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dysmenorrhoea:

Dysménorrhées : évaluation de l'acupuncture

Articles connexes : - conduites thérapeutiques -

1. Systematic Reviews and Meta-Analysis

1.1. Generic Acupuncture

1.1.1. Zhang 2026 (Immediate Analgesic Effect)

Zhang P, Li M, Lv J. Immediate Analgesic Effect of Acupuncture for Primary Dysmenorrhea: A Systematic Review and Meta-Analysis. J Pain Res. 2026;19:634802. https://doi.org/10.2147/JPR.S634802

Background	Primary dysmenorrhea is characterized by recurrent menstrual pain, and the immediate analgesic effects of acupuncture remain incompletely defined. This systematic review and meta-analysis evaluated the rapid analgesic effect of acupuncture, characterized its time-effect profile, and explored factors that may influence the magnitude of response.
Methods	PubMed, Cochrane Library, Web of Science, CNKI, Wanfang, and VIP were searched from January 2006 to April 2026 for randomized controlled trials evaluating acupuncture for primary dysmenorrhea. Two reviewers independently screened studies, extracted data, and assessed risk of bias using RoB 2.0. Meta-analyses were performed with RevMan 5.4.1, and certainty of evidence was assessed using GRADE.
Results	**Thirty-six RCTs involving 3,532 patients** were included. Compared with blank control, single-point acupuncture produced analgesia from 5 minutes after needle insertion, with a peak at 30 minutes (MD = -30.86, 95% CI -39.91 to -21.81; $p < 0.00001$), and the effect persisted up to 120 minutes after needle withdrawal. Single-point acupuncture was superior to non-acupoint shallow needling (MD = -9.96, 95% CI -19.16 to -0.75; $p = 0.03$). Sanyinjiao (SP6) showed a more favorable analgesic trend than Xuanzhong (GB39). Multi-acupoint acupuncture was superior to single-point acupuncture (MD = -3.70, 95% CI -5.82 to -1.57; $p = 0.0007$), and stronger Deqi was superior to weaker Deqi (MD = -7.54, 95% CI -10.05 to -5.02; $p < 0.00001$). At 30 minutes, acupuncture produced greater analgesia than conventional medication (SMD = -2.97, 95% CI -4.45 to -1.49; $p < 0.0001$), but heterogeneity was very high ($I^2 = 96\%$), certainty was very low, and trim-and-fill analysis suggested possible overestimation from publication bias.
Conclusion	Acupuncture may provide rapid-onset analgesia for primary dysmenorrhea, with effects influenced by acupoint selection, use of multiple points, and Deqi intensity. However, certainty of evidence ranged from very low to moderate, and substantial heterogeneity and possible publication bias limit confidence in the estimates. Larger, standardized multicenter randomized trials are required.

1.1.2. Liu 2025 (Network Meta-Analysis)

Liu J, Wang Y, Zhang J, Fan X, Chen H, Zuo G, Wang X, She Y. Efficacy and Safety of Non-Pharmacological Therapies for Primary Dysmenorrhea: A Network Meta-Analysis. J Pain Res. 2025 Feb 27;18:975-991. https://doi.org/10.2147/JPR.S498184

Backgound	This network meta-analysis (NMA) aimed to explore the impact of Non-pharmacological therapies (NPT) on alleviating primary dysmenorrhea (PD) symptoms and assess the effectiveness differences among various NPT.
Methods	We searched seven databases and summarized clinical trials of PD treated with NPT from inception to September 6, 2023. Randomized controlled clinical trials (RCTs) of PD treated with NPT. The outcomes were the Visual Analog Scale (VAS), the Cox menstrual symptom scale (CMSS), and response rate. Quality was assessed using the Cochrane risk of bias assessment tool. Pairwise meta-analysis and network meta-analysis (NMA) was performed by RevMan (5.4), Stata (15.0), and WinBUGS (1.4.3). The ranking probabilities for all treatment interventions were performed using the Surface Under the Cumulative Ranking curve (SUCRA).
Results	A total of **16 RCTs** were finally included, involving 8 kinds of NPT. Results of pairwise meta-analyses: For the VAS score results, moxibustion (SMD: -0.591,95% CI: -0.916, -0.266) was more effective than acupuncture, acupuncture (SMD: -0.948,95% CI: -1.853, -0.044) was more effective than placebo, and yoga (SMD: 2.634,95% CI: -4.28, -0.988) was more effective than the blank control. NMA results: Compared to the blank control, acupuncture (SMD: -4.81; 95% CI: -6.63, -3.00), auricular point therapy (SMD: -4.36; 95% CI: -7.18, -1.60), yoga (SMD: -2.12; 95% CI: -3.13, -1.09), moxibustion (SMD:5.54; 95% CI: 3.33, 7.68), and placebo (SMD: 3.10; 95% CI: 1.03, 5.27) proved to be a superior reduction in VAS. The use of acupressure (SMD: 2.49; 95% CI: 0.03, 5.03), moxibustion (SMD: -2.45; 95% CI: -4.06, -0.71), and acupuncture (SMD: -1.72; 95% CI: -2.75, -0.56) demonstrated a greater decrease in VAS efficacy than placebo. The consolidated ranking outcomes indicate that moxibustion, acupuncture, and auricular acupoint therapy occupy high SUCRA positions across various outcome metrics.
Conclusion	**Acupuncture, moxibustion and auricular point** may be the best treatment for PD. In the future, more trials are needed to obtain higher-quality evidence and the best protocols.

1.1.3. Shen 2025 (Long term effects)

Shen X, Liu S, Chen H, Wang W, Fang J, Liu Z. Long term effects of acupuncture for primary dysmenorrhea: a systematic review and meta-analysis. J Pain Res. 2025 Oct 11;18:5359-5376. https://doi.org/10.2147/JPR.S540073

Background	Primary dysmenorrhea (PD) is a recurrent condition for which standard treatments often fail to yield sustained benefits. The long-term efficacy of acupuncture after treatment completion remains uncertain. This systematic review evaluated the durability of acupuncture’s effects in PD.
Methods	Comprehensive searches of English and Chinese databases were conducted up to January 24, 2025. Two independent reviewers screened and extracted data. Risk of bias was assessed with the Cochrane RoB 2.0 tool. Continuous data were pooled as mean differences (MD) and safety outcomes as odds ratios (OR).

Results	**Fourteen RCTs (n = 970)** were included. At three menstrual cycles post-treatment, acupuncture significantly reduced pain intensity versus no intervention (VAS MD = –47.80; 95 % CI –48.63 to –46.97; p < 0.0001) and improved McGill Pain (MD = –8.55; 95 % CI –11.46 to –5.64; p < 0.0001) and CMSS scores (duration MD = –18.24; severity MD = –12.96; both p < 0.0001). Compared with NSAIDs, acupuncture achieved greater pain reduction (VAS MD = –29.89; 95 % CI –37.63 to –22.15; p < 0.0001) and symptom improvement (CMSS MD = –3.00; p = 0.0043). Combined therapy (acupuncture + NSAIDs) showed enhanced analgesic efficacy (VAS MD = –19.95; p < 0.0001). No superiority was observed over sham acupuncture.
Conclusion	Acupuncture may provide sustained pain relief and symptom improvement for up to three menstrual cycles post-treatment in primary dysmenorrhea. However, evidence quality remains low due to methodological limitations and risk of bias.

1.1.4. Wang 2025

Wang Y, Liu L, Wu X, Wu Y, Qin R, Wang M, Zhou B, Sun J, Song Y, Zhang M, Li M, Yu L. Clinical evidence of acupoint stimulation for primary dysmenorrhea: a systematic review and updated meta-analysis. J Pain Res. 2025 Aug 24;18:4307-4336. https://doi.org/10.2147/JPR.S533585

Purpose	Meridian-based acupoint stimulation has been increasingly used for primary dysmenorrhea (PD), though evidence of efficacy remains inconsistent. This systematic review and meta-analysis evaluated the effectiveness and safety of invasive and noninvasive acupoint stimulation therapies for PD.
Methods	Registered in PROSPERO (CRD42024586857). Searches were conducted in PubMed, Embase, AMED, CENTRAL, Web of Science, Scopus, VIP, CNKI, and Wanfang up to May 20, 2024. Risk of bias was assessed using the Cochrane RoB 2 tool. Random-effects models were applied, with primary outcomes being pain intensity (VAS/effective rate) and adverse event incidence; secondary outcomes included symptom scores, quality of life, uterine hemodynamics, and prostaglandin levels.
Results	**Twenty-two RCTs (n = 1,955)** were included. Compared with no or sham treatment, acupoint stimulation significantly reduced pain (SMD = –2.96, 95 % CI –4.39 to –1.53). Compared with NSAIDs, acupoint stimulation provided both immediate (SMD = –2.85, 95 % CI –4.06 to –1.64) and sustained pain relief (3 cycles: SMD = –1.58, 95 % CI –2.43 to –0.73; following 3 cycles: SMD = –3.74, 95 % CI –5.57 to –1.90), especially with invasive techniques. Adverse events did not differ significantly (RR = 0.94, 95 % CI 0.26–3.33). Evidence certainty ranged from low to moderate due to risk of bias and heterogeneity.
Conclusion	Acupoint stimulation effectively reduces menstrual pain in primary dysmenorrhea without increasing adverse events, showing both immediate and durable benefits, particularly for invasive methods.

1.1.5. Liu 2022 ★★

Liu W, Wang CC, Lee KH, Ma X, Kang TL. Efficacy and Safety of Acupuncture and or Moxibustion for Managing Primary Dysmenorrhea: A Systematic Review and Meta-Analysis. Clin Nurs Res. 2022 Sep;31(7):1362-1375. https://doi.org/10.1177/10547738221086984. Epub 2022 May 2.

Background	Acupuncture and moxibustion have been accepted as add-on options for primary dysmenorrhea (PD); however, the clinical evidence is still inadequate.
Methods	We searched AMED, CENTRAL, EMBASE, PubMed, Web of Science, CBM, CNKI, VIP, Wangfang database, ANZCTR, ClinicalTrials.gov, and the WHO ICTRP, from their inception to February 2021.

Results	The pooled analysis of **13 RCTs with 675 participants** for VAS showed that acupuncture and moxibustion were more effective in managing PD than the control group with the MD of -1.93 (95% CI [-2.80, -1.06] and -2.67 (95% CI [-4.96, -0.38]). With the CMSS, seven studies with 487 participants showed that these modalities were more effective than the control group with the MD of -7.58 (95% CI [-10.97, -4.19]) and -3.78 (95% CI [-6.90, -0.66]).
Conclusions	The findings indicated that acupuncture and moxibustion could relieve pain effectively and has fewer adverse events (AEs) in managing PD.

1.1.6. Yang 2020 (Versus Western Medication) ☆

Yang Jun, Xiong Jun, Yuan Ting, et al. [Efficacy of Acupuncture-moxibustion Versus Western Medication for Primary Dysmenorrhea: A Meta-analysis]. Shanghai Journal of Acupuncture and Moxibustion. 2020;39(10):1339. [214569].

Objective	To systematically evaluate the clinical efficacy of acupuncture-moxibustion and Western medication in treating primary dysmenorrhea.
Method	A comprehensive retrieval was conducted through the Chinese Biomedical database (CBM), China National Knowledge Infrastructure (CNKI), VIP database (VIP), Wanfang database (WF), Pubmed, Embase and Cochrane Library by computer, assisted by manual retrieval through the relevant journals and references, to collect randomized controlled trials (RCTS) comparing acupuncture-moxibustion with Western medication in treating primary dysmenorrhea. The Jadad scale and Cochrane bias risk assessment tool were used for quality evaluation. The statistician performed meta-analysis with RevMan 5.3 software.
Result	**Forty-two studies** were included, including a total of **3179 participants**. There were 7 studies (1 6.67%) scored) 4 points by the Jadad scale. The studies were evaluated as high risk in the performance of blinding, with other potential bias, and the randomized allocation and concealment were assessed as unclear. The meta-analysis showed that there was statistical significant comparing the total effective rate between the acupuncture-moxibustion group and the Western medication group [RR=1.22, 95%CI (1.16,1.29), Z=7.86]. The funnel plot showed possible publication bias. There was statistical significance comparing the real-time efficacy between the acupuncture-moxibustion group and the Western medication group [RR=1.25, 95%CI (1.08,1.45), Z=2.95]. There was no statistical significance comparing the long-term efficacy between the acupuncture-moxibustion group and the Western medication group [RR= 1 .34, 95%CI (0.93, 1 .94), Z=1 .57]. The relapse rate in the acupuncture-moxibustion group was significantly different from that in the Westem medication group [RR=0.28, 95%CI (0. 1 5,0.5 1), Z=4. 1 3]. There was statistical significance comparing the VAS score between the acupuncture-moxibustion group and the Westem medication group [WMD= - 2.58, 95%CI (- 3.88, - 1.29), Z=3.91]. The general score of dysmenorrhea symptoms in the acupuncture-moxibustion group was significantly different from that in the Western medication group [WMD= - 2.58, 95%CI (- 3.88, - 1.29), Z=3.91].
Conclusion	Compared with Western medication, acupuncture-moxibustion shows significant advantage in treating primary dysmenorrhea, but RCTs with large sample size, multiple centers and high quality are required for in-depth study and observation considering the included low-quality studies currently.

1.1.7. Luo 2019 (versus NSAIDs) ☆

Luo F, Huang X, Liu X, Wang L, Xu N. Comparative efficacy and safety of NSAIDs-controlled acupuncture in the treatment of patients with primary dysmenorrhoea: a Bayesian network meta-analysis. J Int Med Res. 2019;47(1):19-30. [198557].

Background	Acupuncture and non-steroidal anti-inflammatory drugs (NSAIDs) are used frequently to treat primary dysmenorrhoea. However, it is unclear whether this treatment greatly reduces the risk of primary dysmenorrhoea.
Methods	Eight databases were searched up to January 2018. Pair-wise and network meta-analyses were conducted to synthesize data from eligible studies.
Results	Seventeen randomized controlled trials were included. The following acupuncture types showed more efficacy than NSAIDs in reducing primary dysmenorrhoea risk: traditional acupuncture (odds ratio [OR] = 6.70, 95% confidence interval [CI] 2.60-20.0), eye acupuncture (OR = 3.50, 95% CI 1.40-8.90), wrist-ankle acupuncture (OR = 6.00, 95% CI 1.30-32.0), superficial acupuncture (OR= 5.10, 95% CI 1.20-26.0), moxibustion (OR = 7.70, 95% CI 2.90-25.0), electroacupuncture (OR = 23.0, 95% CI 4.80-130), ear acupuncture (OR = 13.0, 95% CI 2.80-100) and abdominal acupuncture (OR = 5.30, 95% CI 2.10-16.0). Surface under the cumulative ranking curve values were traditional acupuncture (53.0%), eye acupuncture (22.0%), wrist-ankle acupuncture (81.5%), superficial acupuncture (50.0%), moxibustion (57.8%), electroacupuncture (99.9%), ear acupuncture (41.6%) and abdominal acupuncture (44.1%).
Conclusion	Acupuncture is more efficacious than NSAIDs in reducing primary dysmenorrhoea risk. Acupuncture, particularly electroacupuncture, can decrease the risk of primary dysmenorrhoea.

1.1.8. Woo 2018 ☆☆

Woo HL, Ji HR, Pak YK, Lee H, Heo SJ, Lee JM, Park KS. The efficacy and safety of acupuncture in women with primary dysmenorrhea: A systematic review and meta-analysis. Medicine (Baltimore). 2018;97(23). [165819].

BACKGROUND	This systematic review aimed to evaluate the current evidence regarding the efficacy and safety of acupuncture on primary dysmenorrhea.
METHODS	Ten electronic databases were searched for relevant articles published before December 2017. This study included randomized controlled trials (RCTs) of women with primary dysmenorrhea; these RCTs compared acupuncture to no treatment, placebo, or medications, and measured menstrual pain intensity and its associated symptoms. Three independent reviewers participated in data extraction and assessment. The risk of bias in each article was assessed, and a meta-analysis was conducted according to the types of acupuncture. The results were expressed as mean difference (MD) or standardized mean difference (SMD) with 95% confidence intervals (Cis).
RESULTS	This review included **60 RCTs; the meta-analysis included 49 RCTs**. Most studies showed a low or unclear risk of bias. We found that compared to no treatment, manual acupuncture (MA) (SMD = -1.59, 95% CI [-2.12, -1.06]) and electro-acupuncture (EA) was more effective at reducing menstrual pain, and compared to nonsteroidal anti-inflammatory drugs (NSAIDs), MA (SMD = -0.63, 95% CI [-0.88, -0.37]) and warm acupuncture (WA) (SMD = -1.12, 95% CI [-1.81, -0.43]) were more effective at reducing menstrual pain. Some studies showed that the efficacy of acupuncture was maintained after a short-term follow-up.
CONCLUSION	The results of this study suggest that acupuncture might reduce menstrual pain and associated symptoms more effectively compared to no treatment or NSAIDs, and the efficacy could be maintained during a short-term follow-up period. Despite limitations due to the low quality and methodological restrictions of the included studies, acupuncture might be used as an effective and safe treatment for females with primary dysmenorrhea.

1.1.9. Li 2017 ☆☆

Li Ge, Si Jinhua, Zhao Chen, Ge Long, Tian Jinhui, Shang Hongcai, Wang Zixin, Xu Xiangling, Wang Shuhe. [Network meta-analysis on clinical effects of acupuncture in treatment of primary dysmenorrhea]. Chinese Journal of Evidence-Based Medicine. 2017;17(10):1212. [175772].

Objective	To assess the effectiveness of acupunctures in treatment of primary dysmenorrhea by using network meta-analysis.
Methods	Databases including the PubMed, EMbase, The Cochrane Library (Issue 6, 2016), CBM, CNKI and WanFang Data were searched for relevant clinical randomized controlled trials (RCTs) comparing acupunctures with ibuprofen or other kinds of acupuncture from inception to July 6th 2016. Two reviewers independently screened literature extracted data and assessed the risk of bias of included studies. Then meta-analysis was performed by using Stata 13.0 and WinBugs 1.43 software.
Results	A total of **56 RCTs involving 4 600 PD patients** were included. The results of network meta-analysis showed that: for the clinical effects: simple acupuncture, acupuncture plus moxa moxibustion, acupuncture plus indirect-moxibustion, electroacupuncture, warm-acupuncture and electroacupuncture plus warm-acupuncture were superior to ibuprofen, acupuncture plus moxa-moxibustion, acupuncture plus indirect moxibustion and warm-acupuncture were superior to simple acupuncture. For VAS score, there was no significant difference among all treatments. Simple acupuncture and ibuprofen were superior to acupuncture plus indirect moxibustion in dysmenorrhea symptom scores.
Conclusion	The included 6 kinds of acupunctures are superior to ibuprofen and different acupunctures have different advantages in the treatment of PD. When selecting treatment regimen, it is better to consider the clinical situation and TCM syndrome differentiation

1.1.10. Xu 2017 (versus NSAIDs) ☆☆

Xu Y, Zhao W, Li T, Bu H , Zhao Z, Zhao Y, Song S. Effects of acupoint-stimulation for the treatment of primary dysmenorrhoea compared with NSAIDs: a systematic review and meta-analysis of 19 RCTs. BMC Complement Altern Med. 2017;17(1):436. [171496].

Background	Primary dysmenorrhoea (PD), defined as painful menses in women with normal pelvic anatomy, is one of the most common gynaecological syndromes. Acupoint-stimulation could potentially be an effective intervention for PD. Our aim was to determine the effectiveness of acupoint-stimulation compared with Non-Steroidal Anti-Inflammatory Drugs (NASIDs) in the treatment of PD.
Methods	Six databases were searched to December 2014. **Sixteen studies involving 1679 PD patients** were included. We included randomized controlled trials that compared acupoint-stimulation with NASIDs for the treatment of PD. The main outcomes assessed were clinical effectiveness rate, symptom score, visual analogue score, variation in peripheral blood prostaglandin F2α (PGF2α) and side effects. All analyses were performed using Comprehensive Meta-Analysis statistical software.

Results	(1) The total efficacy was better than control group: odds ratio = 5.57; 95% confidence interval (95% CI) = 3.96, 7.83; P < 0.00001; (2) The effect of intervention was positive in relieving the severity of PD symptoms: mean difference (MD) = 2.99; 95%CI = 2.49, 3.49; P < 0.00001; (3) No statistical difference existed between two groups in terms of a reduction in the VAS: MD = 1.24; 95%CI = -3.37, 5.85; P = 0.60; (4) The effect of intervention on the variation in peripheral blood PGF2α between two groups was positive: MD = 7.55; 95%CI = 4.29,10.82; P < 0.00001; (5) The side effects of control groups was more than the acupoint-stimulation group: OR = 0.03; 95%CI =0.00,0.22; P = 0.0005.
Conclusions	**According to this article, acupoint-stimulation can relieve pain effectively in the treatment of PD and offers advantages in increasing the overall effectiveness.**

1.1.11. Smith 2016 Ø

Smith CA, Armour M, Zhu X, Li X, Lu ZY, Song J. Acupuncture for dysmenorrhoea. Cochrane Database Syst Rev. 2016. [186528].

Background	Primary dysmenorrhoea is the most common form of period pain and affects up to three-quarters of women at some stage of their reproductive life. Primary dysmenorrhoea is pain in the absence of any organic cause and is characterised by cramping pain in the lower abdomen, starting within the first eight to 72 hours of menstruation. This review examines the currently available evidence supporting the use of acupuncture (stimulation of points on the body using needles) and acupressure (stimulation of points on the body using pressure) to treat primary dysmenorrhoea.
OBJECTIVES	To determine the effectiveness and safety of acupuncture and acupressure in the treatment of primary dysmenorrhoea when compared with a placebo, no treatment, or conventional medical treatment.
Methods	SEARCH METHODS: We searched the following databases: the Cochrane Menstrual Disorders and Subfertility Group Trials Register (to September 2015), Cochrane Central Register of Controlled Trials (CENTRAL) (the Cochrane Library), MEDLINE, EMBASE, PsycINFO, CINAHL and Chinese databases including Chinese Biomedical Literature Database (CBM), China National Knowledge Infrastructure (CNKI), VIP database and registers of ongoing trials. SELECTION CRITERIA: We included all published and unpublished randomised controlled trials (RCTs) comparing acupuncture with sham acupuncture or placebo control, usual care, pharmacological treatment or no treatment. We included the following modes of treatment: acupuncture, electro-acupuncture, and acupressure. Participants were women of reproductive age with primary dysmenorrhoea during the majority of the menstrual cycles or for three consecutive menstrual cycles, and moderate to severe symptoms. DATA COLLECTION AND ANALYSIS: We calculated odds ratios (Ors) for dichotomous outcomes and mean differences (MDs) or standardised mean differences (SMDs) for continuous outcomes, with 95% confidence intervals (Cis). We pooled the data where appropriate. Our primary outcomes was pain. Secondary outcomes included menstrual symptoms, quality of life, and adverse effects.

Main Results	We included **42 RCTs (4640 women)**. Acupuncture or acupressure was compared with a sham/placebo group, medication, no treatment or other treatment. Many of the continuous data were not suitable for calculation of means, mainly due to evidence of skew.1. Acupuncture studies Acupuncture versus sham or placebo control (6 RCTs) Findings were inconsistent and inconclusive. However, the only study in the review that was at low risk of bias in all domains found no evidence of a difference between the groups at three, six or 12 months. The overall quality of the evidence was low. No studies reported adverse events. Acupuncture versus NSAIDs Seven studies reported visual analogue scale (VAS) pain scores, but were unsuitable for pooling due to extreme heterogeneity (I^2 = 94%). In all studies the scores were lower in the acupuncture group, with the mean difference varying across studies from 0.64 to 4 points on a VAS 0 - 10 scale (low-quality evidence). Four RCTs reported rates of pain relief, and found a benefit for the acupuncture group (OR 4.99, 95% CI 2.82 to 8.82, 352 women, I^2 = 0%, low-quality evidence). Adverse events were less common in the acupuncture group (OR 0.10, 95% CI 0.02 to 0.44, 4 RCTs, 239 women, 4 trials, I^2 = 15%, low-quality evidence). Acupuncture versus no treatment Data were unsuitable for analysis, but pain scores were lower in the acupuncture group in all six studies reporting this outcome. The quality of the evidence was low. No studies reported adverse events.2. Acupressure studies No studies of acupressure reported adverse events. Acupressure versus sham or placebo control Data were unsuitable for pooling, but two studies reported a mean benefit of one to three points on a 0 - 10 VAS pain scale. Another four studies reported data unsuitable for analysis: all found that pain scores were lower in the acupuncture group. No studies reported adverse events. The quality of the evidence was low. Acupressure versus NSAIDsOne study reported this outcome, using a 0 - 3 pain scale. The score was higher (indicating more pain) in the acupressure group (MD 0.39 points, 95% CI 0.21 to 0.57, 136 women, very low-quality evidence). Acupressure versus no treatmentThere was no clear evidence of a difference between the groups on a VAS 0 - 10 pain scale (MD -0.96 points, 95% CI -2.54 to 0.62, 2 trials, 140 women, I^2 = 83%, very low-quality evidence).
Authors' conclusions	**There is insufficient evidence** to demonstrate whether or not acupuncture or acupressure are effective in treating primary dysmenorrhoea, and for most comparisons no data were available on adverse events. The quality of the evidence was low or very low for all comparisons. The main limitations were risk of bias, poor reporting, inconsistency and risk of publication bias.

1.1.12. Lin 2015 ☆

Lin Han-Mei, Zeng Qian-Ru, Liu Dan-Qing, Lei Yuan. [Meta-Analysis of Primary Dysmenorrhea Treated by Acupuncture]. Henan Traditional Chinese Medicine 2015;4:862-865. [186981]

Objective	To systematically evaluate the effectiveness of acupuncture treatment for primary dysmenorrhea.
Methods	The PubMed, CNKI, VIP, Chongqing Vipdatabase and Wan Fangdatabase were retrieved by computer, literature retrieval and manual searching were also added to collect the randomized controlled trials (RCTs) that related with primary dysmenorrhea treated by acupuncture ((published from January 1, 2003 to August 1, 2013). The research quality were included after literature screening according to inclusive criteria and emission standard. Then Meta-analysis was made via Rev Man 5. 2 software.
Results	The effective rate of **acupuncture for primary dysmenorrhea is higher than that of western medicine and Chinese patent medicine**. The total scores of treatment group were better than these of control group; the difference was statistically significant.

Conclusion	The current study shows that **acupuncture is effective in treating primary dysmenorrhea and has advantages over routine medicine**. However, due to the limitation of included research quality, it needs high-quality RCTs to further test the clinical effect and safety of acupuncture for treating primary dysmenorrhea.

1.1.13. Abaraogu 2015 ☆

Abaraogu UO, Tabansi-Ochuogu CS. As acupressure decreases pain, acupuncture may improve some aspects of quality of life for women with primary dysmenorrhea: a systematic review with meta-analysis. J Acupunct Meridian Stud 2015. 8(5):220-8. [184386].

Background	Primary dysmenorrhea is the most common gynecological symptom reported by women and constitutes a high health, social, and economic burden. Chemotherapies, along with their side effects, have not yielded satisfactory outcomes. Alternative nonpharmacological interventions, including acupuncture and acupressure, have been advocated, but evidence regarding their beneficial effect is inconclusive.
Methods	This study sought to obtain evidence on the effectiveness of acupuncture and acupressure interventions. Twelve electronic databases were searched by using menstrual pain intensity and quality of life as primary and secondary outcomes, respectively, with the PEDro guideline for quality appraisal. Data unsuitable for a meta-analysis were reported as descriptive data.
Results	The search yielded 38 citations, from which eight studies were systematically reviewed, four of the eight being eligible for meta-analysis. The systematic review showed moderate methodological quality with a mean of 6.1 out of 10 on the PEDro quality scale. Acupressure showed evidence of pain relief while acupuncture improved both the mental and the physical components of quality of life.
Conclusion	In conclusion, physiotherapists should consider using acupuncture and acupressure to treat primary dysmenorrhea, but a need exists for higher quality, randomized, blinded, sham-controlled trials with adequate sample sizes to establish clearly the effects of these modalities.

1.1.14. Jung 2015 (Korean Literatures)

Jung Wan Kim, Bong Ki Park, Jong Ik Jeon, Yun Kyoung Yim. [Acupuncture and Moxibustion for Primary Dysmenorrhea in Korean Literatures: A Systematic Review of Randomized Controlled Trials]. The Acupuncture. 2015;32(2):123-130. [153052].

Objectives	Primary dysmenorrhea is one of the most common female gynecological diseases. Acupuncture and moxibustion therapy have been used to treat dysmenorrhea in Korea. The aim of this review was to examine the effectiveness of acupuncture and moxibustion therapy for primary dysmenorrhea as described in studies in Korea.
Methods	A total of 8 databases were searched, with the search concluding February 15, 2015. These were the Oriental Medicine Advanced Searching Integrated System, Dbpia, Korean Studies Information Service System, National Digital Science Library, Korean Traditional Knowledge Portal, Research Information Sharing Service, and Pubmed. Randomized controlled Trails(RCTs) comparing acupuncture or moxibustion therapy with non acupoints stimulation or medication were selected. Data abstraction and assessment of methodology was conducted by authors and disagreements were resolved by discussion.

Results	**7 trials** were included in this review, with a total of **308 participants**. 4 trials reported on acupuncture, 1 trial reported on acupress by magnet, 1 trial reported on pharmacopuncture, and the other trial reported on moxibustion. Quality of methodology was low. 2 trials showed that experimental therapy was effective for pain relief compared to the controlled group. However, 5 trials did not show a significant difference in pain relief.
Conclusions	**Acupuncture and moxibustion therapy may reduce period pain**, however, it is needed for well designed RCTs in Korea.

1.1.15. Xu 2014 ☆☆

Xu T, Hui L, Juan YL, Min SG, Hua WT. Effects of moxibustion or acupoint therapy for the treatment of primary dysmenorrhea: a meta-analysis. Altern Ther Health Med. 2014;20(4):33-42. [177247].

Purpose	The study intended to compare the effectiveness of moxibustion and acupoint therapy-such as sandwiched moxibustion, moxibustion, acupuncture, eye of floating needle, and acupoint application-with other therapeutic methods for the treatment of primary dysmenorrhea .
Methods	Six electronic databases-PubMed, Web of Science, the Chinese Biomedical Literature Database (CBM), the Chinese Journal Full-text Database (CNKI), the Chinese Science and Technology Journal Full-text Database (VIP), and Chinese Wanfang Data-were searched electronically, from inception to December, 2012, to find randomized, controlled trials (RCTs). Relevant references in articles used in the current study were searched manually. Literature was screened, data were extracted, and the methodological quality of the included studies was assessed. Then, meta-analyses were performed.
Results	A total of **20 RCTs, involving 2134 participants**, were included in the current study. Results of the metaanalysis showed that (1) the total efficacy for the 2 studied interventions was better, with a statistically significant difference from that of the control methods: degrees of freedom (df) = 14, relative risk (RR) = 1.19, 95% confidence interval (95% CI) = (1.14 - 1.24), P < .000 for the UTG, and df = 4, RR = 1.15, 95% CI (1.02 - 1.29), P = .03 for the CDSTG; (2) the studied interventions were better than the control methods, with statistically significant differences, in relieving the severity of symptoms of PD: df = 3, mean difference (MD) = 3.20, 95% CI (2.36 - 4.04), P < .000 for the UTG and df = 1, MD = 2.09, 95% CI (0.16 - 4.02), P = .03 for the CDSTG; and (3) no statistical difference existed between the intervention and control methods groups in the reduction of the level of peripheral blood PGF2α: df = 2, standardized mean difference (SMD) = 0.13, 95% CI (-0.13 - 0.39), P = .32.
Conclusion	Moxibustion and acupoint therapy can **relieve pain effectively for individuals with PD**, and these treatments have advantages in overall efficiency.

1.1.16. Kannan 2014 ☆

Kannan P, Claydon LS. Some physiotherapy treatments may relieve menstrual pain in women with primary dysmenorrhea: a systematic review. J Physiother. 2014. 60(1):13-21. [171188].

Question	In women with primary dysmenorrhoea, what is the effect of physiotherapeutic interventions compared to control (either no treatment or placebo/sham) on pain and quality of life?
Design	Systematic review of randomised trials with meta-analysis. Participants: Women with primary dysmenorrhea. Intervention: Any form of physiotherapy treatment. Outcome measures: The primary outcome was menstrual pain intensity and the secondary outcome was quality of life.

Results	The search yielded 222 citations. Of these, 11 were eligible randomised trials and were included in the review. Meta-analysis revealed statistically significant reductions in pain severity on a 0-10 scale from acupuncture (weighted mean difference 2.3, 95% CI 1.6 to 2.9) and acupressure (weighted mean difference 1.4, 95% CI 0.8 to 1.9), when compared to a control group receiving no treatment. However, these are likely to be placebo effects because when the control groups in acupuncture/acupressure trials received a sham instead of no treatment, pain severity did not significantly differ between the groups. Significant reductions in pain intensity on a 0-10 scale were noted in individual trials of heat (by 1.8, 95% CI 0.9 to 2.7), transcutaneous electrical nerve stimulation (2.3, 95% CI 0.03 to 4.2), and yoga (3.2, 95% CI 2.2 to 4.2). Meta-analysis of two trials of spinal manipulation showed no significant reduction in pain. None of the included studies measured quality of life.
Conclusion	Physiotherapists could consider using heat, transcutaneous electrical nerve stimulation, and yoga in the management of primary dysmenorrhea. While benefits were also identified for acupuncture and acupressure in no-treatment controlled trials, the absence of significant effects in sham-controlled trials suggests these effects are mainly attributable to placebo effects.

1.1.17. Qin 2014 ☆☆

Qin Ai-Ling, Ma Rui-Ping, Xiao Wan, Yi Li-Juan, Tian Xu. [Effects of Associated Simple Acupuncture Therapy in the Treatment of Primary Dysmenorrhea: a Systematic Review]. Journal of International Obstetrics and Gynecology. 2014;4:453-458. [187003]

Objective	To systematically review the effectiveness of associated simple acupuncture therapy in the treatment of primary dysmenorrhea (PD).
Methods	Databases such as PubMed, Web of Science (SCI), CBM, CNKI, VIP and WANFANG DATA were electronically searched to collect the randomized controlled trials (RCTs) (up to December 2012), and the relevant references of the included articles were also manually searched. According to the inclusion and exclusion criteria, literature was screened, data were extracted and methodological quality of the included studies was assessed. Then Meta analyses were performed by using RevMan 5. 2 software.
Results	A total of **20 RCTs involving 2 134 participants** were included. Results of Meta analyses showed that: ①total efficiency of associated simple acupuncture therapy was better than that of control method , with statistically significant differences [RR=1. 19, 95%CI (1. 14, 1. 24), P<0. 000] and [RR=1. 15, 95%CI (1. 10, 1. 21), P=0. 03]. ②Associated simple acupuncture therapy was better than control method in releasing degree of serious symptoms of PD , with statistically significant differences [MD=3. 20, 95%CI (2. 36, 3. 04), P<0. 000] and [MD=2. 09, 95%CI (0. 16, 4. 02), P=0. 03]. ③There was no statistical difference in reducing level of the peripheral blood prostaglandin F 2α between the two groups [MD=0. 13, 95%CI (-0. 13, 0. 39), P=0. 32].
Conclusions	**Associated simple acupuncture therapy can significantly relieve pain in patients with PD and overall efficiency**. Due to limitations on the quantity and quality of included studies, this conclusion has yet to be carried out in large, multicenter study to verify.

1.1.18. Chen 2013 ☆

Chen Wen, Yu Haihong, Liu Shihong, Huang Wanling, Tian Weizhen. [Systematic Review of Acupuncture Treatment of Primary Dysmenorrhea]. Chinese Archives of Traditional Chinese Medicine. 2013;2:321-325. [186932]

Objective	To evaluate the clinical efficacy of acupuncture treatment of primary dysmenorrhea (PD) and analyze the current research status.
Methods	28 randomized controlled trials were used for application of standard quality evaluation. Meta-analysis, funnel plot analysis and other methods of statistical data were used for a comprehensive conclusion.
Results	There were 24 papers below 3 with general quality;Meta-analysis combined with OR=6. 82, 95% confidence interval 5. 20-8. 94, diamond in vertical right (Z=13. 89, P<0. 00001), it showed that the control effect of acupuncture and moxibustion on PD in treatment group had significant meaning;funnel plot showed a skewed distribution, suggesting the possible presence of publication bias.
Conclusion	Results from the statistical analysis, **acupuncture treatment of this disease is basically affirmed**, but the research of low quality is the main factor that influences the system evaluation conclusion. Therefore, application of these conclusions should be cautious. To confirm its efficacy and safety, it need randomized controlled trials of strict design and implementation with multicenter large sample and enough follow-up time.

1.1.19. Chung 2012 ☆☆

Chung YC, Chen HH, Yeh ML. Acupoint stimulation intervention for people with primary dysmenorrhea: Systematic review and meta-analysis of randomized trials. Complement Ther Med. 2012 Oct;20(5):353-63.[157955].

Purpose	The aim of this study was to determine the effectiveness of acupoint stimulation for primary dysmenorrhea.
Methods	All searches in the Cochrane Library, MEDLINE, PubMed, CINAHL Plus with Full Text, and CEPS databases (inception to March 2011). Study selection: Randomized controlled trials (RCTs) included were comparing acupoint stimulation with non-acupoint-related stimulation or medication. Thirty RCTs met the selection criteria, and 25 reported sufficient data for pooling. The main outcomes assessed were cure rate, total effective rate, pain intensity, menstrual pain, plasma PGF2/PGE2 ratio, and adverse events. According to the type of outcome, the strength of a relationship between two dichotomous variables was described by odds ratios and 95% confidence intervals, and continuous variables were expressed as mean± standard deviation.
Results	**Twenty-five randomised controlled trials with a total of over 3000 participants** were included for the meta-analysis. effective.
Conclusion	**Acupoint stimulation when compared with non-acupoint-related stimulation or medication had significant effects**. Moderator analysis further confirmed that invasive and noninvasive acupoint stimulation was effective separately, with the latter being more effective. The most common adverse events were hemorrhage and hematoma. Limitations: Papers written in language other than English or Chinese were not included.

1.1.20. Smith 2011 ☆☆☆

Smith CA, Zhu X, He L, Song J. Acupuncture for primary dysmenorrhoea. Cochrane Database Syst Rev. 2011;(1):CD007854.[156154]

Purpose	To determine the efficacy and safety of acupuncture in the treatment of primary dysmenorrhoea when compared with a placebo, no treatment, or conventional medical treatment (for example oral contraceptives and non-steroidal anti-inflammatory medication nSAIDs)).

Methods	The following databases were searched (from inception until March 2010): the Cochrane Menstrual Disorders and Subfertillity Group Trials Register, Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library), PubMed, CINAHL, PsycINFO, Chinese Biomedical Literature Database (CBM), ChineseMedical Current Content (CMCC), China National Knowledge Infrastructure (CNKI), VIP database, Dissertation Abstracts International, BIOSIS, AMED(The Allied and ComplementaryMedicine Database), Acubriefs, and Acubase. Inclusion criteria included all published and unpublished randomised controlled trials comparing acupuncture with placebo control,usual care, and pharmacological treatment. The following modes of treatment were included: acupuncture, electro-acupuncture, and acupressure. Participants were women of reproductive age with primary dysmenorrhoea during the majority of the menstrual cycles or for three consecutive menstrual cycles, and moderate to severe symptoms. Meta-analyses were performed using odds ratios (OR) for dichotomous outcomes and mean differences or standard mean différences (SMD) for continuous outcomes, with 95% confidence intervals (CI). Primary outcomes were pain relief and improved menstrual symptoms, measured by self-rating scales. Other outcomes included use of analgesics, quality of life, and absence from school or work.
Results	**Ten trials were included in the review with data reporting on 944 participants**. Six trials reported on acupuncture (n = 673) and four trials (n = 271) reported on acupressure. There was an improvement in pain relief from acupuncture compared with a placebo control (OR 9.5, 95% CI 21.17 to 51.8), NSAIDs (SMD -0.70, 95% CI -1.08 to -0.32) and Chinese herbs (SMD -1.34, 95% CI -1.74 to -0.95). One trial found a reduction in pain intensity compared with usual care (MD -2.09, 95% CI -2.99, -1.19). In two trials acupuncture reduced menstrual symptoms (for example nausea, back pain) compared with medication (OR 3.25, 95% CI 1.53 to 6.86); in one trial acupuncture reduced menstrual symptoms compared with Chinese herbs (OR 7.0, 95% CI 2.22, 22.06); and in one trial acupuncture improved quality of life compared with usual care. There was an improvement in pain relief from acupressure compared with a placebo control (SMD -0.99, 95% CI -1.48 to -0.49), and in one trial acupressure reduced menstrual symptoms compared with a placebo control (SMD -0.58, 95% CI -1.06 to -0.10). The risk of bias was low in 50% of trials.
Conclusion	**Acupuncture may reduce period pain, however there is a need for further well-designed randomised controlled trials**.

1.1.21. Latthe 2011

Latthe PM, Champaneria R, Khan KS. Dysmenorrhoea. BMJ Clin Evid. 2011. [146374].

Introduction	Dysmenorrhoea may begin soon after the menarche, after which it often improves with age, or it may originate later in life after the onset of an underlying causative condition. Dysmenorrhoea is common, and in up to 20% of women it may be severe enough to interfere with daily activities.
Methods and outcomes	We conducted a systematic review and aimed to answer the following clinical question: What are the effects of treatments for primary dysmenorrhoea? We searched: Medline, Embase, The Cochrane Library, and other important databases up to January 2010 (Clinical Evidence reviews are updated periodically, please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA).
Results	We found 35 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions.

Conclusions	In this systematic review we present information relating to the effectiveness and safety of the following interventions: **acupressure, acupuncture**, aspirin, behavioural interventions, contraceptives (combined oral), fish oil, herbal remedies, magnets, non-steroidal anti-inflammatory drugs, paracetamol, progestogens (intrauterine), spinal manipulation, surgical interruption of pelvic nerve pathways, thiamine, toki-shakuyaku-san, topical heat, transcutaneous electrical nerve stimulation (TENS), vitamin B12, and vitamin E.

1.1.22. Cho 2010 ☆

Cho SH, Hwang EW. Acupuncture for Primary Dysmenorrhoea: A Systematic Review. BJOG 2010;117(5):509-21. [73928].

Objectifs	The effectiveness of acupuncture in primary dysmenorrhoea is not fully understood. *Objectives*: To assess the effectiveness of acupuncture for the symptomatic treatment of primary dysmenorrhoea from randomised controlled trials (RCTs).
Méthodes	*Search Strategy*: Nineteen electronic databases, including English, Korean, Japanese and Chinese databases, were systematically searched for RCTs investigating acupuncture for primary dysmenorrhoea up to July 2008 with no language restrictions. *Selection Criteria*: All RCTs that evaluated the effects of acupuncture compared with controls were included. Studies that assessed the effect of moxibustion or body acupressure were excluded. *Data Collection and Analysis*: The study abstraction and quality assessment of all studies were undertaken following the detailed descriptions of these categories as described in the Cochrane Handbook for Systematic Reviews of Interventions.
Résultats	**Twenty-seven RCTs** were systematically reviewed. **Only nine** of the 27 trials clearly described their methods of randomisation and none of the trials stated the methods of allocation concealment. Compared with pharmacological treatment or herbal medicine, acupuncture was associated with a **significant reduction in pain**. Three studies reported reduced pain within groups from baseline; however, two RCTs did not find a significant difference between acupuncture and sham acupuncture.
Conclusion	The review found promising evidence in the form of RCTs for the use of acupuncture in the treatment of primary dysmenorrhoea compared with pharmacological treatment or herbal medicine. However, the results were limited by methodological flaws. The evidence for the effectiveness of acupuncture for the treatment of primary dysmenorrhoea is **not convincing compared with sham acupuncture**. Further rigorous nonpenetrating placebo-controlled RCTs are warranted.

1.1.23. Yang 2008 ☆

Yang H, Liu CZ, Chen X, Ma LX, Xie JP, Guo NN, Ma ZB, Zheng YY, Zhu J, Liu JP. Systematic Review of Clinical Trials of Acupuncture-related Therapies for Primary Dysmenorrhea. Acta Obstet Gynecol Scand. 2008;87(11):1114-22. [153109]

Objectives	Acupuncture-related therapies might be an effective intervention for primary dysmenorrhea. To evaluate the effects of acupuncture-related therapies for treating primary dysmenorrhea.

Méthods	SEARCH STRATEGY: A specified literature search was performed of the Cochrane Library, MEDLINE, EMBASE, CNKI, and CBM databases. SELECTION CRITERIA: All clinical controlled trials pertaining to acupuncture-related therapies for primary dysmenorrhea were included, and the quality of the trials was assessed. DATA COLLECTION AND ANALYSIS: Two independent reviewers were responsible for data extraction and assessment. The original data of each trial were analyzed with software (Revman 4.2), but a meta-analysis could not be carried out because of the heterogeneity of the trials.
Results	**Thirty randomized controlled trails (RCTs) and two controlled clinical trials (CCTs)** were identified. Most of the trials were of low methodologic quality (six trials were Grade B and 26 trials were Grade C). Data analysis indicated that there were conflicting results regarding whether acupuncture-related therapies were more effective than control treatments. However, there was **a small, methodologic sound trial of acupuncture which suggested that acupuncture was more effective than control groups** (placebo acupuncture: WMD=-0.57 and 95% CI=-0.76-0.38; standard control: WMD=-.19 and 95% CI=-0.37-0.01; visitation control: WMD=-1.04 and 95% CI=-1.28-0.80).
Conclusions	Because of low methodologic quality and small sample size, there is no convincing evidence for acupuncture in the treatment of primary dysmenorrhea. There is an urgent need for randomized, blinded, placebo-controlled trials to assess the effects of acupuncture.

1.1.24. Proctor 2007

Proctor ML, Farquhar CM. Dysmenorrhoea. BMJ Clin Evid. 2007. [158956].

Introduction	Dysmenorrhoea may begin soon after the menarche, after which it often improves with age, or it may originate later in life after the onset of an underlying causative condition. Dysmenorrhoea is common, and in up to 20% of women it may be severe enough to interfere with daily activities.
Methods and outcomes	We conducted a systematic review and aimed to answer the following clinical question: What are the effects of treatments for dysmenorrhoea? We searched: Medline, Embase, The Cochrane Library and other important databases up to July 2006 (Clinical Evidence reviews are updated periodically, please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA).
Results	We found 34 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions.
Conclusions	In this systematic review we present information relating to the effectiveness and safety of the following interventions: **acupressure, acupuncture,** aspirin, behavioural interventions, combined oral contraceptives, compound analgesics, fish oil, herbal remedies, magnesium, magnets, non-steroidal anti-inflammatory drugs, paracetamol, spinal manipulation, surgical interruption of pelvic nerve pathways, thiamine, toki-shakuyaku-san, topical heat, transcutaneous electrical nerve stimulation (TENS), vitamin B12, and vitamin E.

1.1.25. Chou 2005

Chou Chin-Shan, Liu Bao-Yan, Zhang Lu, Jin Zhi-Gao. Acupuncture for primary dysmenorrhea -a meta-analysis. World Journal of Acupuncture and Moxibustion. 2005;15(1):53. [140372].

Recent literature search showed that up to now there are a total of 9 theses about clinical treatment of primary dysmenorrhea with acupuncture therapy, among them 5 clinical trials are from Chinese journals and the rest 4 from foreign journals. Majority of the trials have some methodological and/or reporting shortcomings. The frequency and intensity of dysmenorrhea are divided into intermittent and continuous types. Results of quantitative meta-analysis with Revman 4. 1 software showed that the existing evidence supports the value of acupuncture for the treatment of dysmenorrhea. However, the quality of evidence is not fully convincing. There is an urgent need for well-planned, large-scale and multiple-center studies to assess the effectiveness and cost-effectiveness of acupuncture under real-life conditions.

1.2. Special Acupuncture Techniques

1.2.1. Sham acupuncture

1.2.1.1. Sun 2023

Sun CY, Xiong ZY, Sun CY, Ma PH, Liu XY, Sun CY, Xin ZY, Liu BY, Liu CZ, Yan SY. Placebo response of sham acupuncture in patients with primary dysmenorrhea: A meta-analysis. J Integr Med. 2023 Sep;21(5):455-463. https://doi.org/10.1016/j.joim.2023.08.005

Background	The placebo response of sham acupuncture in patients with primary dysmenorrhea is a substantial factor associated with analgesia. However, the magnitude of the placebo response is unclear.
Objective	This meta-analysis assessed the effects of sham acupuncture in patients with primary dysmenorrhea and the factors contributing to these effects.
Methods	Search strategy: PubMed, Embase, Web of Science, and Cochrane CENTRAL databases were searched from inception up to August 20, 2022. Inclusion criteria: Randomized controlled trials (RCTs) using sham acupuncture as a control for female patients of reproductive age with primary dysmenorrhea were included. Data extraction and analysis: Pain intensity, retrospective symptom scale, and health-related quality of life were outcome measures used in these trials. Placebo response was defined as the change in the outcome of interest from baseline to endpoint. We used standardized mean difference (SMD) to estimate the effect size of the placebo response.
Results	**Thirteen RCTs** were included. The pooled placebo response size for pain intensity was the largest (SMD = -0.99; 95% confidence interval [CI], -1.31 to -0.68), followed by the retrospective symptom scale (Total frequency rating score: SMD = -0.20; 95% CI, -0.80 to -0.39. Average severity score: SMD = -0.35; 95% CI, -0.90 to -0.20) and physical component of SF-36 (SMD = 0.27; 95% CI, -0.17 to 0.72). Studies using blunt-tip needles, single-center trials, studies with a low risk of bias, studies in which patients had a longer disease course, studies in which clinicians had < 5 years of experience, and trials conducted outside Asia were more likely to have a lower placebo response.
Conclusion	Strong placebo response and some relative factors were found in patients with primary dysmenorrhea.

1.2.2. Comparison of Acupuncture techniques

1.2.2.1. Zhao 2026

Zhao HY, Jang JH, Ryu YH, Han CH. Acupuncture-Related Therapies for Primary Dysmenorrhea: A Systematic Review and Network Meta-Analysis. J Integr Complement Med. 2026;32(2):92-116. https://doi.org/10.1177/27683605251382169

Background	Primary dysmenorrhea (PD) is characterized by a cramping pain in the lower abdomen during menstruation. Acupuncture-related therapy is frequently used to treat patients with PD. We conducted a network meta-analysis to compare the efficacy and safety of acupuncture-related therapies based on Korean and Chinese clinical practice guidelines.
Methods	We searched 10 databases from their inception to November 1, 2024, including the Cochrane Central Register of Controlled Trials, Embase, PubMed, China National Knowledge Infrastructure, Wanfang Database, China Science and Technology Journal Database, SinoMed, KoreaMed, Korean Studies Information Service System, and Oriental Medicine Advanced Search Integrated System. The Cochrane Handbook was used to assess the risk of bias, and analyses were performed using the RevMan and Netmeta packages in R (4.4.2).
Results	A total of **120 studies (9,571 participants with PD)** were included, reporting 29 types of acupuncture-related therapies aligned with the Korean and Chinese guidelines. Overall, risk of bias was low. Based on a network meta-analysis, the most effective treatments were acupoint catgut embedding (ACE) + moxibustion, warm acupuncture + acupressure, and warm acupuncture + Western medicine. At 3-month follow-up, the highest visual analog scale (VAS) improvements were observed with ACE + moxibustion, ACE + cupping, and acupressure + manual acupuncture (MA). For prostaglandin E2 (PGE2), the most effective therapies were ACE, MA + western medicine, and MA + moxibustion. For prostaglandin F2α (PGF2α), ACE + Western medicine, MA + moxibustion, and transcutaneous electrical nerve stimulation ranked highest.
Conclusions	Acupuncture-related therapies appear more effective than Western medicine for improving VAS scores during treatment, at 3 months, and for regulating PGE2 and PGF2α levels. Among these, ACE + moxibustion may be the optimal approach for reducing pain intensity, whereas ACE and ACE + Western medicine exhibit the greatest benefits in modulating prostaglandin levels in PD.

1.2.2.2. Chen B 2024

Chen B, Liu S, Jin F, Li T, Yang N, Xu Y, Hu J, Jiang T, Huang Y. Efficacy of acupuncture-related therapy in the treatment of primary dysmenorrhea: A network meta-analysis of randomized controlled trials. Heliyon. 2024 May 9;10(10):e30912. https://doi.org/10.1016/j.heliyon.2024.e30912

Objectives	In order to compare and rank the most effective acupuncture therapy for primary dysmenorrhea and provide evidence-based medical support for clinical treatment of this disease.
Methods	A comprehensive search was conducted on China National Knowledge Infrastructure (CNKI), Wanfang Database, Information Chinese Journal Service Platform (VIP), China Biomedical Literature Service System (SinoMed), PubMed, Web of Science, Embase, and Cochrane Library databases from their inception to May 1, 2023. The Cochrane Collaboration Risk of Bias Tool was used to evaluate bias risk, and the GeMTC package of Stata 15.1 software and R 4.3.1 software was used to perform network Meta-analysis.

Results	**70 studies were included, including 5772 patients** with primary dysmenorrhea, involving **25 kinds of acupuncture techniques** commonly used in clinic. The quality of the included literature was low, most of them did not mention the registration information of clinical trial centers, and the specific sample size estimation method was unclear. Some literature did not explain the specific random method, distribution concealment and blindness, so there was a certain publication bias and small sample effect. Results showed that for improving the clinical effective rate, the top three treatments were salt-separated moxibustion, massotherapy + acupoint patching, acupuncture + heat-sensitive moxibustion. In terms of reducing the visual analogue scale(VAS), the top three treatments were massotherapy + acupoint patching, acupuncture + acupoint patching and warm acupuncture. In terms of alleviating cox menstrual symptom scale (CMSS), the top three treatments were acupuncture + acupoint patching, acupoint patching and point embedding. In relieving TCM symptom score, the top three treatments were acupoint patching + heat-sensitive moxibustion, acupoint patching and moxibustion.
Conclusion	Different acupuncture therapies have more advantages than oral analgesics in improving the clinical effective rate, reducing VAS score, reducing CMSS score, and alleviating TCM symptom score. Among them, massage therapy + acupoint patching, acupuncture + acupoint patching and acupoint patching may be the best solutions for the treatment of primary dysmenorrhea. However, more large-sample, multi-center and high-quality randomized controlled trials are needed to demonstrate.

1.2.2.3. Chen SC 2024

Chen SC, Ruan JY, Zhang B, Pang LY, Zhong L, Lin SL, Wong KP, Ouyang HX, Yeung WF, Fu QW, Chen BQ. Traditional Chinese medicine interventions based on meridian theory for pain relief in patients with primary dysmenorrhea: a systematic review and network meta-analysis. Front Med (Lausanne). 2024 Sep 5;11:1453609. https://doi.org/10.3389/fmed.2024.1453609

Objective	To determine the comparative effects and safety of traditional Chinese medicine (TCM) interventions based on meridian theory for pain relief in patients with primary dysmenorrhea (PD).
Methods	This is a systematic review with network meta-analysis. Randomized controlled trials (RCTs) comparing meridian-based TCM interventions with waitlist, placebo, western medicine, and conventional therapies for PD pain. A SUCRA was used to estimate the probability ranking for the effects of interventions.
Results	57 RCTs involving 3,903 participants and 15 interventions were included. **Thirty-two RCTs** were rated as low risk of bias. A network diagram was drawn with 105 pairs of comparisons. Compared with NSAIDs and waitlist, significantly better effects were found in acupressure [SMD = -1.51, 95%CI (-2.91, -0.12)/SMD = -2.31, 95%CI (-4.61, -0.02)], warm needling [SMD = -1.43, 95%CI (-2.68, -0.18)/SMD = -2.23, 95%CI (-4.43, -0.03)], moxibustion [SMD = -1.21, 95%CI (-1.85, -0.57)/SMD = -2.10, 95%CI (-3.95, -0.07)], and acupuncture [SMD = -1.09, 95%CI (-1.62, -0.55)/SMD = -1.89, 95%CI (-3.67, -0.11)]. No adverse events were detected.
Conclusion	For PD pain, the effects of acupressure, acupuncture, warm needling, and moxibustion were superior to those of NSAIDs and waitlist. Oral contraceptive pill, electro-acupuncture, acupressure, and warm needling demonstrated higher probabilities of being better interventions. More high-quality clinical trials are needed to provide more robust evidence of this network.

1.2.3. Floating needle

1.2.3.1. Luo 2025

Luo Y, Zhang S, Chen X, Shen X, Chen L, Zhang L, Li S. A systematic review and meta-analysis of floating needle in the treatment of primary dysmenorrhea. Medicine (Baltimore). 2025 Jul 25;104(30):e43265. https://doi.org/10.1097/MD.0000000000043265

Background	This study aimed to evaluate the clinical efficacy of floating needle therapy for the treatment of primary dysmenorrhea.
Methods	Randomized controlled trials on floating needle therapy for primary dysmenorrhea were searched in Wanfang, CNKI, VIP, PubMed, Embase, Ovid, and Cochrane Library from inception to November 2023. Two independent reviewers screened, assessed quality, and extracted data. Meta-analyses were performed using RevMan 5.3 and Stata 17.0.
Results	**Sixteen RCTs (n = 1,278)** were included. Compared with control treatments, floating needle therapy significantly improved overall effective rate (RR = 1.20, 95 % CI 1.15–1.26, p < .00001), apparent efficacy rate (RR = 1.38, 95 % CI 1.28–1.50, p < .00001), and reduced VAS scores post-treatment (MD = –1.07, 95 % CI –1.51 to –0.63, p < .0001), after 30 min (MD = –1.94, 95 % CI –2.31 to –1.57) and 12 h (MD = –1.31, 95 % CI –1.93 to –0.69, p < .001). Symptom scores (MD = –2.93, 95 % CI –4.22 to –1.65, p < .00001) and Cox Menstrual Symptom Scale scores (MD = –4.53, 95 % CI –6.51 to –2.55, p < .00001) also improved significantly.
Conclusion	Floating needle therapy demonstrates significant efficacy in alleviating pain and improving menstrual symptoms in patients with primary dysmenorrhea, supporting its clinical application as an effective treatment option.

1.2.4. acupuncture combined with Wenjing decoction

1.2.4.1. Zhao 2025

Zhao M, Zhou F, Qiu C, Hu X, Xie C, Wen L, Xu L. The clinical value of acupuncture combined with Wenjing decoction in treating primary dysmenorrhea in women—a systematic review and meta-analysis of randomized controlled trials. Front Med (Lausanne). 2025 Sep 8;12:1650158. https://doi.org/10.3389/fmed.2025.1650158

Background	Primary dysmenorrhea (PD) of the cold congealing and blood stasis type is commonly treated in traditional Chinese medicine with Wenjing decoction and acupuncture. This review evaluated the clinical efficacy of combining acupuncture with Wenjing decoction for PD management.
Methods	Randomized controlled trials published between January 2000 and March 2025 comparing Wenjing decoction with or without acupuncture were searched across multiple databases. Outcomes included serum hormone levels, prostaglandins (PGE_2, $PGF_2\alpha$), uterine artery blood flow indices, pain scores, and overall effectiveness rate. Study quality was assessed using the Cochrane risk of bias tool, and analyses were conducted with RevMan 5.4.
Results	**Eleven RCTs (n = 1,024)** were included. The combined treatment significantly improved overall effectiveness (RR = 1.24, 95 % CI 1.06–1.42), increased PGE_2 (MD = 5.9, 95 % CI 2.27–9.52), reduced $PGF_2\alpha$ (MD = –11.96, 95 % CI –25.21 to –1.28), decreased pain scores (MD = –4.13, 95 % CI –6.42 to –1.84), and improved uterine blood flow (RI MD = –0.09, 95 % CI –0.12 to –0.07; PI MD = –0.39, 95 % CI –0.44 to –0.33; all p < 0.05).

Conclusion	Acupuncture combined with Wenjing decoction is more effective than Western medicine alone for primary dysmenorrhea, improving prostaglandin regulation, pain relief, and uterine hemodynamics. Nonetheless, the included studies were of low methodological quality, underscoring the need for rigorous multicenter RCTs to confirm these findings.

1.2.5. Moxibustion

1.2.5.1. Huang 2026

Huang C, Lai W, Luo J, Zhou Z, You J. Different moxibustion therapies for primary dysmenorrhea: a network Meta-analysis. Zhongguo Zhen Jiu. 2026;46(7):1199-1210. doi: 10.13703/j.0255-2930.20250902-k0003.

Objective	To compare the clinical efficacy of different moxibustion therapies for primary dysmenorrhea (PD) using network Meta-analysis.
Methods	A total of 8 databases, including the CNKI, Wanfang, VIP, SinoMed, PubMed, Cochrane Library, EMbase, and Web of Science, were searched by computer to collect randomized controlled trials (RCTs) on moxibustion therapy for PD published from database inception to September 1, 2025. The Cochrane risk of bias tool was used to evaluate the quality of the included literature, and R4.1.0 software and Stata15.0 software were used for data analysis.
Results	A total of **64 RCTs involving 5 814 PD patients** and 11 kinds of moxibustion therapies were finally included. The network Meta-analysis showed that: ① regarding improving the total clinical effective rate, 9 moxibustion therapies (traditional suspended moxibustion, moxibustion with warming devices, herb-partitioned moxibustion, ginger-partitioned moxibustion, warm needling moxibustion, wheat-grain sized cone moxibustion, thunder-fire moxibustion, heat-sensitive moxibustion, and spreading moxibustion) were superior to conventional western medication, and wheat-grain sized cone moxibustion had the best effect [OR=8.91, 95%CI (2.55, 31.14)]; ② regarding improving pain visual analogue scale (VAS) score, 3 moxibustion therapies (herb-partitioned moxibustion, thunder-fire moxibustion, and heat-sensitive moxibustion) were superior to conventional western medication, and herb-partitioned moxibustion had the best effect [MD=-4.19, 95%CI (-6.32, -2.16)]; ③ regarding reducing Cox menstrual symptom scale (CMSS) score, 4 moxibustion therapies (herb-partitioned moxibustion, wheat-grain sized cone moxibustion, thunder-fire moxibustion, and heat-sensitive moxibustion) were superior to conventional western medication, and heat-sensitive moxibustion had the best effect [MD=-11.13, 95%CI (-16.78, -5.42)]; ④ regarding reducing prostaglandin F2α (PGF2α) level, 2 moxibustion therapies (herb-partitioned moxibustion and heat-sensitive moxibustion) were superior to conventional western medication, and heat-sensitive moxibustion had the best effect [MD=-24.94, 95%CI (-42.24, -7.42)]; ⑤ regarding safety, the incidence of adverse events of moxibustion therapies was lower than that of conventional western medication ($P<0.05$).
Conclusion	Based on the current evidence, wheat-grain sized cone moxibustion has the best efficacy in improving the total clinical effective rate, herb-partitioned moxibustion has the best efficacy in improving VAS score, and heat-sensitive moxibustion has the best efficacy in improving CMSS score and PGF2α level. Limited by the quality and quantity of the included original studies and the quality of the current evidence, the conclusions of this study still require further verification by more high-quality RCTs.

1.2.5.2. Song 2025

Song S, Chen H. Systematic review and meta-analysis of the effectiveness of moxibustion therapy for primary dysmenorrhea. Front Med (Lausanne). 2025 Feb 19;12:1545146. https://doi.org/10.3389/fmed.2025.1545146

Backgound	Primary dysmenorrhea is a common gynecological disease. Compared with traditional Chinese medicine treatment, moxibustion has advantages as a main treatment method. Therefore, we conducted a systematic review and meta-analysis to evaluate the efficacy of simple moxibustion therapy for primary dysmenorrhea.
Methods	Randomized controlled trials were searched from PubMed, Web of Science, Embase, The Cochrane Library, China National Knowledge Infrastructure, Wan-fang database and VIP database. In the literature included in these databases, clinical reporters evaluated the efficacy of moxibustion as the treatment for primary dysmenorrhea. All included literature was assessed for risk bias by using Risk of Bias assessment tool 2.0, and meta-analysis was conducted using Rev. Man 5.4.
Results	The findings demonstrated that the moxibustion group exhibited a statistically significant response in comparison to the control group. The improvement observed in the Cox Menstrual Symptom Scale and the visual analogue scale score between the two groups exhibited heterogeneity, with a statistically significant difference noted. In terms of Traditional Chinese Medicine symptom scores, the experimental group demonstrated superiority over the control group. Furthermore, the progesterone levels in the moxibustion treatment were found to be higher than in the control group, while the estrogen levels in the experimental group were lower than in the control group, with a statistically significant difference observed ($p < 0.05$). Conversely, the levels of β-EP and PGE2 in the observation group were higher than those in the control group.
Conclusion	Moxibustion therapy shows significantly better efficacy in treating primary dysmenorrhea. However, a large sample, multi-center, high-quality RCT is still needed to evaluate its safety and efficacy.

1.2.5.3. Xu 2022

Xu N, Huang Y, Huang H, Huang Y, Lai S, Zhang Z, Zhong Y. Curative Effect of Heat-sensitive Moxibustion on Primary Dysmenorrhea: A Meta-Analysis. Evid Based Complement Alternat Med. 2022 Jul 30;2022:1281336. https://doi.org/10.1155/2022/1281336

Background	Primary dysmenorrhea (PD) refers to functional dysmenorrhea, typically characterized by cyclical, pronounced lower abdominal pain and seriously affects a woman's work and quality of life. Some studies have reported that heat-sensitive moxibustion (HSM) is expected to alleviate the clinical symptoms. This systematic review aimed to evaluate the current evidence regarding the efficacy and safety of HSM on PD.
Methods	7 databases including PubMed, Embase, Cochrane Library, Web of Science, China National Knowledge Infrastructure (CNKI), Wan Fang Data Knowledge Service Platform (Wan Fang Data), and China Science and Technology Journal Database (VIP) were searched for clinical randomized controlled trials. Meanwhile, Revman 5.3 software was used to evaluate the methodological quality of the included literature. The confidence interval (CI) of either relative risk or mean difference was set to 95%. Besides, the heterogeneity of the research results is tested by I2.

Results	**19 studies** were ultimately included in this meta-analysis. All of them were declared as random controlled trials. 18 studies reported the total effective rate of the test group and the control group, which was significantly higher (RR: 0.92; 95% CI: 0.85,0.99; P=0.031 < 0.05) than the control group. It is demonstrated that the VAS score of the test group, totally 9 studies included, was significantly lower (SMD: -0.98; 95% CI: -1.15, -0.81; P < 0.001). The meta-analysis of 6 studies showed the symptom score of the test group was significantly lower (SMD: -0.67; 95% CI: -0.87, -0.47; P < 0.001). There were the CMSS results of 3 studies which were significantly lower (SMD: -0.88; 95% CI: -1.13, -0.62; P < 0.001). Combined with the results of subgroup analysis, compared with the control group, the test group had advantages in the VAS score, symptom score, and CMSS score.
Conclusions	The result has revealed the effectiveness and feasibility of HSM in treating PD, especially in improving the total effective rate and reducing the VAS score, symptom score, and CMSS score.

1.2.5.4. Wu 2021 ☆

Wu ZX, Cai MJ, Huang PD, Chen JY, Lv ZH, Huang XY. Comparative efficacy and dysmenorrhea score of 6 object-separated moxibustions for the treatment of Chinese patients with dysmenorrhea: A systematic review and network meta-analysis. Medicine (Baltimore). 2021;100(26). [219692]. doi

Background	Primary dysmenorrhea (PD), one of the most common diseases in women, is known to be effective with object-separated moxibustion. However, because there is no large sample size for comparison, it is difficult to choose the best method for the clinical treatment of these different treatments. Therefore, our aim was to compare and rank different moxibustion methods to determine the most effective treatment method for PD.
Materials and methods	A systematic search was carried out in PubMed, Cochrane Central Register of Controlled Trials, China National Knowledge Infrastructure, Wanfang Database, and Chinese Biomedical Literature, to identify the randomized controlled trials (RCTs) investigated the object-separated moxibustion is associated with dysmenorrhea, as well as we also manually checked the bibliographies of eligible studies and topic-related reviews, RCTs from their inception to May 1, 2020. Three investigators read the citations and excluded quasi-randomized trials and trials that were incomplete. We extracted data following a predefined hierarchy. We assessed the studies' risk of bias in accordance with the Cochrane Handbook for Systematic Reviews of Interventions and certainty of evidence using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework. The primary outcomes were efficacy (response rate) and dysmenorrhea scores. We estimated the summary odds ratio (OR) and mean difference (MD) using pairwise and network meta-analyses with random effects. STATA software version 16.0, ADDIS software version 1.16.5, and R software version 3.6.1 were used to statistically analyze all data.
Results	**Fifty-six RCTs with 5550 patients** were included, comparing 6 object-separated moxibustion therapies with acupuncture or oral medicine. All moxibustions were more effective than ibuprofen, with OR ranging between 6.75 (95%CI: 3.58 to 13.22) for moxibustion at the navel. For relieving pain which uses dysmenorrhea score to evaluate, mild moxibustion (MD = -1.42, -4.24 to 0.85) was more effective than others. A total of 24 (42.8%) of 56 trials were rated as having a high risk of bias, 31(55.4%) as moderate, and 1(1.8%) as low, and the certainty of the evidence was moderate.

Conclusions	Mild moxibustion cannot only effectively treat PD but also relieve pain in comparison with ibuprofen. Although GRADE evidence indicate low to moderate for most comparisons, mild moxibustion seems to be an advisable option for PD treatment to relieve symptoms.

1.2.5.5. Li 2018

Li Xiao-Dong , Liu Yong-Ming , Pang Li-Jian , Liu Chuang , Liu Yan-Tong , Wang Si-Han , Shi Yan. [Clinical Effect of Primary Dysmenorrhea on Treatment by Indirect Moxibustion: A Meta-Analysis]. Journal of Basic Chinese Medicine. 2018;24(7):983. [181055].

Objective	To evaluate the efficacy and security of indirect moxibustion on primary dysmenorrheal.
Method	We searched PubMed, CBM,CNKI,VIP Database and WANFANG Database for randomized controlled trials of indirect moxibustion on primary dysmenorrheal by computer. Time had beer, limited to July 2016 since the database was established. Evaluate the quality of the included studies and extracted the data , and then use the RevMan 5. 3 software for meta-analysis.
Results	**Thirteen researches were incorporated in the end , including 1524 cases**. Meta-analysis showed: Indirect moxibustion was more effective in clinical efficacy rate compared with the control group (RR=1. 14, 95% CI: 1. 10 □ 1. 18); Indirect moxibustion could effectively decrease in patients with dysmenorrhea symptom scores, the comparisons have significant difference(WMD)= - 1. 16, 95% CI□-1. 46 □ - 0. 87).At the same time, indirect moxibustion could also reduce the incidence of adverse reactions (OR=0. 01, 95% CI:0. 00 □ 0. 11). The PGF2□./PGE2□E T-1/NO content in serum showed no difference compared with the control group.
Conclusion	Indirect moxibustion can relieve the pain of patients with primary dysmenorrheal to some extent and alleviate the symptoms of primary dysmenorrheal, reduce the incidence of adverse reactions , but in terms of safety, it needs to be demonstrated. It is not enough comprehensive to evaluate the effectiveness and security of indirect moxibustion due to the quality and quantity of the included Literatures. The results still need high quality literatures to be validated.

1.2.5.6. Zhou 2018

Zhou Mei, Huang Xianbao, Chen Rixin. [System Evaluation and Meta-Analysis of Thermal Moxibustion Treatment for Primary Dysmenorrhea]. Liaoning Journal of Traditional Chinese Medicine. 2018;(4):812-22. [115724].

Objective	To evaluate the Meta-analysis on the validity and security of the thermal moxibustion treatment for primary dysmenorrhea.
Methods	Comprehensive electronic retrieval database in Chinese included CBM,CNKI,VIP and WF. English database included Pubmed,EMBASE and Medline. We collected clinical randomized controlled trials about thermal moxibustion treatment for primary dysmenorrhea and supplemented by manual retrieval of Jiangxi University of Traditional Chinese Medicine Library item database. After assessed by the two researchers' reading,we screened the independence to extract the effective information and used the Cochrane Review Handbook 5. 1. 0 for quality evaluation and Rev Man 5. 1 software for statistical analysis.

Results	There were 7 qualified references,with a total of 542 cases. The result of Meta-analysis showed thermal moxibustion treatment of primary dysmenorrhea was superior to the other control groups. Combined effect amount OR value was 5. 89(> 1);95% CI was(2. 75,12. 61) and Z = 4. 56,P = 0. 00001(< 0. 01). The difference was statistically significant. Thermal moxibustion cure rate was superior to that of the other control groups for the treatment of primary dysmenorrhea. Combined effect amount OR value was 3. 04(> 1) and 95% CI was(1. 88,4. 89),Z = 4. 56,P = 0. 00001(< 0. 01). The difference was statistically significant. Thermal moxibustion treatment of primary dysmenorrhea in improving CMSS score was better than that of the other control groups,WMD =-0. 78,95% CI(-0. 96,-0. 60),Z = 8. 64,P = 0. 00001(< 0. 01). The difference was statistically significant.
Conclusion	With traditional moxibustion therapy,acupuncture and massage,Western medicine and moxibustion according to sydnrome differentiation,the curative effect of heat-sensitive moxibustion treatment of primary dysmenorrhea has certain advantages. But it still need to be confirmed by more high quality research.

1.2.5.7. Gou 2016 ☆ (Interventional Times)

Gou CQ, Gao J, Wu CX, Bai DX, Mou HY, Hou XL, Zhao X. Moxibustion for Primary Dysmenorrhea at Different Interventional Times: A Systematic Review and Meta-Analysis. Evid Based Complement Alternat Med. 2016. [191063].

Objectives	Primary dysmenorrhea (PD) is one of the most common diseases in gynecology at present. Some clinical trials have reported the effects of moxibustion and confirmed temporal factors are the important elements influencing the efficacy of moxibustion. However, no systematic review has yet been conducted.
Methods	In this study, we assessed the effects of moxibustion in patients with PD enrolled in randomized controlled trials (RCTs) and the difference among different intervention times to start moxibustion. We extracted data for studies searched from 10 electronic databases and evaluated the methodological quality of the included studies. We discussed three outcomes: effective rate, pain remission, and the level of PGF2α in serum.
Results	Current clinical researches showed that, compared with nonmoxibustion treatments for PD, **moxibustion leads to higher effective rate and lower level of PGF2α in serum**. However, there was no difference in using moxibustion to treat PD at different intervention times.
Conclusions	Based on the theory of Chinese medicine and the results of this study, **choosing 5 ± 2 days before menstruation** to start moxibustion can achieve good efficacy for PD patients. However, more high-quality RCTs are needed to confirm the conclusions.

1.2.6. Chinese Medicine at Shenque (CV 8)

1.2.6.1. Yan 2023

Yan LJ, Fang M, Zhu SJ, Wang ZJ, Hu XY, Liang SB, Wang D, Yang D, Shen C, Robinson N, Liu JP. Effectiveness and Safety of Chinese Medicine at Shenque (CV 8) for Primary Dysmenorrhea: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Chin J Integr Med. 2023 Apr;29(4):341-352. https://doi.org/10.1007/s11655-022-3319-z.|

Background	

Objective	To evaluate the effect of navel therapy on pain relief and quality of life in women with PD, compared with Western medicine (WM).
Methods	China National Knowledge Infrastructure (CNKI), Chinese Scientific Journal Database (VIP), SinoMed and Wanfang Database, MEDLINE, the Cochrane Library, Embase, Web of Science, and the International Clinical Trial Registry of the U.S. National Institutes of Health were searched from their inceptions to April 1, 2021. Randomized controlled trials (RCTs) assessing therapeutic effects of navel therapy on PD were eligible for inclusion. RevMan 5.4 software was used for data analyses. The certainty of the evidence was assessed using the online GRADEpro tool.
Results	Totally **24 RCTs involving 2,614 participants** were identified. Interventions applied to acupuncture point CV 8 included: herbal patching, moxibustion or combined navel therapy (using at least 2 types of stimulation). Compared to placebo, there was a significant effect in favor of navel therapy on reducing overall menstrual symptom scores at the end of treatment [mean difference: -0.82, 95% confidence interval (CI): -1.00 to -0.64, n=90; 1 RCT]. As compared with Western medicine, navel therapy had a superior effect on pain intensity as assessed by Visual Analogue Scale at the end of treatment [standardized mean difference (SMD): -0.64, 95% CI: -1.22 to -0.06, I2=80%, n=262; 3 RCTs]; on symptom resolution rate at 3-month follow-up (risk ratio: 1.94, 95% CI: 1.47 to 2.56, n=1527, I2=38%; 13 RCTs); and on global menstrual symptoms score at the end of treatment (SMD: -0.67, 95% CI: -0.90 to -0.45, I2=63%, n=990; 12 RCTs). Subgroup analyses showed either a better or an equivalent effect comparing navel therapy with Western medicine. No major adverse events were reported. The methodological quality of included trials was poor overall.
Conclusions	Navel therapy appears to be more effective than Western medicine in decreasing menstrual pain and improving overall symptoms of PD. However, these findings need to be confirmed by well-designed clinical trials with adequate sample size (Systematic review registration at PROSPERO, No. CRD42021240350).

1.2.7. Puncture or acupression at sanyinjiao acupoint

1.2.7.1. Ravi 2024

Ravi P, Boopalan D, Vijayakumar V, Anandhan A, Vanamoorthy MK, Chidambaram Y, Kasi M, Kuppusamy M. Effect of Sanyinjiao (Spleen-6) Acupoint for Pain Management in Primary Dysmenorrhea: An Updated Systematic Review and Meta-Analysis. Med Acupunct. 2024 Aug 21;36(4):178-188. https://doi.org/10.1089/acu.2023.0100

Objectives	Available literature highlights the effectiveness of Acupuncture or Acupressure on the Spleen 6 acupoint (Sanyinjiao or SP-6) for pain management in primary dysmenorrhea (PD). The objective of the current systematic review and meta-analysis is to provide an updated assessment of available randomized and non-randomized controlled trials and to compare the effectiveness of acupressure and acupuncture stimulation of Sanyinjiao among patients with PD.
Methods	We conducted a comprehensive literature search on various electronic databases including Embase, PubMed, and the Cochrane Library from January 1990 to March 2023 to identify the comparative studies (randomized and non-randomized controlled trials) that assessed the effects of acupressure or acupuncture on the Sanyinjiao acupoint in patients with PD. We assessed the studies' risk of bias in accordance with the Cochrane Handbook for Systematic Reviews of Interventions, and certainty of evidence using the Grading of Recommendations Assessment. Subsequently, a fixed-effects meta-analysis was performed using the Der-Simonian and Laird method to combine intervention effects from the included studies. The primary outcome of interest was a reduction in pain.

Results	We included **19 studies (9 acupressure and 10 acupuncture) with 1171 PD patients**. This meta-analysis showed a significant (Standardized Mean Difference, SMD: -0.29, 95% confidence interval -0.41 to -0.17, p < 0.001) reduction in pain, for both acupressure and acupuncture at Sanyinjiao acupoint with considerable heterogeneity. Acupressure was found to be more effective than acupuncture stimulation in reducing pain associated with PD (SMD: -0.52, 95% confidence interval -0.71 to -0.33, p < 0.001).
Conclusion	The findings of this updated systematic review and meta-analysis suggest that both acupuncture and acupressure on Sanyinjiao acupoint could effectively reduce pain associated with PD. Acupressure stimulation, in particular, was found to be more effective than acupuncture stimulation of the acupoint in reducing pain associated with PD.

1.2.7.2. Chen 2013 ☆

Chen MN, Chien LW, Liu CF. Acupuncture or Acupressure at the Sanyinjiao (SP6) Acupoint for the Treatment of Primary Dysmenorrhea: A Meta-Analysis. Evid Based Complement Alternat Med 2013:493038. doi: 10.1155/2013/493038.[166862]

Purpose	This meta-analysis aimed to evaluate the effectiveness of acupuncture or acupressure at the Sanyinjiao (SP6) acupoint in relieving pain associated with primary dysmenorrhea.
Methods	We searched the scientific literature databases to identify randomized controlled trials. The primary outcome was visual analogue scale (VAS) pain score. **Three acupuncture and four acupressure trials** were included in the meta-analyses.
Results	**Three acupuncture and four acupressure trials** were included in the meta-analyses. For the acupuncture analysis, there was no difference in themeanVAS score reduction between the SP6 acupoint and control (GB39 acupoint) groups (−4.935; lower limit = −15.757, upper limit = 5.887; □ = 0.371). For the acupressure analysis, there was a significant difference in the mean VAS score after intervention between the SP6 acupoint and control (rest/light touch at SP6/nonacupoint acupressure) groups, favoring the SP6 acupoint group (−1.011; lower limit = −1.622, upper limit = −0.400; □ =0.001). Sensitivity analyses demonstrated good reliability of the meta-analyses findings.
Conclusion	**These findings suggest that acupuncture at SP6 is not more effective than acupuncture at an unrelated acupoint in the relief from primary dysmenorrhea**. Acupressure at SP6 may be effective in the relief from primary dysmenorrhea.

1.2.7.3. Abaraogu 2016 ☆ (acupression)

L Abaraogu UO, Igwe SE, Tabansi-Ochiogu CS. Effectiveness of SP6 (Sanyinjiao) acupressure for relief of primary dysmenorrhea symptoms: A systematic review with meta- and sensitivity analyses. Complement Ther Clin Pract. 2016;:92-105. [195747].

Objective	We reviewed the available evidence for SP6 (Sanyinjiao) acupressure for the relief of primary dysmenorrhea (PD) symptoms, as well as patients' experiences of this intervention.
Methods	We searched six relevant databases and gray literature for publications dated up to March 2016.

Results	The search yielded 72 potential studies. **Six** of these studies, contributing **a total of 461 participants**, were included in this review. The primary outcome was pain intensity. Studies with significant homogeneity were pooled for meta-analysis. Qualitative data and quantitative data not suitable for meta-analysis were presented as a narrative synthesis. The Cochrane criteria demonstrated that the included studies were generally of low quality with a high risk of bias. SP6 acupressure delivered by trained personnel significantly decreased pain intensity immediately after the intervention (effect size = -0.718; CI = -0.951 to -0.585; p = 0.000), and pain relief remained up to 3 h after the intervention (effect size = -0.979; CI = -1.296 to 0.662; p = 0.000). However, patient-administered intervention required multiple monthly cycles to effect pain reduction.
Conclusion	**SP6 acupressure appears to be effective when delivered by trained personnel for some PD symptoms**. Findings suggest that self-administered acupressure shows promise for the alleviation of PD symptoms. High-quality research is needed before conclusive recommendations are proposed.

1.2.8. Acupression

1.2.8.1. Yu 2025

Yu X, Liu B, Li J, Gao Y, Chen J, Qi R, Yuan Y, Liu Y. Efficacy and safety of acupressure for primary dysmenorrhea: A systematic review and meta-analysis of randomized controlled trials. Complement Ther Med. 2025 Oct 23:103272. https://doi.org/10.1016/j.ctim.2025.103272

Objective	This systematic review aimed to evaluate the existing randomized controlled trials (RCTs) for evidence of the association between using acupressure and reducing pain and related symptoms of primary dysmenorrhea (PD).
Methods	Six electronic databases were searched for published reports on RCTs—from database inception until May 2025—that compared the use of acupressure with that of placebo acupressure, oral medication, or usual treatment and measured the intensity of menstrual pain and related symptoms. Two independent reviewers extracted and assessed the data. Risk of bias was assessed for each article; the meta-analysis was conducted according to the type of control. Results are presented as mean differences (MDs) or standardised mean differences (SMDs) and 95% confidence intervals (CIs).
Results	In total, **23 RCTs** were included in the systematic review and data from 20 RCTs were evaluated in the meta-analysis. Most studies showed a low or unclear risk of bias. We found that using acupressure was more effective in reducing menstrual pain than using placebo acupressure (MD = -1.58; 95% CI, [-1.96, -1.20]), oral medication (MD = -1.11; 95% CI, [-1.79, -0.43]), or usual treatment (MD = -1.29; 95% CI, [-1.77, -0.80]). The adverse events, reported in only two studies, were mild.
Conclusion	Acupressure can effectively reduce the pain and related symptoms of PD, though the current evidence is of low quality. Future studies with rigorous designs and larger sample sizes are warranted to verify the efficacy and safety of acupressure. Subsequent findings should be incorporated into clinical practice and nursing care to refine the treatment strategies for PD.

1.2.8.2. Armour 2019 ☆

Armour M , Smith CA , Steel KA , Macmillan F. The effectiveness of self-care and lifestyle interventions in primary dysmenorrhea: a systematic review and meta-analysis. BMC Complement Altern Med. 2019;19(1):22. [193063].

Background	Menstrual pain is very common amongst young women. Despite the significant impact that menstrual pain has on academic attendance and performance, social activities and quality of life, most young women do not seek medical treatment but prefer to use self-care; commonly OTC analgesic medications and rest. Many women do not get significant pain relief from these methods, therefore other low cost, easy to learn self-care methods may be a valuable approach to management. This review and meta-analysis examines the evidence for participant lead self-care techniques.
Methods	A search of Medline, PsychINFO, Google Scholar and CINAHL was carried out in September 2017.
Results	Twenty-three trials including 2302 women were eligible and included in the meta-analysis. Studies examined self-delivered acupressure, exercise and heat as interventions. Risk of bias was unclear for many domains. All interventions showed a reduction in menstrual pain symptoms; exercise (g = 2.16, 95% CI 0.97 to 3.35) showed the largest effect size, with heat (g = 0.73, 95% CI 0.06 to 1.40) and acupressure (g = 0.56, 95% CI 0.10 to 1.03) showing more moderate effect sizes. Exercise (g = 0.48, 95% CI 0.12 to 0.83) and heat (g = 0.48, 95% CI 0.10 to 0.87), were more effective than analgesics in reducing pain intensity, whereas acupressure was significantly less effective (g = - 0.76, 95% CI -1.37 to - 0.15).
Conclusion	Exercise showed large effects, while acupressure and heat showed moderate effects in reducing menstrual pain compared to no treatment. Both exercise and heat are potential alternatives to analgesic medication. However, difficulties in controlling for non-specific effects, along with potential for bias, may influence study findings.

1.2.8.3. Jiang 2013

Jiang HR, Ni S, Li JL, Liu MM, Li J, Cui XJ, Zhang BM.. Systematic review of randomized clinical trials of acupressure therapy for primary dysmenorrhea. Evid Based Complement Alternat Med. 2013 . [169121].

Objective	The evidence of acupressure is limited in the management of dysmenorrhea.
Methods	To evaluate the efficacy of acupressure in the treatment of primary dysmenorrhea based on randomized controlled trials (RCTs), we searched MEDLINE, the Chinese Biomedical Database (CBM), and the Cochrane Central Register of Controlled Trials (CENTRAL) databases from inception until March 2012. Two reviewers independently selected articles and extracted data. Statistical analysis was performed with RevMan 5.1 software.
Results & conclusions	Eight RCTs were identified from the retrieved 224 relevant records. Acupressure improved pain measured with VAS (-1.41 cm 95% CI [-1.61, -1.21]), SF-MPQ at the 3-month followup (WMD -2.33, 95% CI [-4.11, -0.54]) and 6-month followup (WMD -4.67, 95% CI [-7.30, -2.04]), and MDQ at the 3-month followup (WMD -2.31, 95% CI [-3.74, -0.87]) and 6-month followup (WMD -4.67, 95% CI [-7.30, -2.04]). All trials did not report adverse events. These results were limited by the methodological flaws of trials.

1.2.8.4. Cho 2010 ☆

Cho SH, Hwang EW. Acupressure for Dysmenorrhoea: A Systematic Review. Complementary Therapies in Medicine. 2010;18(1):49-56. [154012].

Objective	To assess the effectiveness of acupressure for the symptomatic treatment of primary dysmenorrhoea from randomised controlled trials (RCTs).

Methods	Electronic databases including English, Korean, Japanese and Chinese databases were systematically searched for RCTs investigating acupressure for primary dysmenorrhoea up to July 2008 with no language restrictions. The methodological qualities of eligible studies were assessed using the criteria described in the Assessing risk of bias of the Cochrane Handbook edited by Higgins and Altman.
Results	**Four RCTs comprising a total of 458 participants** were systematically reviewed. Only one of the included trials described adequate methods of randomisation. All trials did not have clear descriptions of their method of allocation concealment. Two studies reported significant improvements in the severity of pain for acupressure compared with sham acupressure on non-acupoints. Acupressure reduced the pain and anxiety typical of dysmenorrhoea in a Taiwan study. The U.S. study using an acupressure device reported that the reduction of menstrual pain was significantly better in worst menstrual pain, menstrual pain symptom intensity and the consumption of pain medication, compared with conventional treatment. One study investigated adverse events and reported that there was no adverse event in acupressure treatment.
Conclusions	The available data from RCTs suggest that **acupressure alleviates menstrual pain**. These results were limited by the small number of trials. Well-designed RCTs with rigorous methods of randomisation, and adequately concealed allocation, are needed.

1.2.9. Auricular acupuncture

1.2.9.1. Cao 2023

Cao M, Ye F, Xie W, Yan X, Ho MH, Cheung DST, Lee JJ. Effectiveness of auricular acupoint therapy targeting menstrual pain for primary dysmenorrhea: A systematic review and meta-analysis of randomized controlled trials. Worldviews Evid Based Nurs. 2023 Dec;20(6):621-633. https://doi.org/10.1111/wvn.12636

Background	Primary dysmenorrhea (PD) is a global public health concern affecting women's health and quality of life, leading to productivity loss and increased medical expenses. As a non-pharmacological intervention, auricular acupoint therapy (AAT) has been increasingly applied to treat PD, but the overall effectiveness remains unclear.
Aims	The aim of this review was to synthesize the effects of AAT targeting menstrual pain among females with PD.
Methods	Eight databases (PubMed, EMBASE, AMED, CINAHL Plus, Cochrane Library, Web of Science, China National Knowledge Infrastructure and Wanfang Data) and three registries (ClinicalTrials.gov, ISRCTN Registry and the Chinese Clinical Trial Registry) were searched to identify existing randomized controlled trials (RCTs) from inception to 21 August 2022. Two reviewers independently screened, extracted the data, and appraised the methodological quality and the evidence strength using the Cochrane risk-of-bias tool for randomized trials (RoB 2) and the GRADE approach.
Results	A total of **793 participants from 11 RCTs** were included. Despite substantial heterogeneity, AAT was more effective in reducing menstrual pain and related symptoms than placebo and nonsteroidal anti-inflammatory medications (NSAIDs). No significant subgroup differences were found between study locations as well as invasiveness, duration, type, acupoints number, ear selection and provider of AAT. Only minor adverse effects of AAT were reported.

Linking evidence to action	AAT can help women with PD, particularly those who are refrained from pharmaceuticals. Primary healthcare professionals, including nurses, can be well-equipped to provide evidence-based and effective AAT for people with PD. AAT can be used in a broader global clinical community. To provide an optimal effect and have wider usability, a unified practice standard is required, which would necessitate further adaptation of clinical care of people with PD. AAT effectively decreased menstrual pain and other accompanying symptoms of PD. More research is needed to identify effective AAT features and explore optimal therapy regimes for PD.

1.2.9.2. Kong 2023

Kong X, Fang H, Li X, Zhang Y, Guo Y. Effects of auricular acupressure on dysmenorrhea: A systematic review and meta-analysis of randomized controlled trials. Front Endocrinol (Lausanne). 2023 Jan 5;13:1016222. https://doi.org/10.3389/fendo.2022.1016222

Background	Auricular acupressure (AA) is widely used in treatment of dysmenorrhea, but the safety and efficacy of auricular acupressure on dysmenorrhoea are still lack of evidence-based basis.
Objective	The purpose of meta-analysis was to evaluate the effects of auricular acupressure on dysmenorrhea.
Methods	Data sources: A systematic search was conducted in six electronic databases, including PubMed, Embase, Cochrane Central Register of Controlled Trials (CINAHL), Weipu (CQVIP), China National Knowledge Infrastructure (CNKI), and Wanfang databases, to retrieve studies published from the inception dates to June 10, 2022. Study selection: Randomized controlled trials (RCTs) that investigated the effectiveness of AA on dysmenorrhea were identified. Data extraction and synthesis: The data extraction and quality assessment of the included studies were performed by two reviewers independently. Outcomes were abstracted to determine the effect measure by using mean differences (MD), standardized mean differences (SMD), or odds ratio (OR) from a random effects model. Main outcomes and measures: Cure rate, total effective rate, and visual analogue scale (VAS) were described as primary outcomes; Short-form Menstrual Distress Questionnaire (MDQs), symptom scores, serum nitric oxide (NO) level, and adverse events were recorded as secondary outcomes.
Results	**Thirty-five RCTs involving 3960 participants** were included in this study. Our findings indicated that, overall, AA was associated with a significant benefit in cured rate (OR = 1.95, 95%CI: [1.34, 2.83], P=0.0004, I2 = 75%), total effective rate (OR = 3.58, 95%CI: [2.92, 4.39], P<0.00001, I2 = 67%), VAS score (MD = -1.45, 95%CI: [-1.73, -1.17], P<0.00001, I2 = 67%), and symptom scores compared to the control group (SMD = -0.85, 95%CI: [-1.28, -0.43], P<0.0001, I2 = 91%). However, no difference in serum NO (SMD = 0.77, 95%CI: [-0.39, 1.92], P = 0.19, I2 = 89%) and MDQs (SMD = -0.58, 95%CI: [-1.26, 0.10], P = 0.10, I2 = 79%) was found between the two groups. Furthermore, subgroup analysis results indicated that AA showed significant superiorities in increasing cured rate and total effective rate, and reducing VAS score and symptom scores when compared to analgesics and non-intervention. Moreover, AA presented the same superiorities when used as an adjunctive strategy to other therapy. However, these benefits were not detected in AA used alone when compared to the therapies, including Chinese herbs, acupuncture, external application of Chineseherbal medicine, moxibustion, auricular needle, and health education.

Conclusions	Overall, AA, as a potential safety therapy, is effective for the management of dysmenorrhea, such as increasing cured rate, total effective rate, VAS, and symptom scores. Nevertheless, AA showed no significant improvement in serum NO and MDQs. It is furtherly found that AA used alone is superior to analgesics and non-intervention regarding cured rate, total effective rate, VAS, and symptom scores. Furthermore, the same superiorities are observed when AA serves as an adjunctive strategy to other therapy. However, AA alone has little effect on them compared to other therapies, and there is no definite conclusion on the benefits of AA compared to placebo for patients with dysmenorrhea. Rigorous RCTs with blind method and placebo control are warranted to confirm these findings.

1.2.10. Catgut Embedding

1.2.10.1. Wu 2016

Wu Yuan-rong, Zhao Ruo-hua, Yu Ting-ting, Li Ya-ling, Lin Xiao-qiong. [Efficacy on Primary Dysmenorrhea Treated by Acupoint Catgut Embedding: a Meta Analysis Meta]. Journal of Clinical Acupuncture and Moxibustion. 2016;32(1):50-55,56. [169250].

Objective	To evaluate the efficacy and security of acupoint catgut embedding on primary dysmenorrheal.
Methods	We searched the Cochrane library, PubMed, OVID, CNKI, CMCC, Wanfang Database and VIP Database for randomized or semi -random controlled trials of acupoint catgut embedding on primary dysmenorrhea by computers. Time had been limited to March 2015 since the database was established. Evaluate the quality of the included studies and extracted the data, and then use the RevMan5.2 software for meta-analysis.
Results	Nine researches were incorporated in the end, including 704 cases. Meta-analysis showed: Acupoint catgut embedding could effectively relieve patients' pain compared with the control group (WMD=-1 .79 , 95%CI:-2 .37~-1 .21);the dysmenorrhea symptom integral showed no difference compared with the control group after 3 months of intervention (WMD=-0 .35 ,95%CI:-1 .24~0 .31) and stopping intervention after three months (WMD=-0.97,95%CI:-2.25,0.31).At the same time it could also reduce the recurrence rate (RR=0 .08 , CI 95%:0 .02 ,0 .14) but we couldn't give a conclusion for the adverse reactions .
Conclusion	Acupoint catgut embedding can relieve the pain of patients with primary dysmenorrheal to some extent and relieve the symptoms of dysmenorrheal, reduce the recurrence, but in terms of safety, it needs to be demonstrated. It is not enough comprehensive to evaluate the effectiveness and security of acupoint catgut embedding due to the quality and quantity of the included literatures. To validate the results still need high quality literatures.

1.2.11. Electroacupuncture

1.2.11.1. Yu 2017

Yu S-Y, Lv Z-T, Zhang Q, et al. Electroacupuncture is Beneficial for Primary Dysmenorrhea: The Evidence from Meta-Analysis of Randomized Controlled Trials. Evid Based Complement Alternat Med. 2017:1-14. [203370]. DOI

Objectives	Electroacupuncture (EA) is considered to be a promising alternative therapy to relieve the menstrual pain for primary dysmenorrhea (PD), but the conclusion is controversial. Here, we conducted a systematic review and meta-analysis specifically to evaluate the clinical efficacy from randomized controlled trials (RCTs) on the use of EA in patients with PD.
Methods	PubMed, Embase, ISI Web of Science, CENTRAL, CNKI, and Wanfang were searched to identify RCTs that evaluated the effectiveness of EA for PD. The outcome measurements included visual analogue scale (VAS), verbal rating scale (VRS), COX retrospective symptom scale (RSS), and the curative rate.
Results	**Nine RCTs** with high risk of bias were included for meta-analysis. The combined VAS 30 minutes after the completion of intervention favoured EA at SP6 when compared with EA at GB39, nonacupoints, and waiting-list groups. EA was superior to pharmacological treatment when the treatment duration lasted for three menstrual cycles, evidenced by significantly higher curative rate. No statistically significant differences between EA at SP6 and control groups were found regarding the VRS, RSS-COX1, and RSS-COX2.
Conclusions	The findings of our study suggested that EA can provide considerable immediate analgesia effect for PD. Additional studies with rigorous design and larger sample sizes are needed.

1.2.12. TENS

1.2.12.1. Proctor 2002 ☆

Proctor ML, Smith CA, Farquhar CM, Stones RW. Transcutaneous Electrical Nerve Stimulation and Acupuncture for Primary Dysmenorrhoea. The Cochrane Database of Systematic Reviews. 2002;1. [141320]

Background	Dysmenorrhoea is the occurrence of painful menstrual cramps of the uterus. Medical therapy for dysmenorrhoea commonly consists of nonsteroidal anti-inflammatory drugs or the oral contraceptive pill both of which work by reducing myometrial (uterine muscle) activity. However, these treatments are accompanied by a number of side effects, making an effective non-pharmacological method of treating dysmenorrhoea of potential value. Transcutaneous electrical nerve stimulation (TENS) is a treatment that has been shown to be effective for pain relief in a variety of conditions. Electrodes are placed on the skin and electric current applied at different pulse rates (frequencies) and intensities is used to stimulate these areas so as to provide pain relief. In dysmenorrhoea. TENS is thought to work by alteration of the body's ability to receive or perceive pain signals rather than by having a direct effect on the uterine contractions. Acupuncture may also be indicated as a useful, non-pharmacological method for treating dysmenorrhoea. Acupuncture is thought to excite receptors or nerve bres which, through a complicated interaction with mediators such as serotonin and endorphins, blocks pain impulses. Acupuncture typically involves penetration of the skin by ne, solid metallic needles, which are manipulated manually or by electrical stimulation.
Objectives	To determine the effectiveness of high and low frequency transcutaneous electrical nerve stimulation and acupuncture when compared to each other, placebo, no treatment, or medical treatment for primary dysmenorrhoea.

Méthods	*Search strategy*: Electronic searches of the CochraneMenstrual Disorders and Subfertility Group Register of controlled trials, CCTR (Cochrane Library Issue 3, 2001), MEDLINE, EMBASE, CINAHL, Bio extracts, PsycLIT and SPORTDiscus were performed in August 2001 to identify relevant randomised controlled trials (RCTs). The Cochrane ComplementaryMedicine Field's Register of controlled trials (CISCOM) was also searched. Attempts were also made to identify trials from the UKNational Research Register, the Clinical Trial Register and the citation lists of review articles and included trials. In most cases, the rst or corresponding author of each included trial was contacted for additional information. *Selection criteria*: The inclusion criteria were randomised controlled trials of transcutaneous electrical nerve stimulation and acupuncture that compared these treatments to each other, placebo, no treatment, or medical treatment for primary dysmenorrhoea. Exclusion criteria were: mild, infrequent or secondary dysmenorrhoea and dysmenorrhoea associated with an IUD. *Data collection and analysis*: **Nine RCTs were identied that fullled the inclusion criteria for this review, seven involving TENS, one acupuncture, and one both treatments**. Quality assessment and data extraction were performed independently by two reviewers. Meta analysis was performed using odds ratios for dichotomous outcomes and weighted mean differences for continuous outcomes. Data unsuitable for meta-analysis was reported as descriptive data and was also included for discussion. The outcome measures were pain relief (dichotomous, visual analogue scales, descriptive), adverse effects, use of analgesics additional to treatment and absence from work or school.
Results	Overall high frequency TENS was shown to be more effective for pain relief than placebo TENS. Low frequency TENS was found to be no more effective in reducing pain than placebo TENS. There were conflicting results regarding whether high frequency TENS is more effective than low frequency TENS. One small trial showed acupuncture to be signicantly more effective for pain relief than both placebo acupuncture and two no treatment control groups.
Conclusions	High frequency TENS was found to be effective for the treatment of dysmenorrhoea by a number of small trials. The minor adverse effects reported in one trial requires further investigation. There is insufficient evidence to determine the effectiveness of low frequency TENS in reducing dysmenorrhoea. There is also **insufficient evidence to determine the effectiveness of acupuncture in reducing dysmenorrhoea, however a single small but methodologically sound trial of acupuncture suggests benefit for this modality**.

1.3. Specific outcome

1.3.1. Lin 2020 (Acupuncture vs TCM)

Lin J, Liao W, Mo Q, Yang P, Chen X, Wang X, Huang X, Lu D, Ma M, He F, Wu P, Li K, Liang W, Tang H. A systematic review of the efficacy comparison of acupuncture and traditional Chinese medicine in the treatment of primary dysmenorrhea. Ann Palliat Med. 2020;9(5):3288-3292. [212820]. doi

Background	Dysmenorrhea is one of the most common symptoms in gynecology. It refers to people who experience lower abdominal pain, swelling, backache, or another discomfort before and after menstruation or during menstruation, which seriously affects the quality of life and work. Clinically, there are many methods to treat primary dysmenorrhea, among which acupuncture and traditional Chinese medicine (TCM) are beneficial. This work aimed to test the efficacy of acupuncture and TCM in the treatment of primary dysmenorrhea and hope to supply more reliable evidence for clinical treatment.

Methods	We searched articles from the Wanfang database and China National Knowledge Infrastructure and collected the clinical, randomized, or quasi-randomized controlled trials of acupuncture compared with TCM for primary dysmenorrhea. We tested the quality and data of the included studies according to the Cochrane criteria and compiled detailed systematic reviews and meta-analysis.
Results	Seven articles (including 492 patients) on acupuncture and TCM for primary dysmenorrhea were included in the systematic review. Seven studies were included in the final analysis, and there was no heterogeneity among the studies (P=0.98, I2=0%). The results showed that the clinical effectiveness of acupuncture was better than TCM (OR: 4.86, 95% CI: 2.84-8.33, Z =5.75, P<0.00001).
Conclusions	The efficacy of acupuncture is superior to TCM in the treatment of primary dysmenorrhea.

1.4. Methodological quality of studies

1.4.1. Su 2007

Su Li, Deng Bai-Ying, Liang Liu, Zhang Jian-Fei, Wang Chao-Dong. [Quality evaluation to all literature of acupuncture and moxibustion treating painful menstruation]; Journal of Liaoning University of Traditional Chinese Medicine 2007; 9(3):76-8. [159859]

Objectives	Understand domestic acupuncture and moxibustion treats clinical trials state of menstruation and carries on the method to study the quality evaluation to all literature.
Methods	Examine through machine and hand examine, win acupuncture and moxibustion clinic to treat menstruation contrast and treat and test (RCT) the literature and analyze too literature according to following the medical pieces of literature actually, accord with random contrasting of literature to test (RCT) (account for 8.98), diagnose with curative effect 16 of standard clearly among here 29 literatures (account for 55.17).
Conclusions	Acupuncture and moxibustion treat clinical random controlled studies (RCT) of menstruation quality take, wait for, raise, should follow the clinical research characteristics that acupuncture and moxibustion treat menstruation, explore that sets up the best healing solution, in order to improve clinical curative effect.

2. Overviews of Systematic Reviews

2.1. Yang 2020

Yang J, Xiong J, Yuan T, Wang X, Jiang Y, Zhou X, Liao K, Xu L. Effectiveness and Safety of Acupuncture and Moxibustion for Primary Dysmenorrhea: An Overview of Systematic Reviews and Meta-Analyses. Evid Based Complement Alternat Med. 2020. [209251]. doi

Background	Acupuncture and moxibustion have been accepted as treatment options for primary dysmenorrhea (PD). So far, several systematic reviews (SRs) and meta-analyses (MAs) have reported on the efficacy and safety of acupuncture and moxibustion in treating PD.
Objectives	The aim of this study was to critically summarize the evidence from relevant SRs and MAs reporting on the efficacy and safety of acupuncture and moxibustion in treatment of PD.

Materials and Methods	Seven electronic databases, including Cochrane Database of Systematic Reviews, EMBASE, PubMed, SinoMed, China National Knowledge Infrastructure (CNKI), Chinese Science and Technology Periodical Database (VIP), and Wanfang database, were systematically searched. SRs or MAs about acupuncture for PD published up to May 2019 were included in the analysis. More than two authors independently assessed the quality of the evidence by AMSTAR2, PRISMA, PRISMA-A, and GRADE approach.
Results	A total of **28 SRs and MAs**, 281 original studies, reporting on 26,459 female patients were analyzed. The majority of the SRs were of moderate reporting quality and poor methodological quality. Moderate-quality evidence suggested that acupuncture and moxibustion were more effective compared to indomethacin or Fenbid in treating PD. Low-quality evidence suggested that, compared to NSAIDs, acupuncture and moxibustion could relieve pain with less adverse effects.
Conclusion	Acupuncture and moxibustion seem to be effective and safe approaches in treatment of PD; yet, the methodological quality of most of the studies and the quality of evidence were low. Thus, additional studies are required to further confirm these results.

3. Clinical Practice Guidelines

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

3.1. Society of Obstetricians and Gynaecologists of Canada (SOGC, Canada) 2025 ⊕

Burnett M. Guideline No. 345: Primary Dysmenorrhea. J Obstet Gynaecol Can. 2025 May;47(5):102840. https://doi.org/10.1016/j.jogc.2025.102840

12. High-frequency transcutaneous electrical nerve stimulation (TENS), local heat therapy (heated pads/patches), **acupoint stimulation** and ginger supplementation may be considered as complementary treatments for dysmenorrhea, especially for women who cannot or choose not to use conventional therapy, though evidence varies in strength and certainty (conditional, low).

3.2. Australian and New Zealand College of Anaesthetists (ANZA) 2020 ⊕

Acute Pain Management: Scientific Evidence Australian and New Zealand College of Anaesthetists (ANZA). 2020:1317P. [205268] . URL.

Acupuncture or acupressure may be effective in the treatment of primary dysmenorrhoea (S) (Level I [Cochrane Review]).

3.3. American College of Obstetricians and Gynecologists 2018 ⊕

Dysmenorrhea and endometriosis in the adolescent. ACOG Committee Opinion No. 760. American College of Obstetricians and Gynecologists. Obstet Gynecol. 2018;132:e249-58. [197580].

Transcutaneous electrical nerve stimulation, **acupuncture**, herbal preparations, and yoga have demonstrated improvement in dysmenorrhea in some studies, but current evidence does not support them as first-line complementary and alternative therapies.
Adolescents with endometriosis often benefit from ongoing education and support and integration of other multidisciplinary services such as biofeedback, pain management teams, **acupuncture**, and herbal therapy.

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

National Clinical Guideline Centre. Dysmenorrhoea London (UK): National Institute for Health and Clinical Excellence (NICE). 2018;:14p. [193206].

There is a lack of good-quality evidence to support the use of herbal remedies, dietary supplements, acupuncture, acupressure, spinal manipulation, behavioural therapy, and exercise to treat dysmenorrhoea.

3.5. 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

3.6. Society of Obstetricians and Gynaecologists of Canada (SOGC, Canada) 2017 ⊕

Burnett M, Lemyre M. No. 345-Primary Dysmenorrhea Consensus Guideline. J Obstet Gynaecol Can. 2017 Jul;39(7):585-595. https://doi.org/10.1016/j.jogc.2016.12.023. PMID: 28625286.

11. Acupoint stimulation should be considered for women wishing to use complementary or alternative therapies (II-1B).

3.7. 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].

3. Acupuncture or acupressure may be effective in the treatment of *primary dysmenorrhoea* (S) (Level I [Cochrane Review]).

3.8. 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). Menstrual cramps

3.9. Royal College of Obstetricians and Gynaecologists 2012 Ø

Acupuncture and Chinese Herbal Medicine for Women with Chronic Pelvic Pain Scientific Impact Paper No. 30. Royal College of Obstetricians and Gynaecologists. 2012. [197593].

Acupuncture and CHM may have roles to play in the treatment of CPP associated with dysmenorrhoea, endometriosis, IBS and PID, either as an adjunct or as an alternative to conventional treatments. Unfortunately the current evidence lacks rigour and the available trials are frequently small, poorly designed, and inadequately reported. As a consequence we can only consider this preliminary evidence. This area clearly requires further more rigorous investigation

3.10. Society of Obstetricians and Gynecologists of Canada (SOGC, Canada) 2005 ⊕

Lefebvre G, Pinsonneault O. Primary Dysmenorrhea Consensus Guideline. J Obstet Gynaecol Can. 2005;27(12):1117-30. [165636].

Women who inquire about alternatives to relieve dysmenorrhea may be instructed that, at the present time, there is limited evidence that acupuncture may be of benefit (II-B),

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