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1. Systematic Reviews and Meta-Analysis nausea and vomiting in pregnancy:

1.1. Generic Acupuncture

1.1.1. Frivaldszky 2026

Nausées-vomissements gravidiques : évaluation de l'acupuncture

Frivaldszky L, Csecsidat M, Hegyi P, Kárpáti G, Kobza Z, Ács N, Bánhidy F, Agócs G, Szentes BL, Keszthelyi M. Comparative Effectiveness of Pharmacological and Non-Pharmacological Interventions for Nausea and Vomiting in Pregnancy: A Systematic Review and Network Meta-Analysis. Nutrients. 2026;18(8):1293. https://doi.org/10.3390/nu18081293

Background	Nausea and vomiting in pregnancy affects up to 80% of pregnant women and may progress to hyperemesis gravidarum, leading to maternal morbidity and adverse pregnancy outcomes. Despite numerous pharmacological and non-pharmacological options, the comparative efficacy and safety of these interventions remain unclear.
Methods	We conducted a systematic review and network meta-analysis of randomized controlled trials assessing pharmacological and non-pharmacological interventions for nausea and vomiting in pregnancy. The databases searched included CENTRAL, PubMed, and EMBASE (up to 28 May 2024). Eligible trials compared interventions with a placebo in pregnant women with nausea and vomiting in pregnancy. The primary outcomes were symptom severity, assessed using validated tools. Safety outcomes included adverse effects. Data were pooled using frequentist pairwise and network meta-analyses. The risk of bias was assessed using the RoB2 tool, and the certainty of evidence was evaluated using the CINeMA framework.
Results	Of 9844 records screened, 24 randomized controlled trials (3017 participants) met the inclusion criteria, encompassing 16 intervention categories. Network analysis ranked quince, vitamin B6 with pomegranate and mint, **acupressure P6**, dimenhydrinate, and **acupuncture** combined with doxylamine-pyridoxine as the most effective interventions for reducing symptoms of nausea and vomiting in pregnancy, with considerable uncertainty and low-to-moderate quality of evidence. Reporting of adverse events was limited. Risk of bias was low to moderate.
Discussion	Most interventions demonstrated significant benefit over a placebo. However, high heterogeneity and sparse reporting of adverse effects warrant caution when translating these results into clinical practice.
Conclusions	This study indicates that both pharmacological (vitamin B6, metoclopramide, dimenhydrinate) and non-pharmacological (ginger, quince, **acupressure, acupuncture**) interventions might be effective in reducing symptoms of nausea and vomiting in pregnancy.

1.1.2. Hu 2024

Hu Y, Yang Q, Hu X. The efficacy and safety of acupuncture and moxibustion for the management of nausea and vomiting in pregnant women: A systematic review and meta-analysis. Heliyon. 2024 Jan 11;10(2):e24439. https://doi.org/10.1016/j.heliyon.2024.e24439

Backgound	Nausea and vomiting, which cause considerable multifaceted effects, are commonly experience in early pregnancy. Various therapeutic strategies are employed, including both conventional agents and complementary medicine. However, the effectiveness of complementary medicine remains controversial. The objective of this meta-analysis is to evaluate efficacy and safety of acupuncture and moxibustion in pregnant women.

Methods	We conducted a comprehensive search using electronic databases such as PubMed, Embase, ISI Web, Medline, Cochrane, clinicaltrial.gov, and several Chinese databases. A total of **21 randomized controlled trials** were included in this study for quantitative analysis. Forest plots were utilized to evaluate the efficacy and safety of acupuncture and moxibustion. Egger's test was employed to assess publication bias.
Results	The pooled analysis revealed that the acupuncture/moxibustion group was more effective than control group in alleviating nausea and vomiting in early pregnant women (RR: 0.28; 95%CI: 0.21, 0.37). Similar results were observed when comparing the acupuncture group to traditional herbs (RR: 0.08; 95 % CI: 0.01, 0.60), conventional therapy (RR: 0.15; 95 % CI: 0.04, 0.57), and the blank control group (RR: 0.33; 95 % CI: 0.22, 0.51). Moxibustion also exhibited the ability to alleviate nausea and vomiting compared with the blank control group (RR: 0.21; 95 % CI: 0.08, 0.52). As for safety, there were no significant differences in severe adverse events between the acupuncture group and the control group (RR: 0.77; 95%CI: 0.52, 1.14), the blank control group (RR: 0.61; 95%CI: 0.34, 1.10), the sham acupuncture group (RR: 1.05; 95%CI: 0.63, 1.73), or the conventional therapy group (RR: 0.32; 95%CI: 0.06, 1.55).
Conclusion	Acupuncture and moxibustion might be effective for the management of nausea and vomiting in early pregnant women. Moreover, acupuncture might be a relatively safe treatment for pregnancy.

1.1.3. Jin 2024

Jin B, Han Y, Jiang Y, Zhang J, Shen W, Zhang Y. Acupuncture for nausea and vomiting during pregnancy: A systematic review and meta-analysis. Complement Ther Med. 2024 Oct;85:103079. https://doi.org/10.1016/j.ctim.2024.103079

Background and objectives	Pregnant women commonly experience challenging nausea and vomiting, which significantly affect their general well-being and daily life. Although medication is often used for relief, it may not alleviate symptoms completely, emphasizing the need for complementary therapies. Acupuncture is one of the complementary treatments for nausea and vomiting of pregnancy (NVP). Studying the outcomes of acupuncture for NVP can shed light on this issue and inform treatment guidelines. Therefore, we systematically evaluated the effectiveness and safety of acupuncture in managing NVP, considering the traditional meridian and acupoint theories.
Methods	PubMed, Embase, Web of Science, Cochrane Central Register of Controlled Trials, China National Knowledge Infrastructure, Wanfang Database, Chinese Science and Technology Periodical Database, ClinicalTrials.gov, and the Chinese Clinical Trial Registry were searched on May 1, 2024. Randomized controlled trials (RCTs) that compared acupuncture for NVP with sham acupuncture, placebo, and Western medicine (WM) or acupuncture plus WM with WM alone were included. The risk of bias was assessed using the Cochrane risk-of-bias tool. A meta-analysis was conducted using RevMan 5.4.1, and the quality of evidence for each outcome was evaluated using the Grading of Recommendations, Assessment, Development, and Evaluation approach.

Results	**Twenty-four RCTs** (with 26 publications) involving **2390 women** were included. Acupuncture plus WM significantly led to a reduction in Pregnancy-Unique Quantification of Emesis (PUQE) scores and ineffective rates compared with WM alone (PUQE: mean difference [MD] -1.95, 95 % confidence interval [CI] -3.08 to -0.81, P = 0.0008, I2 = 90 %, six studies; ineffective rates: risk ratio [RR] 0.27, 95 % CI 0.19 to 0.39, P < 0.00001, I2 = 7 %, 16 studies). It also resulted in a greater improvement in ketonuria, shorter length of stay, and lower scores on the NVP Quality of Life and Chinese Medicine Syndrome Scale. Acupuncture was superior to WM in terms of reduction in ineffective rates (RR 0.50, 95 % CI 0.30 to 0.81, P = 0.006, I2 = 0 %, five studies). Acupuncture and WM had comparable results in improvement in PUQE scores (MD -0.80, 95 % CI -3.06 to 1.46, P = 0.49, I2 = 89 %, three studies) and ketonuria negative rates. The evidence is not clear regarding the impact of acupuncture on depression and anxiety compared with that of sham acupuncture. The incidence of severe adverse events was not significantly different between acupuncture and WM or sham acupuncture. Evidence certainty ranged from moderate to very low. Of the 24 RCTs, 19 used the Neiguan (PC6) acupoint, 16 used the Zusanli (ST36) acupoint, and 13 used the Zhongwan (CV12) acupoint.
Conclusion	According to the current systematic review and meta-analysis, acupuncture combined with WM may be a more effective treatment for NVP than WM alone. Furthermore, acupuncture may be as effective as WM. PC6, ST36, and CV12 are the most commonly used acupoints. Although more robust and larger studies are required, the current evidence supports the use of acupuncture in NVP treatment, as it has been demonstrated to be safe.

1.1.4. Tan 2023 ☆

Tan MY, Shu SH, Liu RL, Zhao Q. The efficacy and safety of complementary and alternative medicine in the treatment of nausea and vomiting during pregnancy: A systematic review and meta-analysis. Front Public Health. 2023 Mar 9;11:1108756. https://doi.org/10.3389/fpubh.2023.1108756

Background	Complementary and alternative medicine (CAM) therapies are widely used for nausea and vomiting during pregnancy (NVP) due to the limitations of conventional medicine. However, their efficacy and safety remain controversial. Therefore, this meta-analysis was performed to assess the improvement of CAM therapy on NVP.
Methods	Randomized controlled trials (RCTs) were searched for where the trial group was CAM and the control group was a conventional medicine or a placebo for NVP. This was done via 8 databases, including PubMed, EMBASE, the Cochrane Library, Web of Science, China National Knowledge Infrastructure, Wanfang, SinoMed, and VIP, from inception to October 25, 2022. The Grades of Recommendation, Assessment, Development and Evaluation (GRADE) was used to assess the quality of evidence. The Stata 15.0 software was used to perform the meta-analysis.

Results	Thirty-three RCTs were included in this study. **The acupuncture** treatment was superior to conventional medicine at the effective rate [RR = 1.71, 95% CI (1.02, 2.86), P = 0.042; Low-quality evidence]. Ginger had more significant effects than conventional medicine at the Rhodes index [WMD = -0.52, 95% CI (-0.79, -0.24), P ≤ 0.001; Moderate-quality evidence] and it had the same effect as drugs to relieve vomiting [SMD = 0.30, 95% CI (-0.12, 0.73), P = 0.160; Low-quality evidence]. Compared with placebo, ginger had a higher effective rate [RR = 1.68, 95% CI (1.09, 2.57), P = 0.018; Low-quality evidence], and lower Visual analog scale (VAS) of Nausea [WMD = -1.21, 95% CI (-2.34, -0.08), P = 0.036; Low-quality evidence]. Ginger had the same antiemetic effect as placebo [WMD = 0.05, 95% CI (-0.23, 0.32), P = 0.743; Low-quality evidence]. **Acupressure** was superior to conventional medicine at the reduction of antiemetic drugs [SMD = -0.44, 95% CI (-0.77, -0.11), P = 0.008; Low-quality evidence], and at the effective rate [RR = 1.55, 95% CI (1.30, 1.86), P ≤ 0.001; Low-quality evidence]. **Acupressure** had the same effect as placebo at the effective rate [RR = 1.25, 95% CI (0.94, 1.65), P = 0.124; Low-quality evidence]. Overall, CAM therapy was safer than conventional medicine or a placebo.
Conclusion	The results showed that CAM therapies were able to alleviate NVP. However, due to the low quality of existing RCTs, more RCTs with large sample sizes are needed to validate this conclusion in the future.

1.1.5. Nassif 2022 ☆

Nassif MS, Costa ICP, Ribeiro PM, Moura CC, Oliveira PE. Integrative and complementary practices to control nausea and vomiting in pregnant women: a systematic review. Rev Esc Enferm USP. 2022 Oct 21;56:e20210515. English, Portuguese. https://doi.org/10.1590/1980-220X-REEUSP-2021-0515en.

Objective	to synthesize the evidence available in the literature on the effects of integrative and complementary practices in nausea and vomiting treatment in pregnant women.
Method	a systematic review, reported according to PRISMA and registered in PROSPERO. The search for studies was carried out in 11 databases. To assess risk of bias in randomized clinical trials, the Cochrane Collaboration Risk of Bias Tool (RoB 2) was used.
Results	the final sample consisted of 31 articles, divided into three categories: aromatherapy, phytotherapy and acupuncture. It was observed that aromatherapy with lemon essential oil, ginger capsules, pericardial 6 point acupressure were the interventions that proved to be effective. Less than half of studies reported adverse effects, with mild and transient symptoms predominating. Most articles were classified as “some concern” in risk of bias assessment.
Conclusion	the three most effective interventions to control gestational nausea and vomiting were aromatherapy, herbal medicine and **acupuncture**, with significant results in the assessment of individual studies.

1.1.6. Lu 2021 ★★

Lu H, Zheng C, Zhong Y, Cheng L, Zhou Y. Effectiveness of Acupuncture in the Treatment of Hyperemesis Gravidarum: A Systematic Review and Meta-Analysis. Evid Based Complement Alternat Med. 2021. [220826]. https://doi.org/10.1155/2021/2731446

Background	Hyperemesis gravidarum (HG) is a common gastrointestinal disease afflicting gravidas. It usually results in hospital admission in early pregnancy.
Objective	Through a meta-analysis, this study intended to explore acupuncture's clinical efficacy in treating HG.

Materials and methods	A comprehensive search of PubMed, the Cochrane Library, EMBASE, Web of Science, China National Knowledge Infrastructure (CNKI), Chinese Biological Medical (CBM), Wanfang Database, and China Science and Technology Journal (VIP) for published clinical randomized controlled trials (RCTs) of acupuncture for treating HG was conducted from the date of database creation to 20th January 2021. We also searched grey literature in four databases: Chinese Cochrane Center, Chinese Clinical Trial Registry, GreyNet International, and Open Grey from their inception to 20th January 2021. Two authors independently screened the literature, extracted data, and evaluated the quality of the literature with Cochrane Handbook 5.1.0 and Review Manager 5.2 software. Review Manager 5.2 and STATA 12.0 software were applied to analyze data. Heterogeneity analysis was performed by the Cochran Chi-square test and I 2 statistic. Egger's tests together with funnel plots were used to identify publication bias.
Results	A total of **16 trials covering 1043 gravidas** were included. Compared with the conventional treatment, acupuncture had a significantly higher effective rate (OR: 8.11, 95% CI: 5.29~12.43; P < 0.00001), a higher conversion rate of urine ketone (RR: 1.36, 95% CI: 1.15~1.60; P=0.0003), an improvement rate of nausea and vomiting (OR: 26.44, 95% CI: 3.54~197.31; P=0.001), and a relatively higher improvement rate of food intake (RR: 1.17, 95% CI: 1.01~1.36; P=0.04). Acupuncture also shortened hospitalization time and manifested with a lower pregnancy termination rate and fewer adverse events. Nevertheless, no statistical variation in the improvement of nausea intensity, vomiting episodes, and lassitude symptom, recurrence rate, and serum potassium was observed.
Conclusion	Our study suggested that acupuncture was effective in treating HG. However, as the potential inferior quality and underlying publication bias were found in the included studies, there is a need for more superior-quality RCTs to examine their effectiveness and safety.

1.1.7. Sridharan 2020 ☆

Sridharan K, Sivaramakrishnan G. Interventions for treating hyperemesis gravidarum: a network meta-analysis of randomized clinical trials. J Matern Fetal Neonatal Med. 2020;33(8):1405-1411. [216323]. doi

Background	Several interventions were explored in clinical trials for treating hyperemesis gravidarum (HG). The present study is a network meta-analysis of such interventions.
Methods	Electronic databases were searched for appropriate randomized clinical trials comparing interventions for treatment of patients with HG. Control of HG symptoms was the primary outcome and emetic episodes, hospital stay, nausea scores, patients requiring rescue antiemetics, hospital readmission, adverse events, and adverse pregnancy outcomes were the secondary outcome measures. Random-effects model was used and odds ratio (OR) [95% confidence interval (CI)] was the effect estimate for categorical outcomes and weighted mean difference (WMD) [95% confidence interval] for numerical outcomes.
Results	**Twenty studies were included** in the systematic review and 18 in the meta-analysis. Acupuncture (OR: 18.9; 95% CI: 2.1, 168), acupressure (OR: 26.7; 95% CI: 2.5, 283.1) and methylprednisolone (OR: 6.7; 95% CI: 1.1, 38.8) were associated with better control of HG symptoms than standard of care. Acupressure decreases the requirement of rescue antiemetics (OR: 0.06; 95% CI: 0.01, 0.44); ondansetron with reduced hospital stay (WMD: -0.2; 95% CI: -0.31, -0.01) and diazepam with reduced risk of hospital admission (OR: 0.11; 95% CI: 0.01, 0.95). The quality of evidence is very low.

Conclusion	Acupuncture, acupressure, and methylprednisolone were observed with better therapeutic benefits than other interventions for treating HG. However, the pooled estimates may change with the advent of results from future head-to-head clinical trials.

1.1.8. Sridharan 2018 ☆

Sridharan K, Sivaramakrishnan G. Interventions for treating nausea and vomiting in pregnancy: a network meta-analysis and trial sequential analysis of randomized clinical trials. Expert Rev Clin Pharmacol. 2018;11(11):1143-1150. [189851].

Introduction	Several drugs were explored for their utility in treating nausea and vomiting in pregnancy (NVP). The present study is a network meta-analysis of such drugs.
Methods	Electronic databases were searched for randomized clinical trials that have compared active interventions (with placebo or other active interventions) for treating NVP. Nausea scores were the primary outcome and changes in nausea scores, emetic episodes, adverse events, and vomiting control were the key secondary outcomes. Weighted mean difference was the effect estimate for continuous variable and odds ratio for the numerical variable. Random-effects model was used and the strength of the evidence was graded.
Results	Fifty studies were included in the systematic review and 42 in the meta-analysis. **Acupuncture**, chamomile, dimenhydrinate, doxylamine/vitamin B6, ginger, quince, metoclopramide, and vitamin B6 were associated with reduced nausea scores compared to placebo. Of these interventions, ginger and vitamin B6 were also associated with better vomiting control and less incidence of adverse events. Adequate evidence supporting the use exists only for ginger and the quality of evidence for this comparison is moderate. Strength of evidence for all other comparisons is very low.
Conclusion	Present evidence is conclusive on the therapeutic benefits of ginger in treating NVP. Although favorable results were obtained for several other interventions, the strength of evidence is very low. The results of this network meta-analysis should be interpreted with extreme caution as it might change with the advent of data from future head-to-head clinical trials.

1.1.9. O'Donnel 2016

O'Donnell A, McParlin C2, Robson SC3, Beyer F, Moloney E4, Bryant A, Bradley J, Muirhead C, Nelson-Piercy C, Newbury-Birch D, Norman J, Simpson E, Swallow B, Yates L, Vale L. Treatments for hyperemesis gravidarum and nausea and vomiting in pregnancy: a systematic review and economic assessment. Health Technol Assess. 2016;20(74):1-268. [100354].

Background	Nausea and vomiting in pregnancy (NVP) affects up to 85% of all women during pregnancy, but for the majority self-management suffices. For the remainder, symptoms are more severe and the most severe form of NVP - hyperemesis gravidarum (HG) - affects 0.3-1.0% of pregnant women. There is no widely accepted point at which NVP becomes HG.
Objectives	This study aimed to determine the relative clinical effectiveness and cost-effectiveness of treatments for NVP and HG.

Methods	DATA SOURCES: MEDLINE, EMBASE, Cumulative Index to Nursing and Allied Health Literature, Cochrane Central Register of Controlled Trials, PsycINFO, Commonwealth Agricultural Bureaux (CAB) Abstracts, Latin American and Caribbean Health Sciences Literature, Allied and Complementary Medicine Database, British Nursing Index, Science Citation Index, Social Sciences Citation Index, Scopus, Conference Proceedings Index, NHS Economic Evaluation Database, Health Economic Evaluations Database, China National Knowledge Infrastructure, Cochrane Database of Systematic Reviews and Database of Abstracts of Reviews of Effects were searched from inception to September 2014. References from studies and literature reviews identified were also examined. Obstetric Medicine was hand-searched, as were websites of relevant organisations. Costs came from NHS sources. REVIEW METHODS: A systematic review of randomised and non-randomised controlled trials (RCTs) for effectiveness, and population-based case series for adverse events and fetal outcomes. Treatments: vitamins B6 and B12, ginger, **acupressure/acupuncture**, hypnotherapy, antiemetics, dopamine antagonists, 5-hydroxytryptamine receptor antagonists, intravenous (i.v.) fluids, corticosteroids, enteral and parenteral feeding or other novel treatment. Two reviewers extracted data and quality assessed studies. Results were narratively synthesised; planned meta-analysis was not possible due to heterogeneity and incomplete reporting. A simple economic evaluation considered the implied values of treatments.
Results	Seventy-three studies (75 reports) met the inclusion criteria. For RCTs, 33 and 11 studies had a low and high risk of bias respectively. For the remainder (n = 20) it was unclear. The non-randomised studies (n = 9) were low quality. There were 33 separate comparators. The most common were **acupressure versus placebo (n = 12)**; steroid versus usual treatment (n = 7); ginger versus placebo (n = 6); ginger versus vitamin B6 (n = 6); and vitamin B6 versus placebo (n = 4). There was evidence that ginger, antihistamines, metoclopramide (mild disease) and vitamin B6 (mild to severe disease) are better than placebo. Diclectin® [Duchesnay Inc.; doxylamine succinate (10 mg) plus pyridoxine hydrochloride (10 mg) slow release tablet] is more effective than placebo and ondansetron is more effective at reducing nausea than pyridoxine plus doxylamine. Diclectin before symptoms of NVP begin for women at high risk of severe NVP recurrence reduces risk of moderate/severe NVP compared with taking Diclectin once symptoms begin. Promethazine is as, and ondansetron is more, effective than metoclopramide for severe NVP/HG. I.v. fluids help correct dehydration and improve symptoms. Dextrose saline may be more effective at reducing nausea than normal saline. Transdermal clonidine patches may be effective for severe HG. Enteral feeding is effective but extreme method treatment for very severe symptoms. Day case management for moderate/severe symptoms is feasible, acceptable and as effective as inpatient care. For all other interventions and comparisons, evidence is unclear. The economic analysis was limited by lack of effectiveness data, but comparison of costs between treatments highlights the implications of different choices. LIMITATIONS: The main limitations were the quantity and quality of the data available.
Conclusion	There was evidence of some improvement in symptoms for some treatments, but these data may not be transferable across disease severities. Methodologically sound and larger trials of the main therapies considered within the UK NHS are needed.

1.1.10. McParlin 2016 ~

McParlin C, O'Donnell A, Robson SC, Beyer F, Moloney E, Bryant A, Bradley J, Muirhead CR, Nelson-Piercy C, Newbury-Birch D, Norman J, Shaw C, Simpson E, Swallow B, Yates L, Vale L. Treatments for Hyperemesis Gravidarum and Nausea and Vomiting in Pregnancy: A Systematic Review. JAMA. 2016;316(13):1392-140. [190439].

Objectives	Nausea and vomiting affects approximately 85% of pregnant women. The most severe form, hyperemesis gravidarum, affects up to 3% of women and can have significant adverse physical and psychological sequelae. Objective- To summarize current evidence on effective treatments for nausea and vomiting in pregnancy and hyperemesis gravidarum-
Methods	Databases were searched to June 8, 2016. Relevant websites and bibliographies were also searched. Titles and abstracts were assessed independently by 2 reviewers.
Results	Results were narratively synthesized; planned meta-analysis was not possible because of heterogeneity and incomplete reporting of findings. Findings: Seventy-eight studies (n = 8930 participants) were included: 67 randomized clinical trials (RCTs) and 11 nonrandomized studies. Evidence from 35 RCTs at low risk of bias indicated that ginger, vitamin B6, antihistamines, metoclopramide (for mild symptoms), pyridoxine-doxylamine, and ondansetron (for moderate symptoms) were associated with improved symptoms compared with placebo. One RCT (n = 86) reported greater improvements in moderate symptoms following psychotherapy (change in Rhodes score [range, 0 {no symptoms} to 40 {worst possible symptoms}], 18.76 [SD, 5.48] to 7.06 [SD, 5.79] for intervention vs 19.18 [SD, 5.63] to 12.81 [SD, 6.88] for comparator [P < .001]). For moderate-severe symptoms, 1 RCT (n = 60) suggested that pyridoxine-doxylamine combination taken preemptively reduced risk of recurrence of moderate-severe symptoms compared with treatment once symptoms begin (15.4% vs 39.1% [P < .04]). One RCT (n = 83) found that ondansetron was associated with lower nausea scores on day 4 than metoclopramide (mean visual analog scale [VAS] score, 4.1 [SD, 2.9] for ondansetron vs 5.7 [SD, 2.3] for metoclopramide [P = .023]) but not episodes of emesis (5.0 [SD, 3.1] vs 3.3 [SD, 3], respectively [P = .013]). Although there was no difference in trend in nausea scores over the 14-day study period, trend in vomiting scores was better in the ondansetron group (P = .042). One RCT (n = 159) found no difference between metoclopramide and promethazine after 24 hours (episodes of vomiting, 1 [IQR, 0-5] for metoclopramide vs 2 [IQR, 0-3] for promethazine [P = .81], VAS [0-10 scale] for nausea, 2 [IQR, 1-5] vs 2 [IQR, 1-4], respectively [P = .99]). Three RCTs compared corticosteroids with placebo or promethazine or metoclopramide in women with severe symptoms. Improvements were seen in all corticosteroid groups, but only a significant difference between corticosteroids vs metoclopramide was reported (emesis reduction, 40.9% vs 16.5% at day 2; 71.6% vs 51.2% at day 3; 95.8% vs 76.6% at day 7 [n = 40, P < .001]). For other interventions, evidence was limited.
Conclusions	For mild symptoms of nausea and emesis of pregnancy, ginger, pyridoxine, antihistamines, and metoclopramide were associated with greater benefit than placebo. For moderate symptoms, pyridoxine-doxylamine, promethazine, and metoclopramide were associated with greater benefit than placebo. Ondansetron was associated with improvement for a range of symptom severity. Corticosteroids may be associated with benefit in severe cases. Overall the quality of evidence was low.
acupuncture	In summary for **acupressure** (three RCTs compared acupressure with placebo in women with mild symptoms) : treatment with acupressure was associated with symptom improvement for mild cases (level A, class IIa). For nerve stimulation:evidence indicates treatmentmay be considered, but the benefit was unclear (level B, class IIb). For **acupuncture** (three RCTs compared acupuncture with other treatments) : the benefit was unclear (level A, class IIb).

1.1.11. Van den Heuvel 2016 ~

Van den Heuvel E, Goossens M, Vanderhaegen H, Sun HX, Buntinx F. Effect of acustimulation on nausea and vomiting and on hyperemesis in pregnancy: a systematic review of Western and Chinese literature.. BMC Complement Altern Med. 2016. [187820].

Background	Nausea and vomiting in pregnancy (NVP) and hyperemesis gravidarum (HG) have a significant impact on quality of life. Medication to relieve symptoms of NVP and HG are available but pregnant women and their caregivers have been concerned about the teratogenic effect, side effects and poor efficacy. The aim of this review was to investigate if there is any clinical evidence for the efficacy of acustimulation in the treatment of NVP or HG.
Methods	A systematic review of randomized controlled trials (RCTs), including both English and Chinese databases was conducted to assess the efficacy of various techniques of acustimulation for NVP and HG. The methodological quality of the studies was assessed using the Cochrane's risks of bias tool. Revised STRICTA (2010) criteria were used to appraise acustimulation procedures. Pooled relative risks (RRp) and standard mean deviations (SMD) with 95% confidence intervals (CI) were calculated from the data provided by the investigators of the original trials.
Results	**Twenty-nine trials including 3519 patients met the inclusion criteria.** Twenty trials could be included in statistical pooling. **The overall effect of different acustimulation techniques shows a significant reduction for the combined outcome for NVP or HG in pregnancy as a dichotomous variable** (RRp 1.73, 95% CI 1.43 to 2.08). Studies with continuous outcome measures for nausea, vomiting and the combined outcome did not show any evidence for relieving symptoms of NVP and HG (SMD -0.12, 95% CI -0.35 to 0.12).
Conclusions	**Although there is some evidence for an effect of acustimulation on nausea and vomiting or hyperemesis in pregnancy, results are not conclusive.** Future clinical trials with a rigorous design and large sample sizes should be conducted to evaluate the efficacy and safety of these interventions for NVP and HG.

1.1.12. Boelig 2016 Ø

Boelig RC, Barton SJ, Saccone G, Kelly AJ, Edwards SJ, Berghella V. Interventions for Treating Hyperemesis Gravidarum. Cochrane Database Syst Rev. 2016. [186424]

Background	Hyperemesis gravidarum is a severe form of nausea and vomiting in pregnancy affecting 0.3% to 1.0% of pregnancies, and is one of the most common indications for hospitalization during pregnancy. While a previous Cochrane review examined interventions for nausea and vomiting in pregnancy, there has not yet been a review examining the interventions for the more severe condition of hyperemesis gravidarum.
Objectives	To assess the effectiveness and safety, of all interventions for hyperemesis gravidarum in pregnancy up to 20 weeks' gestation. SEARCH METHODS: We searched the Cochrane Pregnancy and Childbirth Group's Trials Register and the Cochrane Complementary Medicine Field's Trials Register (20 December 2015) and reference lists of retrieved studies. SELECTION CRITERIA: Randomized controlled trials of any intervention for hyperemesis gravidarum. Quasi-randomized trials and trials using a cross-over design were not eligible for inclusion.We excluded trials on nausea and vomiting of pregnancy that were not specifically studying the more severe condition of hyperemesis gravidarum. DATA COLLECTION AND ANALYSIS: Two review authors independently reviewed the eligibility of trials, extracted data and evaluated the risk of bias. Data were checked for accuracy.

Main Results	**Twenty-five trials (involving 2052 women)** met the inclusion criteria but the majority of 18 different comparisons described in the review include data from single studies with small numbers of participants. The comparisons covered a range of interventions including **acupressure/acupuncture, outpatient care, intravenous fluids, and various pharmaceutical interventions**. The methodological quality of included studies was mixed. For selected important comparisons and outcomes, we graded the quality of the evidence and created 'Summary of findings' tables. For most outcomes the evidence was graded as low or very low quality mainly due to the imprecision of effect estimates. Comparisons included in the 'Summary of findings' tables are described below, the remaining comparisons are described in detail in the main text. **No primary outcome data were available when acupuncture was compared with placebo**. There was no clear evidence of differences between groups for anxiodepressive symptoms (risk ratio (RR) 1.01, 95% confidence interval (CI) 0.73 to 1.40; one study, 36 women, very low-quality evidence), spontaneous abortion (RR 0.48, 95% CI 0.05 to 5.03; one study, 57 women, low-quality evidence), preterm birth (RR 0.12, 95% CI 0.01 to 2.26; one study, 36 women, low-quality evidence), or perinatal death (RR 0.57, 95% CI 0.04 to 8.30; one study, 36 women, low-quality evidence).**There was insufficient evidence to identify clear differences between acupuncture and metoclopramide** in a study with 81 participants regarding reduction/cessation in nausea or vomiting (RR 1.40, 95% CI 0.79 to 2.49 and RR 1.51, 95% CI 0.92 to 2.48, respectively; very low-quality evidence).In a study with 92 participants, women taking vitamin B6 had a slightly longer hospital stay compared with placebo (mean difference (MD) 0.80 days, 95% CI 0.08 to 1.52, moderate-quality evidence). There was insufficient evidence to demonstrate a difference in other outcomes including mean number of episodes of emesis (MD 0.50, 95% CI -0.40 to 1.40, low-quality evidence) or side effects.A comparison between metoclopramide and ondansetron identified no clear difference in the severity of nausea or vomiting (MD 1.70, 95% CI -0.15 to 3.55, and MD -0.10, 95% CI -1.63 to 1.43; one study, 83 women, respectively, very low-quality evidence). However, more women taking metoclopramide complained of drowsiness and dry mouth (RR 2.40, 95% CI 1.23 to 4.69, and RR 2.38, 95% CI 1.10 to 5.11, respectively; moderate-quality evidence). There were no clear differences between groups for other side effects.In a single study with 146 participants comparing metoclopramide with promethazine, more women taking promethazine reported drowsiness, dizziness, and dystonia (RR 0.70, 95% CI 0.56 to 0.87, RR 0.48, 95% CI 0.34 to 0.69, and RR 0.31, 95% CI 0.11 to 0.90, respectively, moderate-quality evidence). There were no clear differences between groups for other important outcomes including quality of life and other side effects.In a single trial with 30 women, those receiving ondansetron had no difference in duration of hospital admission compared to those receiving promethazine (MD 0.00, 95% CI -1.39 to 1.39, very low-quality evidence), although there was increased sedation with promethazine (RR 0.06, 95% CI 0.00 to 0.94, low-quality evidence) .Regarding corticosteroids, in a study with 110 participants there was no difference in days of hospital admission compared to placebo (MD -0.30, 95% CI -0.70 to 0.10; very low-quality evidence), but there was a decreased readmission rate (RR 0.69, 95% CI 0.50 to 0.94; four studies, 269 women). For other important outcomes including pregnancy complications, spontaneous abortion, stillbirth and congenital abnormalities, there was insufficient evidence to identify differences between groups (very low-quality evidence for all outcomes). In other single studies there were no clear differences between groups for preterm birth or side effects (very low-quality evidence).For hydrocortisone compared with metoclopramide, no data were available for primary outcomes and there was no difference in the readmission rate (RR 0.08, 95% CI 0.00 to 1.28;one study, 40 women).In a study with 80 women, compared to promethazine, those receiving prednisolone had increased nausea at 48 hours (RR 2.00, 95% CI 1.08 to 3.72; low-quality evidence), but not at 17 days (RR 0.81, 95% CI 0.58 to 1.15, very low-quality evidence). There was no clear difference in the number of episodes of emesis or subjective improvement in nausea/vomiting. There was insufficient evidence to identify differences between groups for stillbirth and neonatal death and preterm birth.

Authors' Conclusions	On the basis of this review, there is little high-quality and consistent evidence supporting any one intervention, which should be taken into account when making management decisions. There was also very limited reporting on the economic impact of hyperemesis gravidarum and the impact that interventions may have. The limitations in interpreting the results of the included studies highlights the importance of consistency in the definition of hyperemesis gravidarum, the use of validated outcome measures, and the need for larger placebo-controlled trials.

1.1.13. Matthews 2015 ☆

Matthews A, Haas DM, O'Mathúna DP, Dowswell T, Doyle M. Interventions for nausea and vomiting in early pregnancy. Cochrane Database Syst Rev. 2015. [160202]

Purpose	To assess the effectiveness and safety of all interventions for nausea, vomiting and retching in early pregnancy, up to 20 weeks' gestation.
Methods	We searched the Cochrane Pregnancy and Childbirth Group's Trials Register and the Cochrane ComplementaryMedicine Field's Trials Register (27 April 2013). Selection criteria : all randomised controlled trials of any intervention for nausea, vomiting and retching in early pregnancy. We excluded trials of interventions for hyperemesis gravidarum, which are covered by another Cochrane review. We also excluded quasi-randomised trials and trials using a cross-over design. Data collection and analysis : four review authors, in pairs, reviewed the eligibility of trials and independently evaluated the risk of bias and extracted the data for included trials.
Results	Thirty-seven trials involving 5049 women, met the inclusion criteria. These trials covered many interventions, including acupressure, acustimulation and acupuncture (**RCTs 11, 1859 patients**), ginger, chamomile, lemon oil, mint oil, vitamin B6 and several antiemetic drugs. We identified no studies of dietary or other lifestyle interventions. **Evidence regarding the effectiveness of P6 acupressure, auricular (ear) acupressure and acustimulation of the P6 point was limited**. Acupuncture (P6 or traditional) showed no significant benefit to women in pregnancy. The use of ginger products may be helpful to women, but the evidence of effectiveness was limited and not consistent, though two recent studies support ginger over placebo. There was only limited evidence from trials to support the use of pharmacological agents including vitamin B6, and anti-emetic drugs to relieve mild or moderate nausea and vomiting. There was little information on maternal and fetal adverse outcomes and on psychological, social or economic outcomes. We were unable to pool findings from studies for most outcomes due to heterogeneity in study participants, interventions, comparison groups, and outcomes measured or reported. Themethodological quality of the included studies was mixed.
Conclusion	Given the high prevalence of nausea and vomiting in early pregnancy, women and health professionals need clear guidance about effective and safe interventions, based on systematically reviewed evidence. **There is a lack of high-quality evidence to support any particular intervention.** This is not the same as saying that the interventions studied are ineffective, but that there is insufficient strong evidence for any one intervention. The difficulties in interpreting and pooling the results of the studies included in this review highlight the need for specific, consistent and clearly justified outcomes and approaches to measurement in research studies.

1.1.14. Festin 2014

Festin M. Nausea and vomiting in early pregnancy. BMJ Clin Evid. 2014. [151511].

Introduction	More than half of pregnant women suffer from nausea and vomiting, which typically begins by the fourth week and disappears by the 16th week of pregnancy. The cause of nausea and vomiting in pregnancy is unknown, but may be due to the rise in human chorionic gonadotrophin concentration. In 1 in 200 women, the condition progresses to hyperemesis gravidarum, which is characterised by prolonged and severe nausea and vomiting, dehydration, and weight loss.
Methods and outcomes	We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of treatment for nausea and vomiting in early pregnancy? What are the effects of treatments for hyperemesis gravidarum? We searched: Medline, Embase, The Cochrane Library, and other important databases up to September 2013 (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 32 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; corticosteroids; ginger; metoclopramide; ondansetron; prochlorperazine; promethazine; and pyridoxine (vitamin B6).

1.1.15. Matthews 2010 ø

Matthews A, Dowswell T, Haas DM, Doyle M. Interventions for nausea and vomiting in early pregnancy. Cochrane Database Syst Rev. 2010;9:CD007575. [183357].

Objectifs	Nausea, retching and vomiting are very commonly experienced by women in early pregnancy. There are considerable physical and psychological effects on women who experience these symptoms. This is an update of a review of interventions for nausea and vomiting in early pregnancy previously published in 2003. To assess the effectiveness and safety of all interventions for nausea, vomiting and retching in early pregnancy, up to 20 weeks' gestation.
Méthodes	SEARCH STRATEGY: We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (28 May 2010). SELECTION CRITERIA: All randomised controlled trials of any intervention for nausea, vomiting and retching in early pregnancy. We excluded trials of interventions for hyperemesis gravidarum which are covered by another review. We also excluded quasi-randomised trials and trials using a crossover design. DATA COLLECTION AND ANALYSIS: Four review authors, in pairs, reviewed the eligibility of trials and independently evaluated the risk of bias and extracted the data for included trials.

Résultats	**Twenty-seven trials, with 4041 women**, met the inclusion criteria. These trials covered many interventions, including acupressure, acustimulation, acupuncture, ginger, vitamin B6 and several antiemetic drugs. We identified no studies of dietary or other lifestyle interventions. Evidence regarding the effectiveness of P6 acupressure, auricular (ear) acupressure and acustimulation of the P6 point was limited. **Acupuncture (P6 or traditional) showed no significant benefit to women in pregnancy**. The use of ginger products may be helpful to women, but the evidence of effectiveness was limited and not consistent. There was only limited evidence from trials to support the use of pharmacological agents including vitamin B6, and anti-emetic drugs to relieve mild or moderate nausea and vomiting. There was little information on maternal and fetal adverse outcomes and on psychological, social or economic outcomes. We were unable to pool findings from studies for most outcomes due to heterogeneity in study participants, interventions, comparison groups, and outcomes measured or reported. The methodological quality of the included studies was mixed.
Conclusions	Given the high prevalence of nausea and vomiting in early pregnancy, health professionals need to provide clear guidance to women, based on systematically reviewed evidence. There is a lack of high-quality evidence to support that advice. The difficulties in interpreting the results of the studies included in this review highlight the need for specific, consistent and clearly justified outcomes and approaches to measurement in research studies.

1.1.16. Jewell 2010 Ø

Jewell D, Young G. Interventions for nausea and vomiting in early pregnancy. Cochrane Database Syst Rev. 2010. [185641].

Objectifs	Nausea and vomiting are the most common symptoms experienced in early pregnancy, with nausea affecting between 70 and 85% of women. About half of pregnant women experience vomiting. To assess the effects of different methods of treating nausea and vomiting in early pregnancy.
Méthode	Search strategy: We searched the Cochrane Pregnancy and Childbirth Group trials register (December 2002) and the Cochrane Central Register of Controlled Trials (The Cochrane Library, Issue 4, 2002). Selection criteria: Randomised trials of any treatment for nausea and/or vomiting in early pregnancy. Data collection and analysis: Two reviewers assessed the trial quality and extracted the data independently.
Résultats	**Twenty-eight trials** met the inclusion criteria. For milder degrees of nausea and vomiting, 21 trials were included. These trials were of variable quality. Nausea treatments were: different antihistamine medications, vitamin B6 (pyridoxine), the combination tablet Debendox (Bendectin), **P6 acupressure** and ginger. For hyperemesis gravidarum, seven trials were identified testing treatments with oral ginger root extract, oral or injected corticosteroids or injected adrenocorticotropic hormone (ACTH), intravenous diazepam and acupuncture. Based on 12 trials, there was an overall reduction in nausea from anti-emetic medication (odds ratio 0.16, 95% confidence interval 0.08 to 0.33).
Conclusions	Anti-emetic medication appears to reduce the frequency of nausea in early pregnancy. There is some evidence of adverse effects, but there is very little information on effects on fetal outcomes from randomised controlled trials. Of newer treatments, pyridoxine (vitamin B6) appears to be more effective in reducing the severity of nausea. **The results from trials of P6 acupressure are equivocal**. No trials of treatments for hyperemesis gravidarum show any evidence of benefit. Evidence from observational studies suggests no evidence of teratogenicity from any of these treatments.

1.1.17. Festin 2009

Festin M. Nausea and vomiting in early pregnancy. Clin Evid (Online). 2009. [157038].

Introduction	More than half of pregnant women suffer from nausea and vomiting, which typically begins by the 4th week and disappears by the 16th week of pregnancy. The cause of nausea and vomiting in pregnancy is unknown, but may be due to the rise in human chorionic gonadotrophin concentration. In 1 in 200 women, the condition progresses to hyperemesis gravidarum, which is characterised by prolonged and severe nausea and vomiting, dehydration, and weight loss.
Methods and outcomes	We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of treatment for nausea and vomiting in early pregnancy? What are the effects of treatments for hyperemesis gravidarum? We searched: Medline, Embase, The Cochrane Library, and other important databases up to May 2008 (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 30 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; antihistamines; corticosteroids; corticotrophins; diazepam; dietary interventions other than ginger; domperidone; ginger; metoclopramide; ondansetron; phenothiazines; and pyridoxine (vitamin B6). [Likely to be beneficial: Acupressure for treating nausea and vomiting in early pregnancy ; Acupressure for treating hyperemesis gravidarum. Unknown effectiveness: Acupuncture for treating nausea and vomiting in early pregnancy ; Acupuncture for treating hyperemesis gravidarum].

1.1.18. Helmreich 2006 ☆☆

Helmreich RJ, Schiao SY, Dune LS. Meta-analysis of acustimulation effects on nausea and vomiting in pregnant women. Explore (NY).2006;2(5):412-21.[141417].

Purpose	We used meta-analysis ta examine the effects of acustimulation (AS) on the prevention of nausea and vomiting in pregnant women (NVP).
Methods	Meta-analysis of effects of acustimulations (ie, acupressure, acupuncture, and electrical stimulation [ETS]) on NVP was conducted. Fourteen trials, eight random controlled trials (RCTs), with one RCT having two treatrnent modalities with four groups, and six crossover controlled trials (N = 1655) published over the last 16 years were evaluated for quality according to the Quality of Reports of Meta-analysis of Randomized Controlled Trials (QUORUM) guidelines. Relative risks (RR) and 95% confidence intervals (CI) were calculated from the data provided by the investigators of the original trials.
Results	Before the treatment, 100% of the women (**13 trials, n = 1615 women**) were nauseated, but and 96.6% (1599/1655) reported vomiting. After the treatment, compared with the controls, AS (ail modalities combined) reduced the proportion of nausea (RR = 0.47, 95% CI: 0.35-0.62, P < .0001) and vomiting (RR = 0.59, 95% CI: 0.51-0.68, P < .0001). Acupressure methods applied by finger pressure or wristband reduced NVP. The ETS method was also effective in reducing NVP. However, the acupuncture method did not show effects on reducing NVP. There was a placebo effect when compared with controls in reducing nausea (three trials, RR = 0.63, 95% CI: 0.39-1.02, P =.0479) and vomiting (five trials, RR = 0.67, 95% CI: 0.50-0.91, P= .0084).

Conclusion	**This meta-analysis demonstrates that acupressure and ETS had greater impact than the acupuncture methods in the treatrnent of NVP**. However, the number of acupuncture trials. was limited for pregnant women, perhaps because it is impossible ta self-administer the acupuncture and thus inconvenient for women experiencing NVP as chronic symptoms.

1.1.19. Jewell 2003 ☆

Jewell D, Young G. Interventions for nausea and vomiting in early pregnancy. Cochrane Database Syst Rev. 2003;(4):CD000145.[141049]..

Purpose	To assess the effects of different methods of treating nausea and vomiting in early pregnancy.
Methods	We searched the Cochrane Pregnancy and Childbirth Group trials register (December 2002) and the Cochrane Central Register of Controlled Trials (The Cochrane Library, Issue 4, 2002). Selection Criteria : randomised trials of any treatment for nausea and/or vomiting in early pregnancy. Data collection and analysis : two reviewers assessed the trial quality and extracted the data independently.
Results	Twenty-eight trials met the inclusion criteria. For milder degrees of nausea and vomiting, 21 trials were included. These trials were of variable quality. Nausea treatments were: different antihistamine medications, vitamin B6 (pyridoxine), the combination tablet Debendox (Bendectin), P6 acupressure (**six trials, 1309 women**) and ginger. For hyperemesis gravidarum, seven trials were identified testing treatments with oral ginger root extract, oral or injected corticosteroids or injected adrenocorticotropic hormone (ACTH), intravenous diazepam and acupuncture. Based on 12 trials, there was an overall reduction in nausea from anti-emetic medication (odds ratio 0.16, 95% confidence interval 0.08 to 0.33).
Conclusion	Anti-emetic medication appears to reduce the frequency of nausea in early pregnancy. There is some evidence of adverse effects, but there is very little information on effects on fetal outcomes from randomised controlled trials. Of newer treatments, pyridoxine (vitamin B6) appears to be more effective in reducing the severity of nausea. **The results from trials of P6 acupressure are equivocal**. It has not been shown to be clearly more effective than sham or dummy acupressure.

1.1.20. Jewell 2001 Ø

Jewell D et al. Interventions for nausea and vomiting in early pregnancy (cochrane review). Cochrane Library Oxford. 2001. [101019].

Background	Nausea and vomiting are the most common symptoms experienced in early pregnancy, with nausea affecting between 70 and 85% of women. About half of pregnant women experience vomiting. Objectives: The objective of this review was to assess the effects of different methods of treating nausea and vomiting in early pregnancy.
Methods	Search strategy: We searched the Cochrane Pregnancy and Childbirth Group trials register and the Cochrane Controlled Trials Register. Date of last search: October 2001. Selection criteria: Randomised trials of any treatment for nausea and/or vomiting in early pregnancy. Data collection and analysis: Trial quality was assessed and data were extracted independently by two reviewers.

Main results	**Twenty-three trials were included**. These trials were of variable quality. Nausea treatments were different anti-histamine medications, vitamin B6 (pyridoxine), the combination tablet Debendox (Bendectin) and P6 acupressure. For hyperemesis gravidarum five trials were identified testing treatments with oral ginger root extract, oral corticosteroids or injected adrenocorticotropic hormone (ACTH) and intravenous diazepam. Based on 13 trials, there was an overall reduction in nausea from anti-emetic medication (odds ratio 0.17, 95% confidence interval 0.13 to 0.21).
Reviewers' conclusions	Anti-emetic medication appears to reduce the frequency of nausea in early pregnancy. There is some evidence of adverse effects, but there is very little information on effects on fetal outcomes from randomised controlled trials. Of newer treatments, pyridoxine (vitamin B6) appears to be more effective in reducing the severity of nausea. **The results from trials of P6 acupressure are equivocal**. No trials of treatments for hyperemesis gravidarum show any evidence of benefit. Evidence from observational studies suggests no evidence of teratogenicity from any of these treatments.

1.1.21. Aikins 1998 ☆

Aikins Murphy P. Alternative Therapies for Nausea and Vomiting of Pregnancy. Obstet Gynecol. 1998;91:149-55. (eng). [94779]

Objectives	To review available evidence about the effectiveness of alternative therapies for nausea and vomiting of pregnancy.
Methods	*Data Sources*: MEDLINE and 13 additional US and international data bases were searched in 1996-1997 for papers that described use of alternative medicine in the treatment of pregnancy and pregnancy complications, specifically those addressing nausea, vomiting, and hyperemesis. Bibliographies of retrieved papers were reviewed to identify additional sources. *Methods of Study Selection*: All relevant English language clinical research papers were reviewed. Randomized clinical trials addressing specifically the use of nonpharmaceutical and nondietary interventions were chosen for detailed review.
Results	**Ten randomized trials** studying the effects of acupressure, ginger, and pyridoxine on nausea and vomiting of pregnancy were reviewed. Evidence of beneficial effects was found for these three interventions, although the data on acupressure are equivocal. Insufficient evidence was found for the benefits of hypnosis. Other interventions have not been studied.
Conclusions	There is a dearth of research to support or to refute the efficacy of a number of common remedies for nausea and vomiting of pregnancy. The **best-studied alternative remedy is acupressure**, which may afford relief to many women; ginger and vitamin B, also may be beneficial

1.2. Special Acupuncture Techniques

1.2.1. Comparison of Acupuncture techniques

1.2.1.1. Liu 2025

Liu H, Liao C, Deng J, Yang Y, Yang Y, Guo X, Liu C, Tang C. Efficacy of acupoint-related therapies for nausea and vomiting in pregnancy: a Bayesian network meta-analysis. Front Med (Lausanne). 2025 Sep 30;12:1589950. https://doi.org/10.3389/fmed.2025.1589950

Objective	Bayesian network meta-analysis was used to compare the efficacy of different acupoint-related treatments for Nausea and Vomiting of Pregnancy (NVP).
Methods	PubMed, Embase, Cochrane Library, CNKI, Wan Fang, and VIP databases were systematically searched from the time of library construction to February 20, 2025, to include randomized controlled trials (RCTs) comparing acupoint-related treatments for the treatment of nausea and vomiting in pregnancy. Literature screening, data extraction and risk of bias assessment were performed independently by two investigators, Bayesian network Meta-analysis was performed by R4.4.1 software.
Result	A total of **38 studies containing 1,164 patients** were included, this Bayesian network meta-analysis assessed the efficacy of various treatments for NVP across multiple outcomes. Results indicated that Acupoint Application (AA), Acupressure, Auriculotherapy Acupoint Application (ATAA), Ginger Moxibustion Acupoint Application (GMAA), and Moxibustion Acupoint Application (Mox_AA) were significantly more effective than Press Needle (PN) in improving PUQE scores. Thunder Fire Moxibustion (TFM) ranked highest in efficacy (89.1%), followed by GMAA (74.2%) and Acupressure (70.3%). Regarding overall efficacy, AA was less effective than AA_WA (OR = 0.22) and Acupuncture (OR = 0.44), but more effective than usual care (UT) (OR = 3.76), with AA_WA ranking highest (84.7%). In terms of NVP quality of life, TCM_acupuncture showed the greatest benefit (MD = 30.43), significantly outperforming AA (MD = -42.54), Mox_AA, and UT. Overall, TCM_acupuncture emerged as the most effective treatment for both symptom relief and quality of life improvement, followed by Mox_AA and ATAA, while UT was the least effective across all measures.
Conclusion	Overall, the analyses showed that TFM may be the most effective in treating NVP, followed by GMAA and ear pressure therapy. Compared to PN, AA, auricular pressure therapy, ATAA and GMAA were more effective. AA was more effective than UT, but not as effective as AA_WA and acupuncture. In terms of quality-of-life improvement, TCM_acupuncture may be the most effective, followed by Mox_AA and ATAA, and UT was the least effective. Overall, acupuncture-based treatments, especially Thunder Fire Moxibustion and TCM acupuncture, performed better in the treatment of NVP.

1.2.2. Acupressure

1.2.2.1. Gong 2024

Gong J, Gu D, Wang H, Zhang F, Shen W, Yan H, Xie J. Effect of acupressure in nausea and vomiting treatment during pregnancy: A meta-analysis. Explore (NY). 2024 Jan-Feb;20(1):17-26. https://doi.org/10.1016/j.explore.2023.06.015

Background and objective	Many women experience nausea and vomiting in early pregnancy. Regardless of the disease severity, it affects the work and life of pregnant women. However, drug treatment may potentially impact the foetus; thus, alternative safe and effective measures are essential. We aimed to evaluate the effect of acupressure, a non-drug treatment for nausea and vomiting, during pregnancy.
Methods	PubMed, EMBASE, Cochrane, Web of Science, CNKI, CBM, VIP, and Wanfang databases were searched using 'pregnancy', 'nausea', 'vomiting', and 'acupressure' as keywords. The search period was from database inception to 30 November 2022. Two researchers independently screened articles, extracted data, and used RevMan 5.4 software for statistical analysis.

Results	We included **33 trials and 3 390 patients** in this meta-analysis. Acupressure was effective for women with nausea and vomiting during pregnancy (odds ratio (OR)= 4.81, 95% confidence interval (CI) [3.47, 6.68]; p<0.0001); it significantly reduced the nausea score of the Rhodes index (mean square deviation (MD): -3.21, 95% CI [-4.85, -1.57], Z = 3.83, p = 0.0001), modified Pregnancy Unique Quantification of Emesis and Nausea score (MD: -2.18, 95% CI [-3.21, -1.15], Z = 4.15, p<0.0001), and hospital stay (OR=-3.27, 95% CI [-6.18, -0.36]; p = 0.03) and improved quality of life (MD: -14.06,95% CI [- 17.31, -10.18], Z = 8.48, p<0.00001). However, no significant difference was observed in nursing satisfaction and anxiety scores (OR=4.13, 95% CI [0.89, 19.15]; p = 0.07) (MD: -13.26,95% CI [-32.04,5.53], Z = 1.38, p = 0.17).
Conclusions	This meta-analysis provides evidence of a non-drug intervention for women with nausea and vomiting during pregnancy; acupressure effectively reduces nausea and vomiting during pregnancy.

1.2.3. Pharmaco-acupuncture

1.2.3.1. Lin 2019

Lin Xiaoyang, Shen Qiuxian , Zhuang Lixing. [Clinical Efficacy of Acupoint Injection in Treating Hyperemesis Gravidarum : A Meta - Analysis]. Journal of Clinical Acupuncture and Moxibustion. 2019;35(8):62. [203011].

Objective	To evaluate the clinical efficacy of adupoint injection in treating hyperemesis gravidarum.
Methods	By computer retrieval, literatures of randomized controlled trials about adupoint injection in treating hyperemesis gravidarum were collected from Pubmed, Embase, China Biology Medicine disc (CBMdisc), China National Knowledge Infrastructure (CNKI) , WangFang and VIP databases. After data extraction and quality evaluation by using Cochrane Review Handbook 5. 1 , the eligible clinical trials underwent meta - analysis by using RevMen5. 3 software.
Results	A total of 10 articles met the inclusion criteria, including 834 patients with 417 cases in the treatment group and 417 cases in the control group. The meta - analysis showed that the cure rate, the effective rate and the ameliorative situation of urine ketone of acupoint injection were better than those of intravenous infusion in the treatment of hyperemesis gravidarum. In terms of the cure rate, OR =4. 18,95% CI(3. 02, 5.78), P <0.00001. In terms of the effective rate, OR= 4.95 ,95% CI(2. 66, 9.23), P <0.000 01. Moreover, with the Egger's test, the publication bias were analyzed. The cure rate was chose to analyze the efficiency of the meta - analysis.
Conclusion	Compared to single intravenous infusion, acupoint injection and acupoint injection plus intravenous infusion can produce a better clinical efficacy with less adverse reactions.

2. Overviews of systematic reviews

2.1. Cui 2026

Cui J, Ai Z, Shen W, Han M. Acupuncture for nausea and vomiting during pregnancy: an overview of systematic reviews. Front Endocrinol (Lausanne). 2026;17:1886667. https://doi.org/10.3389/fendo.2026.1886667

Background	Nausea and vomiting during pregnancy (NVP) are common symptoms in early pregnancy. NVP can further affect the physical and mental health of pregnant women. Acupuncture has shown potential clinical value in treating NVP and can be considered a beneficial supplemental therapy for NVP. However, existing systematic reviews (SRs) and meta-analyses (MAs) on the efficacy and safety of acupuncture for NVP have yielded inconsistent conclusions, and their methodological and reporting quality has not yet been systematically and comprehensively evaluated.
Objective	To synthesize the existing evidence on the efficacy and safety of acupuncture for the treatment of NVP and to assess the quality and risk of bias of the available SRs/MAs.
Methods	Two researchers independently searched nine databases for relevant literature, screened studies according to predefined inclusion and exclusion criteria, and extracted data from the eligible SRs and MAs. The methodological quality, reporting completeness, risk of bias, and strength of evidence were rigorously evaluated using AMSTAR 2, PRISMA-A, ROBIS, and GRADE, respectively. In addition, the GROOVE tool was used to assess the degree of overlap among the original studies by calculating the corrected covered area (CCA).
Results	We retrieved a total of 288 studies, and 9 SRs/MAs were ultimately included in this review. The methodological quality of one study was moderate, while two studies were rated as low and the remaining six as critically low. According to the PRISMA-A statement, the reporting items of the included SRs/MAs were relatively complete. Furthermore, it revealed a slight overlap among the original studies, with a CCA of 3.64%. The results based on GRADE showed that of the 52 outcomes, 2 were rated as moderate quality, 20 as low quality, and 30 as very low quality. Descriptive analysis showed that acupuncture combined with medication could reduce the frequency of nausea and vomiting, accelerate the ketonuria-negative rates, and maintain serum electrolyte balance. Acupuncture also appeared to reduce the frequency of nausea and vomiting compared with medication alone.
Conclusions	Acupuncture appears to relieve the symptoms of NVP to a certain extent. However, the current evidence is limited by low reliability, methodological flaws, publication bias, and inaccurate data. Therefore, the true efficacy remains unclear. Although acupuncture shows preliminary clinical potential, high-quality randomized controlled trials with standardized outcome indicators are still needed to draw definite conclusions.

2.2. Xie 2026

Xie YX, Sun YN, Yu CH. Non-pharmaceutical Chinese Medical Therapies for Nausea and Vomiting of Pregnancy: An Umbrella Review of Systematic Reviews and Meta-analyses of Randomized Controlled Trials. Chin J Integr Med. 2026. https://doi.org/10.1007/s11655-026-4243-4

Background	Nausea and vomiting of pregnancy (NVP) are common symptoms during early pregnancy that significantly impact maternal quality of life and fetal development. Given concerns about the safety of pharmacological treatments, non-pharmaceutical Chinese medical therapies (NPCT) have been new topics of great interest due to their minimal side effects.
Objective	To evaluate the efficacy and safety of NPCT for the management of NVP through an umbrella review of systematic reviews and meta-analyses of randomized controlled trials.

Methods	Eligible data were retrieved from online databases up to August 31, 2024 for subsequent analyses. The quality of included reviews and the certainty of evidence were evaluated using the AMSTAR-2 tool and the GRADE criteria, respectively. Subgroup analyses were performed based on intervention types, treatment methods, and control conditions to explore potential sources of heterogeneity. Primary outcomes included the severity of NVP, treatment effectiveness, and safety.
Results	This study included a total of **22 systematic reviews or meta-analyses** on various NPCT interventions. The AMSTAR-2 assessment rated 6 studies as high quality, 2 as moderate, and 14 as low or very low quality. The GRADE evaluation categorized evidence as moderate for 5 comparisons, low for 15, and very low for 5 out of the 25 outcome measures. Further analyses revealed the superior effects of acupuncture in decreasing the Pregnancy-Unique Quantification of Emesis score (MD, −1.32; 95% CI, −1.69 to −0.95; moderate evidence), increasing the rate of negative urinary ketone bodies (RR, 1.32; 95% CI, 1.14 to 1.53; moderate evidence); as well as reducing anxiety (MD, 0.78; 95% CI, −1.13 to 2.6; moderate evidence) and depression scores (MD, 0.20; 95% CI, −2.05 to 2.46; moderate evidence).
Conclusion	NPCT, particularly **acupuncture**, may have potential benefits in alleviating NVP. However, due to limited overall quality and certainty of evidence, studies with more rigorous designs and larger sample sizes should be included to produce higher-quality evidence, thereby better informing clinical practice. (PROSPERO registration No. CRD42024590714)

2.3. Choi 2025

Choi SJ, Choi S, Kim DI. Acupuncture and Herbal Medicine for Nausea and Vomiting in Pregnancy: An Overview and Quality Assessment of Systematic Reviews. Int J Womens Health. 2025 May 11;17:1343-1361. https://doi.org/10.2147/IJWH.S512247

Backgound	Up to 85% of pregnant women experience nausea and vomiting in pregnancy (NVP), which can impact both the pregnant woman and developing fetus. Traditional East Asian Medicine (TEAM) including acupuncture and herbal medicine has been used to treat NVP; however, its effectiveness remains under debate. This study aimed to systematically review the existing evidence from systematic reviews on the effectiveness of TEAM for NVP and to critically evaluate the quality of these reviews.
Methods	Nine databases were searched from their inception until January 2024. Search terms included, “Hyperemesis gravidarum”, “Nausea”, “Vomiting”, “acupuncture” and “herbal medicine”. Systematic reviews (SRs) that evaluated the effect of TEAM treatment for NVP were included. We evaluated methodological quality, reporting quality, and risk of bias using the AMSTAR-2, ROBIS tool, and PRISMA guidelines.
Results	In total, 20,121 publications were retrieved from the databases. **Twenty-five SRs met the inclusion criteria**, indicating that acupuncture and related techniques, and herbal medicines are effective in alleviating NVP. Various methods including traditional acupuncture, acupressure, acupoint injection, electroacupuncture, herbal acupoint patching, and herbal decoctions were used. Herbs like ginger and additional aromatherapies such as lemon and cardamom have also shown beneficial effects. However, there are controversies regarding the consistency of results and the quality of methodologies. Despite low risk of bias across reviews, all were deemed low or critically low in methodological quality, with none fully adhering to PRISMA guidelines.
Conclusion	This comprehensive review underscores the potential of TEAM in managing NVP but highlights significant gaps in research quality and reporting. Future studies of higher methodological quality are essential to validate these findings and guide clinical practice.

3. Clinical Practice Guidelines

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

3.1. Collège national des gynécologues et obstétriciens français (CNGOF, France) 2022 ⊕

Deruelle P, Sentilhes L, Ghesquière L, Desbrière R, Ducarme G, Attali L, Jarnoux A, Artzner F, Tranchant A, Schmitz T, Sénat MV. Consensus formalisé d'experts du Collège national des gynécologues et obstétriciens français : prise en charge des nausées et vomissements gravidiques et de l'hyperémèse gravidique [Expert consensus from the College of French Gynecologists and Obstetricians: Management of nausea and vomiting of pregnancy and hyperemesis gravidarum]. Gynecol Obstet Fertil Senol. 2022 Sep 21:S2468-7189(22)00261-6. https://doi.org/10.1016/j.gofs.2022.09.002

Proposition 2.6 – Il est proposé de réserver l'acupression, l'acupuncture et l'électrostimulation aux femmes ayant un score PUQE ≤ 6, si elles devaient être utilisé en sachant que l'amélioration des symptômes après leur prescription n'est pas démontrée.

3.2. National Institute for Health and Care Excellence (NICE) 2021 ⊕

NICE guideline NG201 : Antenatal care [R] Management of nausea and vomiting in pregnancy. National Institute for Health and Care Excellence (NICE). 2021. [211646]. Recommendations: doi. Argument: doi

Recommendations. For pregnant women with moderate-to-severe nausea and vomiting: consider intravenous fluids, ideally on an outpatient basis, consider **acupressure** as an adjunct treatment. *Argument*: The committee recommended that **acupressure** should be considered as an adjunct treatment of moderate to severe nausea and vomiting in pregnant women because there was evidence that acupressure in addition to standard care is effective in aiding symptomatic relief during pregnancy, compared to placebo.

3.3. World Health Organization (WHO) 2021 ⊕

WHO Guideline on Self-Care Interventions for Health and Well-Being. Geneva: World Health Organization. 2021.186P. [219406]. doi

Recommendation 3. Interventions for nausea and vomiting Ginger, chamomile, vitamin B6 and/or **acupuncture** are recommended for the relief of nausea in early pregnancy, based on a woman's preferences and available options.

3.4. Aetna (insurance provider, USA) 2018 ⊕

Acupuncture. Aetna (insurance provider, USA). 2018. 73P. [188029].

Aetna considers needle acupuncture (manual or electroacupuncture) medically necessary for any of the following indications:**Nausea of pregnancy**

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. Royal College of Obstetricians and Gynaecologists 2016 (RCOG, UK) 2016 ⊕

Royal College of Obstetricians and Gynaecologists. The Management of Nausea and Vomiting of Pregnancy and Hyperemesis Gravidarum. RCOG Green-top Guideline No. 69. 2016;:27p. [100755].

Acustimulations – acupressure and acupuncture. Women may be reassured that acustimulations are safe in pregnancy. Acupressure may improve NVP [B, evidence level 1+].

3.7. Société des Obstétriciens et Gynécologues du Canada (SOGC, Canada) 2016 ⊕

Campbell, K., H. Rowe, H. Azzam et C.A. Lane. Prise en charge des nausées et vomissements de la grossesse . Journal of Obstetrics and Gynaecology (Canada). 2016; 38(12): 1138-11. [190415].

4.L'acupression peut atténuer les NVG chez certaines femmes. (I-B)

3.8. World Health Organization (WHO) 2016 ⊕

WHO recommendations on antenatal care for a positive pregnancy experience. World Health Organization. 2016:172P. [196767].

Recommendation D.1: Ginger, chamomile, vitamin B6 and/or acupuncture are recommended for the relief of nausea in early pregnancy, based on a woman’s preferences and available options. (Recommended)

3.9. South Australia Health 2016 (SAH, Australia) ⊕

SA Health. South Australian Perinatal Practice Guidelines Hyperemesis in Pregnancy Department of Health, Government of South Australia. 2011. [100841].

Treatment option : acupuncture.

3.10. Haute Autorité de Santé (HAS, France) 2005 ⊕

Comment mieux informer les femmes enceintes ? Recommandations pour les professionnels de santé (recommandation) Haute Autorité de Santé. 2005. Argumentaire ; Recommandation.

Si une femme demande ou envisage un traitement, les mesures suivantes peuvent s'avérer efficaces et réduire les symptômes : méthodes naturelles : gingembre en gélule ; stimulation du point d'acupuncture P6 ou point de Neiguan (point situé à la face interne de l'avant-bras, trois doigts au-dessus du poignet) (grade A)

3.11. Société des Obstétriciens et Gynécologues du Canada (SOGC, Canada) 2002 ⊕

ArsenaulT MY, Lane CA. Prise en charge des nausées et vomissements durant la grossesse. J Obstet Gynaecol Can. 2002;24(10):824-31. [141048].

Certains traitements de médecine douce tels que les suppléments de gingembre, l'acupuncture et l'acupression peuvent avoir des effets favorables. (I-A)

4. Randomized controlled trials

4.1. Sources

Systematic reviews and guidelines for a listing of randomized control trials included:

1. **Acudoc2**: RCT included in the GERA Database and not cited in other sources.
2. **Hu 2024**:Hu Y, Yang Q, Hu X. The efficacy and safety of acupuncture and moxibustion for the management of nausea and vomiting in pregnant women: A systematic review and meta-analysis. Heliyon. 2024 Jan 11;10(2):e24439. https://doi.org/10.1016/j.heliyon.2024.e24439 (n=21)
3. **Jin 2024**:Jin B, Han Y, Jiang Y, Zhang J, Shen W, Zhang Y. Acupuncture for nausea and vomiting during pregnancy: A systematic review and meta-analysis. Complement Ther Med. 2024 Oct;85:103079. https://doi.org/10.1016/j.ctim.2024.103079 (n=24)
4. **Tan 2023**: Tan MY, Shu SH, Liu RL, Zhao Q. The efficacy and safety of complementary and alternative medicine in the treatment of nausea and vomiting during pregnancy: A systematic review and meta-analysis. Front Public Health. 2023 Mar 9;11:1108756. https://doi.org/10.3389/fpubh.2023.1108756 (n=33)
5. **Gong 2021**: Gong J, Gu D, Wang H, Zhang F, Shen W, Yan H, Xie J. Effect of acupressure in nausea and vomiting treatment during pregnancy: A meta-analysis. Explore (NY). 2024 Jan-Feb;20(1):17-26. https://doi.org/10.1016/j.explore.2023.06.015
6. **Lu 2021**: Lu H, Zheng C, Zhong Y, Cheng L, Zhou Y. Effectiveness of Acupuncture in the Treatment of Hyperemesis Gravidarum: A Systematic Review and Meta-Analysis. Evid Based Complement Alternat Med. 2021. [220826]. https://doi.org/10.1155/2021/2731446
7. **Matthews 2015**: Matthews A, Haas DM, O'Mathúna DP, Dowswell T. Interventions for nausea and vomiting in early pregnancy. Cochrane Database Syst Rev. 2015 Sep 8;2015(9):CD007575. https://doi.org/10.1002/14651858.cd007575.pub4

4.2. List

	RCT		control	**Sources**
2024	Wang Q, Zhu J. [Clinical study on the treatment of hyperemesis gravidarum by acupuncture based on the theory of regulating the spirit]. Inner Mongolia J Tradit Chin Med. 2024;43(2):102–104. https://doi.org/10.16040/j.cnki.cn15-1101.2024.02.066.			Jin 2024,

	RCT		control	Sources
2023	Lai YQ, Guo QY, Xue D, et al. [Clinical study of acupuncture in the treatment of hyperemesis gravidarum]. Yunnan J Tradit Chin Med Mat Med. 2023;44(2):70–72. https://doi.org/10.16254/j.cnki.53-1120/r.2023.02.023.			Jin 2024,
	Wu XK, Gao JS, Ma HL, Wang Y, Zhang B, Liu ZL, Li J, Cong J, Qin HC, Yang XM, Wu Q, Chen XY, Lu ZL, Feng YH, Qi X, Wang YX, Yu L, Cui YM, An CM, Zhou LL, Hu YH, Li L, Cao YJ, Yan Y, Liu L, Liu YX, Liu ZS, Painter RC, Ng EHY, Liu JP, Mol BWJ, Wang CC. Acupuncture and Doxylamine-Pyridoxine for Nausea and Vomiting in Pregnancy : A Randomized, Controlled, 2 × 2 Factorial Trial. Ann Intern Med. 2023 Jul;176(7):922-933. https://doi.org/10.7326/m22-2974	électroacupuncture	sham doxylamine–pyridoxine	Hu 2024, Jin 2024,
2022	Deng L. [Clinical effect of screw acupuncture therapy for spleen-stomach weakened pregnancy obstruction]. China Mod Med. 2022;29(4):134–137.			Jin 2024,
	Liu L, Hao XY, Cheng YL, et al. [The clinical observation of 212 patients with pregnancy nausea and vomiting treated by acupuncture and medicine]. World J Integr Tradit West Med. 2022;17(2):331–335. https://doi.org/10.13935/j.cnki.sjzx.220225.		sham	Jin 2024,
	Mohd Nafiah NA, Chieng WK, Zainuddin AA, Chew KT, Kalok A, Abu MA, Ng BK, Mohamed Ismail NA, Nur Azurah AG. Effect of Acupressure at P6 on Nausea and Vomiting in Women with Hyperemesis Gravidarum: A Randomized Controlled Trial. Int J Environ Res Public Health. 2022 Sep 1;19(17):10886. https://doi.org/10.3390/ijerph191710886	acupression 6MC	metoclopramide	Tang 2023
	Zhang CH. [Application of wrist and ankle acupuncture in hyperemesis gravidarum]. Elecrron J Pr Gynecol Endocrinol. 2022;9(29):35–37. https://doi.org/10.3969/j.issn.2095-8803.2022.29.011.			Jin 2024,
2021	Chen Y, Hu S, Ning Y, Liao J, Yu D. [The effect of huolong moxibustion for treatment of hyperemesis gravidarum with spleen and stomach weakness]. Chin Acupunct Moxibustion. 2021;41(4):449–450.			Hu 2024,
	Lyu J, Wang R, Wang Q. [Efficacy of needling eight confluence points combined with press-needle embedding in treating pernicious vomiting due to deficiency of spleen and stomach and its influence to the scores of SAS and SDS]. Journal of Clinical Acupuncture and Moxibustion. 2021;37(2):32–35.			Hu 2024,
	Zhao YT. [Observation of the effect of press-acupuncture therapy on the patients with pregnancy obstruction due to spleen and stomach weakness]. Heilongjiang Univ Chin Med. 2021.			Jin 2024,
2020	Ma WJ, Cui SY, Ning Y, et al. [Observation on the therapeutic effect of lingnan flying needling combined with symptomatic supportive therapy in the treatment of hyperemesis gravidarum]. Guangming J Chin Med. 2020;35(2):228–230. https://doi.org/10.3969/j.issn.1003-8914.2020.02.032.			Jin 2024, Lu 2021
	Negarandeh R, Eghbali M, Janani L, Dastaran F, Saatchi K. Auriculotherapy as a means of managing nausea and vomiting in pregnancy: a double-blind randomized controlled clinical trial. Complement Ther Clin Pract. 2020;40:101177.	acupuncture auriculaire	sham	
	Tara F, Bahrami-Taghanaki H, Amini Ghalandarabad M, Zand-Kargar Z, Azizi H, Esmaily H, Azizi H. The Effect of Acupressure on the Severity of Nausea, Vomiting, and Retching in Pregnant Women: A Randomized Controlled Trial. Complement Med Res. 2020;27(4):252-259. https://doi.org/10.1159/000505637	acupression 6MC	sham vit B6 + metaclopramide	Tang 2023
	Yan GH. [The clinical observation on the therapeutic effect of wrist-ankle acupuncture on hyperemesis gravidarum]. Fujian University of Traditional Chinese Medicine. 2020.			Hu 2024, Jin 2024,
	Zhu YR, Fang SF. [Effect of percutaneous electrical stimulation at Neiguan acupoint on hyperemesis gravidarum]. China Modern Doctor. 2020;58:59–61.	électroacupuncture 6MC	injection placebo	Tang 2023
2019	Yang R. Analysis of the efficacy and safety of acupuncture in the auxiliary treatment of hyperemesis gravidarum. Health Horizon. 2019;7:92.			Lu 2021
2018	Huang Shi-wei. [Therapeutic Observation of the Treatment of Hyperemesis Gravidarum Majorly with Intradermal Needle plus Acupressure]. Shanghai Journal of Acupuncture and Moxibustion. 2018;37(1):51-55. [100905].	Acupuncture intradermique		
	Qiu Y 25	Acupression 6MC + 5TR		Gong 2021
	Yu Xiao-Lei, Liu Jing, Mao Qun-Yan. [Therapeutic Observation of Acupoint injection at Different Groups of Acupoints for Hyperemesis Gravidarum]. Shanghai Journal of Acupuncture and Moxibustion. 2018;37(8):887. [189731].	Injection au point d'acupuncture		Acudoc2
	Zhang Wan-Yu, Ding Ying, Jin Yong, Cal Shao-Ren. [Clinical Observation of Acupuncture at the Eight Confluent Points plus Acupoint Sticking for Hyperemesis Gravidarum]. Shanghai Journal of Acupuncture and Moxibustion. 2018;37(8):891. [189499].			Lu 2021
2017	Adlan AS, Chooi KY, Mat Adenan NA. Acupressure as adjuvant treatment for the inpatient management of nausea and vomiting in early pregnancy: a double-blind randomized controlled trial. J Obstet Gynaecol Res. 2017;43:662–8	acupression 6MC	sham	Tang 2023
	Shang G, Liu J, Qi B, Liu J, Li H. [Effect observation of modified sini san combined with acupuncture for pregnant vomiting patients with the pattern of liver-stomach disharmony]. Information on Traditional Chinese Medicine. 2017;34(4):113–115.			Hu 2024,
	Zhong Q. Clinical observation of acupuncture and moxibustion in the treatment of hyperemesis gravidarum. Inner Mongolia Journal of Traditional Chinese Medicine. 2017;36(14):120–1.			Lu 2021

	RCT		control	Sources
2015	Chong Zeng	acupression 36E + 6MC		Gong 2021
	Jin Cao	acupression 12VC+6MC+4Rte		Gong 2021
	Shao G	acupression auriculaire		Gong 2021
	Xu Y, Huang WZ, Li QW, et al. Clinical observation of acupuncture combined with moxibustion in the treatment of hyperemesis gravidarum with spleen and stomach weakness syndrome type. Journal of Frontiers of Medicine. 2015;5(10):341–2.			Lu 2021
	Xueying Wu	acupression 6MC +36E		Gong 2021
	Yazhen Zeng	acupression 20V +21V		Gong 2021
	Zhaoqian Zhu	acupression 36E + 6MC		Gong 2021
2014	Jin LH, Hu DX. Clinical observation on filiform needling combined with symptomatic and supportive therapy for 20 cases of intractable hyperemesis gravidarum. J Tradit Chin Med. 2014;55(11):939–941. https://doi.org/10.13288/j.11-2166/r.2014.11.011.			Hu 2024, Jin 2024, Lu 2021
	Saberi F, Sadat Z, Abedzadeh-Kalahroudi M, Taebi M. Effect of ginger on relieving nausea and vomiting in pregnancy: a randomized, placebo-controlled trial. Nurs Midwifery Stud. 2014 Apr;3(1):e11841. doi: 10.17795/nmsjournal11841. Epub 2014 Apr 17. https://doi.org/10.17795/nmsjournal11841	acupression 6MC	gingembre	Matthews 2015
2013	Agham	acupression 6MC	sham	Gong 2021
	Jin Ruifen	acupression 36E + 6MC		Gong 2021
	Ma JZ, Meng LP. [Observations on the therapeutic effect of applying the method of matching acupoints to treat 30 cases of hyperemesis gravidarum]. J Sichuan Tradit Chin Med. 2013;31(11):134–135.			Hu 2024, Jin 2024, Lu 2021
	Sabeiri			Gong 2021
	Xie H. [Therapeutic observation on acupuncture for hyperemesis gravidarum]. Shanghai Journal of Acupuncture and Moxibustion. 2013;32(9):734–735.			Hu 2024, Tang 2023
	Ye Chunmei	Acupression shenmen auriculaire		Gong 2021
	Zhang X. [Therapeutic effect of acupuncture combined with psychological counseling in treating 31 cases of hyperemesis gravidarum]. Hunan J Tradit Chin Med. 2013;29(6):74–75. https://doi.org/10.16808/j.cnki.issn1003-7705.2013.06.040.			Jin 2024, Lu 2021
2012	Lu X. [The effect of citicoline combined with moxibustion in the treatment of hyperemesis gravidarum]. Zhejiang JITCWM. 2012;22(10):806–807.			Hu 2024,
	Naeimi Rad M, Lamyian M, Heshmat R, Jaafarabadi MA, Yazdani S. A randomized clinical trial of the efficacy of KID21 point (Youmen) acupressure on nausea and vomiting of pregnancy. Iran Red Crescent Med J. 2012;14:697–701.	acupression 21Rn	sham	Tang 2023, Gong 2021
	Yan L, Liu RR, Ji FS, et al. [Observations on the efficacy of acupuncture therapy in the treatment of hyperemesis gravidarum]. Mod J Integr Tradit Chin West Med. 2012;21(29):3246–3304.			Jin 2024, Lu 2021
	Zhou Y. [Gastric Tocolysis Soup Combined with Acupuncture Therapy Hyperemesis Gravidarum Incoordination between the Liver and Stomach Syndrome Clinical Observation] [Master's Degree]. Hunan University of Chinese Medicine; 2012.			Hu 2024,
2010	Khavandizadeh AS, Mahfouzi B. Evaluation of the effects of acupressure by sea band on nausea and vomiting in pregnancy. Iranian Journal of Obstetrics, Gynecology and Infertility. 2010;13(2):39-44.	acupression 6MC	sham	Matthews 2015
	Liang SD, Huang Y. [Observation on the efficacy of plum blossom needle in treating 24 cases of severe vomiting in pregnancy by percussing the frontal and temporal regions through the meridians]. Chin Fore Med Res. 2010;8(8):90–91.			Jin 2024,
	Sinha A, Paech MJ, Thew ME, Rhodes M, Luscombe K, Nathan E, et al. A randomised, double-blinded, placebo-controlled study of acupressure wristbands for the prevention of nausea and vomiting during labour and delivery. Int J Obstet Anesth. 2011;20:110–7.			Tang 2023
2009	Mao ZN, Liang CE. [Observation on therapeutic effect of acupuncture on hyperemesis gravidarum]. Chinese Acupuncture and Moxibustion. 2009;29(12):973–6. [154621]. Zhong Nan, Mao, and Chuta E, Liang. Observation on the therapeutic effects of acupuncture on hyperemesis gravidarum. International Journal of Clinical Acupuncture. 2010;2:60–65. [162879].			Hu 2024, Jin 2024, Lu 2021

	RCT		control	Sources
	Xu Y. [The effect of moxibustion for treatment of hyperemesis gravidarum]. Today Nurse. 2009;(9):66–67.			Hu 2024,
	Zhang H, Gu L. [Clinical observation on therapeutic effect of acupuncture and moxibustion and acupoint injection on hyperemesis gravidarum to search for a more effective method for treatment of hyperemesis gravidarum]. China Practical Medical. 2009;4(5):46–48.			Hu 2024,
2008	Can Gürkan O, Arslan H. Effect of acupressure on nausea and vomiting during pregnancy. Complement Ther Clin Pract. 2008 Feb;14(1):46-52. https://doi.org/10.1016/j.ctcp.2007.07.002			Acudoc2
	Chen J, Ning WX. Transcutaneous electro acupuncture stimulation in treatment of 18 cases of hyperemesis gravidarum. Chin J Tradit Med Sci Technol. 2008;15:231–2.			Tang 2023
	Puangsricharern A, Mahasukhon S. Effectiveness of auricular acupressure in the treatment of nausea and vomiting in early pregnancy. J Med Assoc Thai. 2008;91(11):1633-8. https://thaiscience.info/Journals/Article/JMAT/10402675.pdf	acupression auriculaire		Tang 2023, Gong 2021
	Su QL, Wang HY, Zhao WJ. [Clinical observation on the treatment of 18 cases of hyperemesis gravidarum by combining acupressure of head and face with acupuncture of Neiguan]. Jiangsu J Tradit Chin Med. 2008;40(4):55–56.			Jin 2024,
	Sun JH. Observation on therapeutic effect of acupoint injection on hyperemesis gravidarum. Chin J Misdiag. (2009) 9:2846–7.			Tang 2023
	Wang RY. [Clinical observation on the treatment of hyperemesis gravidarum by acupuncture with acupoint method]. Shanxi Med J. 2008;37(2):135–136.			Hu 2024, Jin 2024, Lu 2021
2007	Jamigorn M, Phupong V. Acupressure and vitamin B6 to relieve nausea and vomiting in pregnancy: a randomized study. Arch Gynecol Obstet. 2007 Sep;276(3):245-9. doi: 10.1007/s00404-007-0336-2. Epub 2007 Feb 21. https://doi.org/10.1007/s00404-007-0336-2	acupression 6MC	Vit B6	Tang 2023, Matthews 2015
	Liu S. [Clinical study on TCM and acupuncture combined treating hyperemesis gravidarum]. Journal of Liaoning University of TCM. 2007;(6):145–146.			Hu 2024,
	Wang MZ, Li XB, Huang LY, et al. [Effect of along-channel plum blossom percussion used in treating psychological problems caused by severe pregnant vomit]. Mod Nurs. 2007;13(31):2976–2977.			
2006	Heazell A, Thorneycroft J, Walton V, Etherington I. Acupressure for the in-patient treatment of nausea and vomiting in early pregnancy: a randomized control trial. Am J Obstet Gynecol. 2006 Mar;194(3):815-20. https://doi.org/10.1016/j.ajog.2005.08.04216522418.	acupression 6MC	sham	Tang 2023
	Shin HS, Song YA. [The effect of P6 acupressure for symptom control in pregnant women having hyperemesis gravidarum]. Taehan Kanho Hakhoe Chi. 2005 Jun;35(3):593-601. https://doi.org/10.4040/jkan.2005.35.3.593 Shin HS, Song YA, Seo S. Effect of Nei-Guan point (P6) acupressure on ketonuria levels, nausea and vomiting in women with hyperemesis gravidarum. J Adv Nurs. 2007 Sep;59(5):510-9.https://doi.org/10.1111/j.1365-2648.2007.04342.x	acupression 6MC	sham	Acudoc2
	Xie HY. Clinical Effects of the Combination of Acupuncture and Medicine on the Ketone Bodies in Hyperemesis Gravidarum. Nanjing University of Chinese Medicine,; 2007.			Jin 2024, Lu 2021
2005	Neri I, Allais G, Schiapparelli P, Blasi I, Benedetto C, Facchinetti F. Acupuncture versus pharmacological approach to reduce Hyperemesis gravidarum discomfort. Minerva Ginecol. 2005 Aug;57(4):471-5. PMID: 16170293.			Acudoc2
	Zhang HH. [Observation on therapeutic effect of acupuncture and moxibustion on hyperemesis gravidarum]. Chinese Acupuncture and Moxibustion. 2005;25(7):469–70. [120476].			Hu 2024, Lu 2021
2004	Habek D, Barbir A, Habek JC, Janculiak D, Bobić-Vuković M. Success of acupuncture and acupressure of the Pc 6 acupoint in the treatment of hyperemesis gravidarum. Forsch Komplementarmed Klass Naturheilkd. 2004 Feb;11(1):20-3. https://doi.org/10.1159/000077192	acupuncture 6MC acupression 6MC	sham	Hu 2024, Jin 2024, Tang 2023, Lu 2021
2003	Rosen T, de Veciana M, Miller HS, Stewart L, Rebarber A, Slotnick RN. A randomized controlled trial of nerve stimulation for relief of nausea and vomiting in pregnancy. Obstet Gynecol. 2003 Jul;102(1):129-35. https://doi.org/10.1016/s0029-7844(03)00375-2	électrostimulation 6MC	sham	Matthews 2015
2002	Smith C, Crowther C, Beilby J. Acupuncture to treat nausea and vomiting in early pregnancy: a randomized controlled trial. Birth. 2002 Mar;29(1):1-9. https://doi.org/10.1046/j.1523-536x.2002.00149.x	acupuncture acupression 6MC	sham	Hu 2024, Jin 2024, Tang 2023, Matthews 2015
2001	Knight B, Mudge C, Openshaw S, White A, Hart A. Effect of acupuncture on nausea of pregnancy: a randomized, controlled trial. Obstet Gynecol. 2001 Feb;97(2):184-8. doi: 10.1016/s0029-7844(00)01152-2. https://doi.org/10.1016/s0029-7844(00)01152-2	acupuncture	sham	Hu 2024, Jin 2024, Tang 2023, Matthews 2015

	RCT		control	Sources
	Norheim AJ, Pedersen EJ, Fønnebø V, Berge L. Acupressure treatment of morning sickness in pregnancy. A randomised, double-blind, placebo-controlled study. Scand J Prim Health Care. 2001 Mar;19(1):43-7. https://doi.org/10.1080/028134301300034666	acupression 6MC	sham	Matthews 2015
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