes involving a total of 2,433 participants**. Acupuncture is associated with a significant reduction in the likelihood of sleep disturbances (odds ratio [OR] 0.21, 95% confidence interval [CI] 0.14-0.31), a significant increase in the secretion of serum estradiol (pooled difference in means 7.56 pg/mL, 95% CI 4.03-11.08), and reduction in the secretion of serum follicle-stimulating hormone (-6.75 milli-international units/mL, 95% CI -12.16 to -1.34) and luteinizing hormone (-2.71 milli-international units/mL, 95% CI -4.22 to -1.20). Studies with a large effect size of acupuncture-associated changes in serum estradiol had a significantly lower odds of sleep disturbances than did those with a small-to-moderate effect sizes (Ors 0.07 and 0.36, P=.02).
Conclusions	Acupuncture is associated with a significant reduction in sleep disturbances in women experiencing menopause-related sleep disturbances. Our findings suggest that acupuncture should be adopted as part of a multimodal approach for improving sleep disturbances in perimenopausal and postmenopausal women.

1.2. Zhang 2012 ☆☆

Zhang Ning, Hu Jing, Wang Yan. [Meta-analysis on RCTs of menopause sleep disorders treated by acupuncture therapy]. Chinese Journal of Information on Traditional Chinese Medicine. 2012;8:24-26. [186948].

Objectives	To assess the efficacy of acupuncture treatment on menopause sleep disorders.
Methods	Collect randomized controlled clinical trial involving acupuncture for menopause sleep disorders, retrieve Chinese and English relevant database by computer and manual searching, then evaluate the quality of the literature according to Cochrane Handbook recommended quality assessment method, and statistically analyze the data using software RevMan5. 1. 2.
Results	The systematic review included **eleven randomized controlled study with a total of 858 cases**. Meta-analysis derived: the difference in efficiency, the acupuncture treatment compared with drug control, was statistically significant [OR=5. 99, 95%CI (2. 32, 15. 49), P=0. 000 2]. Sub-group analysis showed that: between acupuncture and herb control, the difference was not statistically significant [OR=2. 34, 95%CI (0. 23, 23. 78), P=0. 47]. While between acupuncture and western medicine control, special acupuncture and Chinese and Western medicine control, the differences were both statistically significant. In increasing serum E2 levels, acupuncture compared with drug therapy, the difference was statistically significant [MD=33. 69, 95% CI (29. 87, 37. 50), P<0. 000 01]. In increasing PSQI index, acupuncture compared with drug therapy, the difference was not statistically significant [MD=-0. 62, 95%CI (-2. 75, 1. 51), P=0. 57].
Conclusions	Acupuncture has some effect on menopause sleep disorders.

2. Overview of Systematic Reviews

2.1. Zhao 2021 ☆

Zhao FY, Zhang WJ, Kennedy GA, Conduit R, Zheng Z, Fu QQ. The Role of Acupuncture in Treating Perimenopausal Insomnia: An Overview and Quality Assessment of Systematic Reviews and Meta-Analyses. Neuropsychiatr Dis Treat. 2021 Nov 11;17:3325-3343. https://doi.org/10.2147/NDT.S337504

Objective	To summarize and critically assess the reliability of the methodological quality and outcome measures from systematic reviews (SRs)/meta-analyses (MAs) and provide an overall verdict about the therapeutic value of acupuncture for perimenopausal insomnia (PMI).
Methods	We conducted a comprehensive literature search for SRs/MAs of seven major databases (English and Chinese). For each included review, the methodological quality was appraised according to the Assessing the Methodological Quality of Systematic Reviews 2 (AMSTAR-2), the evidence quality was classified on the basis of the Grading of Recommendations, Assessment, Development and Evaluation (GRADE), and reporting quality was evaluated complying with Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2009 (PRISMA-2009). Veritas plots were used to quantify the quality of included SRs/MAs.
Results	**Nine SRs/MAs** were deemed eligible for the present overview. Considering the assessment of results from the AMSTAR-2 checklist, the methodological quality of one SR/MA was considered low, and the remaining eight were critically low. Major methodological deficiencies were concentrated on item 2 (the lack of protocol and/or registration information), item 7 (the lack of a list of excluded studies), and item 10 (the lack of reports on funding sources for individual studies included in the SRs/MAs). For the GRADE system, of the 25 outcomes, only three (12%) were rated as moderate-quality, while the remaining 22 were rated between low- and very low-quality. The PRISMA-2009 statement indicated three major reporting quality limitations in most SRs/MAs, namely: 1) only search terms without specific retrieval strategy; 2) incomplete descriptions for study characteristics, particularly the specific dosage and frequency of interventions in treatment/control groups; and 3) inadequate investigation and explanation of the source of high heterogeneity among original randomized control trials included. According to Veritas plots, quality rank scores of included SRs/MAs ranged from 3.3 to 8.3, with an average score of 6.4 ± 1.7.
Conclusion	Acupuncture appears to be beneficial for PMI management, but the quality of evidence is weakened by the unsatisfactory quality of both SRs/MAs and original trials included.