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Postoperative Nausea and Vomiting

Nausées-vomissements post-opératoires : évaluation de l'acupuncture

3. Systematic Reviews and Meta-Analysis

3.1. Generic Acupuncture

3.1.1. Guo 2026

Guo Y, Guo J, Qiu Y, Ren M, Cao J. Efficacy of Different Nonpharmacological Interventions as Adjunctive Treatments for Postoperative Nausea and Vomiting: A Systematic Review and Bayesian Network Meta-analysis. J Perianesth Nurs. 2026:S1089-9472(26)00062-6.
<https://doi.org/10.1016/j.jopan.2026.03.004>

Purpose	This network meta-analysis aimed to compare the efficacy of nonpharmacological adjunctive interventions for postoperative nausea and vomiting (PONV) in patients undergoing non-gastrointestinal surgery, with formal assessment of transitivity and consistency.
Design	Systematic review and NMA.
Methods	Eight electronic databases were searched up to October 2024. Pairwise and Bayesian network meta-analyses were performed. Transitivity, consistency, and sensitivity analyses were conducted. Evidence quality was rated using the GRADE approach.
Findings	Fifty-four randomized controlled trials involving 8275 participants and nine nonpharmacological interventions were included. For PONV incidence, preoperative carbohydrate loading ranked highest (35%); for rescue antiemetic usage, acupuncture was most effective (59%); and for PONV VAS severity, ginger was most effective (29%). Transitivity and sensitivity analyses supported the robustness of results. GRADE ratings indicated low or very low certainty of evidence for most comparisons, mainly due to risk of bias, indirectness, and imprecision.
Conclusion	Carbohydrate loading, acupuncture , and ginger appear beneficial as adjunctive interventions for specific PONV outcomes. However, the low evidence quality limits definitive clinical recommendations. Large, well-designed randomized controlled trials are needed to strengthen the evidence base.

3.1.2. Lee 2025

Lee A, Zhang JZ, Xie J, Cheng V, Wong MKH, Yau DKW. Stimulation of the wrist acupuncture point PC6 for preventing postoperative nausea and vomiting: a network meta-analysis. Cochrane Database Syst Rev. 2025 Sep 12;9(9):CD003281. <https://doi.org/10.1002/14651858.CD003281.pub5>

Rationale	Postoperative nausea and vomiting (PONV) are common complications following surgery and anaesthesia. Antiemetic drugs are only partially effective in preventing PONV. Stimulating the PC6 acupoint(s) on the wrist offers an alternative approach, but the effectiveness of the various common techniques is unclear.
Objectives	To update and compare the effects and safety of PC6 acupoint stimulation with or without antiemetic drug(s) versus sham or antiemetic drug(s) for preventing postoperative nausea (PON) and postoperative vomiting (POV) in people undergoing surgery, and to identify the most effective techniques using network meta-analyses (NMAs).
Methods	Search methods: We searched CENTRAL, MEDLINE, Embase, ISI Web of Science, CINAHL, WHO Global Index Medicus, major trial registries, and reference lists of articles for studies up to 6 June 2025, with no language restrictions. Eligibility criteria: Parallel randomised controlled trials of techniques that compared any combinations of PC6 acupoint stimulation, drug therapy, and sham for preventing PONV in children and adults were eligible. Interventions included invasive techniques (e.g. needle acupuncture) and noninvasive techniques (e.g. acupressure wristbands). Drug therapy included antiemetics that belonged to one of the following substance classes: 5-HT ₃ receptor antagonists, D ₂ receptor antagonists, corticosteroids, and antihistamines. The sham group included sham PC6 interventions and/or placebo saline antiemetic interventions. Outcomes: Critical outcomes: incidence of PON and POV. Important outcomes: need for rescue antiemetic therapy when prophylaxis failed and adverse events (side effects). Risk of bias: We assessed the risk of bias in the included studies using RoB 1. Synthesis methods: We performed frequentist NMAs using random-effects models to report risk ratios (RRs) with 95% confidence intervals (95% CIs). We compared the relative effects (with sham as reference) of six broad classes of PC6 acupoint stimulation techniques and their combined use with antiemetic drugs on the outcomes. We summarised the safety data narratively due to heterogeneous reporting of adverse events (side effects). We assessed the certainty of evidence of the NMA treatment effect on outcomes according to the CINeMA and GRADE approaches.
Included studies	This update included 77 trials , conducted between 1986 and 2022, involving 9847 participants . The majority were adults across several countries (USA, South Korea, India, China, Turkey, and Iran). There were 58 (33.9%) sham groups, 16 (9.4%) invasive PC6 acupoint stimulation groups, 50 (29.3%) noninvasive PC6 acupoint stimulation groups, 32 (18.7%) antiemetic(s) groups, 4 (2.3%) combined invasive PC6 acupoint stimulation and antiemetic(s) groups, 10 (5.8%) combined noninvasive PC6 acupoint stimulation and antiemetic(s) groups, and one (0.6%) combined invasive and noninvasive PC6 acupoint stimulation group for the NMAs. The high risk of bias was primarily due to selective reporting.

Synthesis of results	Postoperative nausea The evidence from the NMA (63 studies; 7534 participants) suggests that the combined invasive PC6 and antiemetics technique probably results in a larger reduction in PON than sham (RR 0.21, 95% CI 0.10 to 0.45; moderate confidence from indirect evidence only). The evidence also suggests that invasive PC6, noninvasive PC6, and antiemetic(s) may reduce PON, compared to sham (invasive PC6: RR 0.49, 95% CI 0.38 to 0.64, low confidence; noninvasive PC6: RR 0.67, 95% CI 0.58 to 0.76, low confidence; antiemetic(s): RR 0.73, 95% CI 0.59 to 0.91, very low confidence). The combined use of noninvasive PC6 and antiemetic(s) may reduce PON, compared to sham, based on indirect evidence (RR 0.65, 95% CI 0.45 to 0.96; low confidence). Postoperative vomiting The evidence from the NMA (75 studies; 8627 participants) suggests that the combined invasive PC6 and antiemetics technique may result in a moderate reduction in POV, compared to sham (RR 0.37, 95% CI 0.18 to 0.76; low confidence from indirect evidence only). The evidence also suggests that invasive PC6, noninvasive PC6, antiemetic(s), and combined noninvasive PC6 and antiemetic(s) may reduce POV, compared to sham (invasive PC6: RR 0.47, 95% CI 0.34 to 0.64, low confidence; noninvasive PC6: RR 0.58, 95% CI 0.49 to 0.70, low confidence; antiemetic(s): RR 0.62, 95% CI 0.47 to 0.81, very low confidence; combined noninvasive PC6 and antiemetic(s): RR 0.52, 95% CI 0.33 to 0.83, very low confidence). The combined use of noninvasive PC6 and invasive PC6 may result in little to no difference in POV, compared to sham, based on direct evidence (RR 1.02, 95% CI 0.43 to 2.44; low confidence). Need for rescue antiemetic drug(s) The evidence from the NMA (55 studies; 6614 participants) suggests that combined use of noninvasive PC6 and antiemetic(s) probably reduces the need for rescue antiemetic drug(s) when prophylactic techniques fail, compared to sham (RR 0.44, 95% CI 0.28 to 0.70; moderate confidence from indirect evidence). Antiemetic(s), noninvasive PC6, and invasive PC6 may reduce the need for rescue antiemetics, compared to sham (antiemetic(s): RR 0.56, 95% CI 0.40 to 0.80, very low confidence; noninvasive PC6: RR 0.60, 95% CI 0.51 to 0.70, low confidence; invasive PC6: RR 0.61, 95% CI 0.44 to 0.84, low confidence). The combined use of invasive PC6 and antiemetic(s) (RR 0.31, 95% CI 0.04 to 2.49; low confidence from indirect evidence only) and the combined use of noninvasive PC6 and invasive PC6 may result in little or no difference in the need for rescue antiemetic drug(s), compared to sham (RR 1.41, 95% CI 0.64 to 3.09; low confidence from direct evidence only). Adverse events (side effects) None of the included studies reported serious or long-term complications. Thirty-nine studies, involving 5334 participants, reported minor side effects that go away (e.g. skin irritation, redness, and swelling) with PC6 acupoint stimulation, but the evidence is very uncertain. Publication bias was not apparent in the NMA funnel plots.
Authors' conclusions	NMAs suggest that both invasive and noninvasive PC6 acupoint stimulation combined with antiemetics may reduce PON and POV, compared to sham, and likely lower rescue antiemetic use. PC6 acupoint stimulation may cause minor side effects, but the evidence is very uncertain.

3.1.3. Arslan 2024

Arslan HN, Çelik SŞ. Nonpharmacological Nursing Interventions in Postoperative Nausea and Vomiting: A Systematic Review. *J Perianesth Nurs*. 2024 Feb;39(1):142-154.

<https://doi.org/10.1016/j.jopan.2023.06.096>

Purpose	This study aims to assess the impact of nonpharmacological nursing interventions on postoperative nausea and vomiting (PONV).
Design	This is a systematic review.

Methods	MEDLINE, Web of Science, ScienceDirect, Tübitak-ULAKBİM, and TRDizin databases were searched for the following search terms, including “Postoperative Nausea and Vomiting,” “Nurse,” “Nursing,” and “Nonpharmacological Interventions” to identify nonpharmacological nursing interventions for PONV. A systematic review of English and Turkish articles published in the period between January 1, 2012 and June 1, 2023 was conducted. The PICOT-SD method was used to determine the compatibility of the pieces with the eligibility criteria.
Findings	Fifty-eight of 3,874 articles obtained from databases fulfilled the eligibility criteria. This study demonstrated that acupuncture , aromatherapy, the oral intake of ginger, listening to music, education, and visits to patients decreased the incidence of nausea and vomiting and increased the quality of life. Additionally, it was found that patients' quality of life tended to improve along with reductions in postoperative complications.
Conclusions	The results of this study support previous findings in the literature and demonstrate that nonpharmacological nursing interventions help reduce and prevent PONV. Based on our results, we suggest that nonpharmacological nursing interventions can be employed for the management of PONV in patients undergoing surgery.

3.1.4. Lederer 2018

Lederer AK, Schmucker C, Kousoulas L, Fichtner-Feigl S, Huber R. Naturopathic Treatment and Complementary Medicine in Surgical Practice. Dtsch Arztebl Int. 2018;115(49):815-821. [200295].

Background	Many patients in Germany use naturopathic treatments and complementary medicine. Surveys have shown that many also use them as a concomitant treatment to surgery.
Methods	Multiple databases were systematically searched for systematic reviews, controlled trials, and experimental studies concerning the use of naturopathic treatments and complementary medicine in the management of typical post-operative problems (PROSPERO CRD42018095330).
Results	Of the 387 publications identified by the search, 76 fulfilled the inclusion criteria. In patients with abnormal gastrointestinal activity, acupuncture can improve motility, ease the passing of flatus, and lead to earlier defecation. Acupuncture and acupressure can reduce postoperative nausea and vomiting, as well as pain. More-over, aromatherapy and music therapy seem to reduce pain, stress and anxiety and to improve sleep. Further studies are needed to determine whether phytotherapeutic treatments are effective for the improvement of gastrointestinal function or the reduction of stress. It also remains unclear whether surgical patients can benefit from the methods of mind body medicine.
Conclusion	Certain naturopathic treatments and complementary medical methods may be useful in postoperative care and deserve more intensive study. In the publications consulted for this review, no serious side effects were reported.

3.1.5. Lee 2015

Lee A, Chan SKC, Fan LTY. Stimulation of the wrist acupuncture point PC6 for preventing postoperative nausea and vomiting. Cochrane Database Syst Rev. 2015;(11):CD003281. <https://doi.org/10.1002/14651858.CD003281.pub4>

Background	Postoperative nausea and vomiting (PONV) are common complications following surgery and anaesthesia. Antiemetic drugs are only partially effective in preventing PONV. An alternative approach is to stimulate the PC6 acupoint on the wrist. This is an update of a Cochrane review first published in 2004, updated in 2009 and now in 2015.
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Objectives	To determine the effectiveness and safety of PC6 acupoint stimulation with or without antiemetic drug versus sham or antiemetic drug for the prevention of PONV in people undergoing surgery.
Methods	We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (Cochrane Library, Issue 12, 2014), MEDLINE (January 2008 to December 2014), EMBASE (January 2008 to December 2014), ISI Web of Science (January 2008 to December 2014), World Health Organization Clinical Trials Registry, ClinicalTrials.gov, and reference lists of articles to identify additional studies. We applied no language restrictions. Selection criteria: All randomized trials of techniques that stimulated the PC6 acupoint compared with sham treatment or drug therapy, or combined PC6 acupoint and drug therapy compared to drug therapy, for the prevention of PONV. Interventions used in these trials included acupuncture, electro-acupuncture, transcutaneous electrical acupoint stimulation, transcutaneous nerve stimulation, laser stimulation, capsicum plaster, acupoint stimulation device, and acupressure in people undergoing surgery. Primary outcomes were the incidences of nausea and vomiting after surgery. Secondary outcomes were the need for rescue antiemetic therapy and adverse effects. Data collection and analysis: Two review authors independently extracted the data and assessed the risk of bias domains for each trial. We used a random-effects model and reported risk ratio (RR) with associated 95% confidence interval (95% CI). We used trial sequential analyses to help provide information on when we had reached firm evidence in cumulative meta-analyses of the primary outcomes, based on a 30% risk ratio reduction in PONV.
Results	We included 59 trials involving 7667 participants . We rated two trials at low risk of bias in all domains (selection, attrition, reporting, blinding and other). We rated 25 trials at high risk in one or more risk-of-bias domains. Compared with sham treatment, PC6 acupoint stimulation significantly reduced the incidence of nausea (RR 0.68, 95% CI 0.60 to 0.77; 40 trials, 4742 participants), vomiting (RR 0.60, 95% CI 0.51 to 0.71; 45 trials, 5147 participants) and the need for rescue antiemetics (RR 0.64, 95% CI 0.55 to 0.73; 39 trials, 4622 participants). As heterogeneity among trials was substantial and there were study limitations, we rated the quality of evidence as low. Using trial sequential analysis, the required information size and boundary for benefit were reached for both primary outcomes. PC6 acupoint stimulation was compared with six different types of antiemetic drugs (metoclopramide, cyclizine, prochlorperazine, droperidol, ondansetron and dexamethasone). There was no difference between PC6 acupoint stimulation and antiemetic drugs in the incidence of nausea (RR 0.91, 95% CI 0.75 to 1.10; 14 trials, 1332 participants), vomiting (RR 0.93, 95% CI 0.74 to 1.17; 19 trials, 1708 participants), or the need for rescue antiemetics (RR 0.87, 95% CI 0.65 to 1.16; 9 trials, 895 participants). We rated the quality of evidence as moderate, due to the study limitations. Using trial sequential analyses, the futility boundary was crossed before the required information size was surpassed for both primary outcomes. Compared to antiemetic drugs, the combination of PC6 acupoint stimulation and antiemetic therapy reduced the incidence of vomiting (RR 0.56, 95% CI 0.35 to 0.91; 9 trials, 687 participants) but not nausea (RR 0.79, 95% CI 0.55 to 1.13; 8 trials, 642 participants). We rated the quality of evidence as very low, due to substantial heterogeneity among trials, study limitations and imprecision. Using trial sequential analysis, none of the boundaries for benefit, harm or futility were crossed for PONV. The need for rescue antiemetic was lower in the combination PC6 acupoint stimulation and antiemetic group than the antiemetic group (RR 0.61, 95% CI 0.44 to 0.86; 5 trials, 419 participants). The side effects associated with PC6 acupoint stimulation were minor, transient and self-limiting (e.g. skin irritation, blistering, redness and pain) in 14 trials. Publication bias was not apparent in the contour-enhanced funnel plots.

Conclusion	There is low-quality evidence supporting the use of PC6 acupoint stimulation over sham. Compared to the last update in 2009, no further sham comparison trials are needed. We found that there is moderate-quality evidence showing no difference between PC6 acupoint stimulation and antiemetic drugs to prevent PONV. Further PC6 acupoint stimulation versus antiemetic trials are futile in showing a significant difference, which is a new finding in this update. There is inconclusive evidence supporting the use of a combined strategy of PC6 acupoint stimulation and antiemetic drug over drug prophylaxis, and further high-quality trials are needed.
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3.1.6. Cheong 2013

Cheong KB, Zhang JP, Huang Y, Zhang ZJ. The effectiveness of acupuncture in prevention and treatment of postoperative nausea and vomiting—a systematic review and meta-analysis. PLoS One. 2013 Dec 13;8(12):e82474. [166625]. .

Purpose	This paper included a systematic review and meta-analysis on the effect of different type of acupuncture and acupoint selection in PONV prevention and treatment.
Methods	Randomised controlled trials(RCTs) comparing acupuncture with non-acupuncture treatment were identified from databases PubMed, Cochrane, EBSCO, Ovid, CNKI and Wanfangdata. Meta-analysis on eligible studies was performed using fixed-effects model with RevMan 5.2. Results were expressed as RR for dichotomous data, with 95% CI.
Results	Thirty RCTs, 1276 patients (intervention) and 1258 patients (control) were identified. Meta-analysis showed that PC6 acupuncture significantly reduced the number of cases of early vomiting (postoperative 0-6h) (RR=0.36,95%CI 0.19,0.71; P=0.003) and nausea (postoperative 0-24h) (RR=0.25, 95%CI 0.10,0.61; P=0.002), but not early nausea (postoperative 0-6h) (RR=0.64, 95%CI 0.34,1.19; P=0.150) and vomiting (postoperative 0-24h) (RR=0.82,95%CI 0.48,1.38; P=0.450). PC6 acupressure significantly reduced the number of cases of nausea (RR=0.71, 95%CI 0.57,0.87; P=0.001) and vomiting (RR=0.62, 95%CI 0.49,0.80; P=0.000) at postoperative 0-24h. PC6 electroacupoint stimulation significantly reduced the number of cases of nausea (RR=0.49, 95%CI 0.38,0.63; P<0.000) and vomiting (RR=0.50, 95%CI 0.36,0.70; P<0.000) at postoperative 0-24h. Stimulation of PC6 with other acupoint(s) significantly reduced the number of cases of nausea and vomiting (RR=0.29, 95%CI 0.17,0.49; P<0.000) at postoperative 0-24h. Stimulation of other acupoint(s)(non PC6) also significantly reduced the number of cases of nausea and vomiting (RR=0.63, 95%CI 0.49,0.81; P=0.000) at postoperative 0-24h. However, the quality of study was generally low in studies of PC6 combined with other acupoint(s) and other acupoint(s). Details of blinding were not reported in most reports.
Conclusion	Besides PC6, PC6 combined with other acupoint(s) and other alternative acupoint(s) might be beneficial in prevention and treatment of PONV.

3.1.7. Lee 2009

Lee A, Fan LTY. Stimulation of the wrist acupuncture point P6 for preventing postoperative nausea and vomiting. Cochrane Database Syst Rev. 2009;(2):CD003281.

<https://doi.org/10.1002/14651858.CD003281.pub3>

Background	Postoperative nausea and vomiting (PONV) are common complications following surgery and anaesthesia. Drugs to prevent PONV are only partially effective. An alternative approach is to stimulate the P6 acupoint on the wrist. This is an update of a Cochrane review first published in 2004.
Objectives	To determine the efficacy and safety of P6 acupoint stimulation in preventing PONV.

Methods	Search strategy: We searched CENTRAL (The Cochrane Library, Issue 3, 2008), MEDLINE (January 1966 to September 2008), EMBASE (January 1988 to September 2008), ISI Web of Science (January 1965 to September 2008), the National Library of Medicine publication list of acupuncture studies, and reference lists of articles. Selection criteria: All randomized trials of techniques that stimulated the P6 acupoint compared with sham treatment or drug therapy for the prevention of PONV. Interventions used in these trials included acupuncture, electro-acupuncture, transcutaneous nerve stimulation, laser stimulation, capsicum plaster, an acupuncture stimulation device, and acupressure in patients undergoing surgery. Primary outcomes were the risks of nausea and vomiting. Secondary outcomes were the need for rescue antiemetic therapy and adverse effects. Data collection and analysis: Two review authors independently assessed trial quality and extracted the data. We collected adverse effect information from the trials. We used a random-effects model and reported relative risk (RR) with associated 95% confidence intervals (95% CI).
Results	We included 40 trials involving 4858 participants ; four trials reported adequate allocation concealment. Twelve trials did not report all outcomes. Compared with sham treatment P6 acupoint stimulation significantly reduced: nausea (RR 0.71, 95% CI 0.61 to 0.83); vomiting (RR 0.70, 95% CI 0.59 to 0.83), and the need for rescue antiemetics (RR 0.69, 95% CI 0.57 to 0.83). Heterogeneity among trials was moderate. There was no clear difference in the effectiveness of P6 acupoint stimulation for adults and children; or for invasive and noninvasive acupoint stimulation. There was no evidence of difference between P6 acupoint stimulation and antiemetic drugs in the risk of nausea (RR 0.82, 95% CI 0.60 to 1.13), vomiting (RR 1.01, 95% CI 0.77 to 1.31), or the need for rescue antiemetics (RR 0.82, 95% CI 0.59 to 1.13). The side effects associated with P6 acupoint stimulation were minor. There was no evidence of publication bias from contour-enhanced funnel plots.
Conclusion	P6 acupoint stimulation prevented PONV. There was no reliable evidence for differences in risks of postoperative nausea or vomiting after P6 acupoint stimulation compared to antiemetic drugs.

3.1.8. Abraham 2008 ~

Abraham J. Acupressure and acupuncture in preventing and managing postoperative nausea and vomiting in adults. J Perioper Pract. 2008;18(12):543-51. [152488].

Objectives	This literature review sets out to investigate the effectiveness of acupressure and acupuncture in preventing and managing postoperative nausea and vomiting (PONV) in adult patients. PONV is problematic, affecting patient satisfaction, delayed discharge and even patient re-admission. Current treatment of PONV constitutes a variety of drug therapies, which are only partially effective.
Methods	With the integration of complementary and alternative medicines in healthcare, this review examined 10 research studies investigating the use of acupressure and acupuncture in treating PONV. Three studies found acupressure to be effective in preventing PONV. However, population samples were small and the research designs had numerous anomalies. Overall the article suggests that acupuncture and acupressure are ineffective in preventing and managing PONV in adult patients.
Conclusions	Further investigation of the effectiveness of acupressure and acupuncture, combined with current drug therapies, using well designed and adequately powered studies is needed. Published studies predominantly examined the use of P6 as the pressure point. Further studies should examine other 'acupoint' sites, to ascertain whether these are effective dependent upon the operative site.

3.1.9. Shiao 2006

Shiao SY, Dune LS. Metaanalyses of acustimulations: effects on nausea and vomiting in postoperative adult patients. Explore (NY). 2006;2(3):202-15. [141325].

Objective	Using metaanalysis to examine the effects of acustimulations on nausea and vomiting symptoms (NVS) in postoperative adult populations.
Methods	Metaanalyses of effects of various acupoints stimulations (AS) (including acupuncture, acupressure, and electrical stimulation) on NVS in postoperative adult populations were performed. Thirty-three quality randomized controlled trials (RCT) published over the past three decades were identified by evaluating the quality of randomization and treatment methods, and results were pooled using a fixed effects model.
Results	Twenty-four trials were pooled for nausea, 29 trials for vomiting, and 19 trials for rescue antiemetics, with AS compared with placebo or controls. Two additional trials did not have control groups but compared AS to medication groups. Compared with the controls, AS (all modalities) reduced nausea (relative risk [RR] = 0.60, 95% confidence interval [CI]: 0.54-0.67, $P < .0001$), vomiting (RR = 0.51, 95% CI: 0.45-0.57, $P < .0001$), and use of rescue antiemetics (RR = 0.63, 95% CI: 0.54-0.74, $P < .0001$). All AS modalities were effective in reducing NVS. Korean hand acupressure stimulations (two trials) had the best impact on reducing vomiting. There were no significant differences on pooled RRs for nausea (five trials) and vomiting (eight trials) between medication and AS groups, but medication groups had increased use of rescue antiemetics (two trials, RR = 2.27, 95% CI: 1.48-3.49, $P = .0002$). There was a placebo effect when compared with controls in reducing nausea (four trials, RR = 0.67, 95% CI: 0.50-0.90, $P = .0069$) and vomiting (three trials, RR = 0.39, 95% CI: 0.19-0.80, $P = .0106$).
Conclusions	This metaanalysis demonstrated that AS is just as effective as medications in reducing NVS and that acupressure is just as effective as acupuncture or electrical stimulation in reducing NVS for postoperative adult populations.

3.1.10. Chen 2006

Chen Min, Li Sheng-Tao, Zheng Hui. [Progress in acupuncture for treatment of postoperative nausea and vomiting in foreign countries]. Chinese Journal of Clinical Rehabilitation. 2006;10(47):1343-8. [168616].

Objective	To analyze and summarize the efficacy and mechanism of acupuncture and moxibustion on postoperative nausea and vomiting (PONV) abroad.
Methods	DATA SOURCES: A computer-based search of articles about PONV abroad between January 1990 and August 2006 was conducted in Pubmed with the of "PONV, acupuncture, moxibustion, acupression, postperative, nausea, vomit", and the language was limited to English. STUDY SELECTION: Articles related to the efficacy and mechanism of acupuncture and moxibustion in the treatment of PONV abroad were ranged, and articles with strong aims were selected. As to the literatures similar in content of the same field, those published recently or published in authoritative magazines were included. DATA EXTRACTION: A total of 41 related articles were retrieved, and 20 of them met the inclusion criteria , while 21 repetitive studies were excluded.

Data Synthesis	PONV is the most common complication of after operation of anesthesia. Treatment of PONV with acupuncture and moxibustion is widely applied abroad, while the clinical effects are different due to different acupoints, manipulation of acupuncture and time to intervene. However, researches on the mechanism of acupuncture in the treatment of PONV are less, and it is presently agreed that it may work by activating serotonergic and noradrenergic fibers to change the transmission of 5-HT.
Conclusion	People in China and abroad gradually accept treatment of PONV with acupuncture, but its efficacy hasn't been confirmed in clinical research yet. More randomized clinical trials with massive multi-center samples should be done. The researches on the mechanism are not enough. Therefore, more work should be done to provide theoretical support for clinic.

3.1.11. Lee 2004

Lee A, Done ML. Stimulation of the wrist acupuncture point P6 for preventing postoperative nausea and vomiting. Cochrane Database Syst Rev. 2004;(3):CD003281.

<https://doi.org/10.1002/14651858.CD003281.pub2>

Background	Postoperative nausea and vomiting (PONV) are common complications following surgery and anaesthesia. Drug therapy to prevent PONV is only partially effective. An alternative approach is to stimulate a P6 acupoint on the wrist. Although there are many trials examining this technique, the results are conflicting.
Objectives	To determine the efficacy and safety of P6 acupoint stimulation in preventing PONV.
Methods	Search strategy: We searched CENTRAL (The Cochrane Library, Issue 1, 2003), MEDLINE (January 1966 to January 2003), EMBASE (January 1988 to January 2003) and the National Library of Medicine publication list of acupuncture studies up to and including January 2003. Reference lists of retrieved papers and reviews were consulted for additional references. Selection criteria: All randomized trials of techniques that stimulated the P6 acupoint compared with: sham treatment or drug therapy for the prevention of PONV. Interventions used in these trials included acupuncture, electro-acupuncture, transcutaneous nerve stimulation, laser stimulation, acustimulation device and acupressure. Data collection and analysis: Two reviewers independently assessed methodological quality and extracted the data. Primary outcomes were incidences of nausea and vomiting. Secondary outcomes were the need for rescue antiemetic therapy and adverse effects. A random effects model was used and relative risk (RR) with associated 95% confidence intervals (95% CI) are reported. Egger's test was used to measure the asymmetry of the funnel plot.
Results	Twenty-six trials (n = 3347) were included, none of which reported adequate allocation concealment. There were significant reductions in the risks of nausea (RR 0.72, 95% CI 0.59 to 0.89), vomiting (RR 0.71, 95% CI 0.56 to 0.91) and the need for rescue antiemetics (RR 0.76, 95% CI 0.58 to 1.00) in the P6 acupoint stimulation group compared with the sham treatment, although many of the trials were heterogeneous. There was no evidence of difference in the risk of nausea and vomiting in the P6 acupoint stimulation group versus individual antiemetic groups. However, when different antiemetics were pooled, there was significant reduction in the risk of nausea but not vomiting in the P6 acupoint stimulation group compared with the antiemetic group (RR 0.70, 95% CI 0.50 to 0.98; RR 0.92, 95% CI 0.65 to 1.29 respectively). The side effects associated with P6 acupoint stimulation were minor. There was some evidence of asymmetry of the funnel plot.
Conclusion	This systematic review supports the use of P6 acupoint stimulation in patients without antiemetic prophylaxis. Compared with antiemetic prophylaxis, P6 acupoint stimulation seems to reduce the risk of nausea but not vomiting.

3.1.12. Lee 1999

Lee A, Done ML. The use of nonpharmacologic techniques to prevent postoperative nausea and vomiting: a metaanalysis. *Anesth Analg*. 1999;88(6):1362-9. [59021].

Objectives-methods	We assessed the efficacy of nonpharmacologic techniques to prevent postoperative nausea and vomiting (PONV) by systematic review. These studies included acupuncture, electroacupuncture, transcutaneous electrical nerve stimulation, acupoint stimulation, and acupressure.
Results	Of the 24 randomized trials retrieved by a search of articles indexed on the MEDLINE and EMBASE databases (1980-1997), 19 were eligible for metaanalysis . The primary outcomes were the incidence of nausea, vomiting, or both 0-6 h (early efficacy) or 0-48 h (late efficacy) after surgery. The pooled relative risk (RR) and numbers needed to treat (NNT) were calculated. In children, no benefit was found. Some results in adults were significant. Nonpharmacologic techniques were similar to antiemetics in preventing early vomiting (RR = 0.89 [95% confidence interval 0.47-1.67]; NNT = 63 [10-infinity]) and late vomiting (RR = 0.80 [0.35-1.81]; NNT = 25 [5-infinity]) in adults. Nonpharmacologic techniques were better than placebo at preventing early nausea (RR = 0.34 [0.20-0.58]; NNT = 4 [36]) and early vomiting in adults (RR = 0.47 [0.34-0.64]; NNT = 5 [48]). Nonpharmacologic techniques were similar to placebo in preventing late vomiting in adults (RR = 0.81 [0.46-1.42]; NNT = 14 [6-infinity]). Using nonpharmacologic techniques, 20%-25% of adults will not have early PONV compared with placebo. It may be an alternative to receiving no treatment or firstline antiemetics.
Implications	This systematic review showed that nonpharmacologic techniques were equivalent to commonly used antiemetic drugs in preventing vomiting after surgery. Nonpharmacologic techniques were more effective than placebo in preventing nausea and vomiting within 6 h of surgery in adults, but there was no benefit in children.

3.2. Special Acupuncture Techniques

3.2.1. Acupuncture prior to surgery

3.2.1.1. Holmer 2012

Holmer Pettersson P, Wengström Y. Acupuncture prior to surgery to minimise postoperative nausea and vomiting: a systematic review. *J Clin Nurs*. 2012;21(13-14):1799-805. [160404].

Objectives	The aim of this systematic review was to assess the outcome of acupuncture treatment prior to surgery in order to avoid or minimise postoperative nausea and vomiting.
Background	The symptoms of nausea and/or vomiting remain a huge problem for many patients after surgery. There is much debate around the best treatment for nausea and/or vomiting, and the most beneficial solution has yet to be found. Postoperative nausea and vomiting is not a life-threatening symptom, but many patients express great distress and dissatisfaction with the existing treatment. Many patients rate their nausea similar to or worse than pain. Historically, treatments often include drug therapy, but not other non-pharmacologic therapies, such as acupuncture or acupressure, which can have beneficial effects on nausea. DESIGN: A systematic literature review.

Methods	The review was undertaken using key words and electronic databases and included 21 papers from the years November 1996 until August 2009.
Results	The results indicate that the application of acupuncture reduced the incidence of nausea but not vomiting when compared with the use of antiemetic prophylaxis alone.
Conclusions	The results show that there is a lack of knowledge of the best treatment to minimise postoperative nausea and vomiting prior to surgery.
Relevance To Clinical Practice	The overall results of this review conclude that all kinds of AP stimulation, both non-invasive and invasive, seem to prevent PONV with minimal side effects. The findings from this study can be used to inform future research to evaluate the effects of preoperative treatment with acupuncture vs. sham procedure before surgery to avoid PONV.

3.2.2. Neiguan Acupoint (PC6)

3.2.2.1. Yang 2026 (wearable devices)

Yang X, Chen X, Liu Z, Han F, Zhan M, Lu X, Chen J, Guo X. Effectiveness and mechanisms of wearable Neiguan (P6) stimulation in preventing postoperative nausea and vomiting: A systematic review and meta-analysis. Eur J Integr Med. 2026;83:102628. <https://doi.org/10.1016/j.eujim.2026.102628>

Background	Postoperative nausea and vomiting (PONV) is a common and distressing complication following surgery. Although acupuncture demonstrates efficacy, wearable P6 (Neiguan) stimulation devices represent a novel, patient-controlled alternative. This systematic review and meta-analysis evaluates the effectiveness of these devices, with particular attention to clinical heterogeneity and the influence of various control interventions.
Methods	A PRISMA-compliant systematic review and meta-analysis was conducted. An expanded search of five electronic databases, including PubMed, Web of Science, and Embase, was performed from inception to January 2025 using comprehensive terms related to wearable acupoint stimulation devices. Due to clinical heterogeneity, Mantel-Haenszel random-effects models were used to pool relative risks (RRs) and 95 % confidence intervals (CIs). Subgroup analyses were conducted to distinguish comparisons against sham stimulation from those against active antiemetics. The certainty of evidence was evaluated using the GRADE framework.
Results	A total of eleven RCTs were identified, with six included in the quantitative synthesis. In the subgroup analysis comparing wearable devices to sham stimulation (five trials), wearable devices significantly reduced the incidence of postoperative nausea and vomiting (PONV) (RR = 0.57, 95 % CI: 0.49–0.67; I ² = 0 %), resulting in an absolute risk reduction of 25 % and a number needed to treat (NNT) of 4. In the comparison with ondansetron (one trial), wearable devices demonstrated superior efficacy (RR = 0.64, 95 % CI: 0.43–0.96). Qualitative synthesis of the remaining five trials indicated that wearable stimulation, when used as an adjunct to pharmacotherapy, significantly improved recovery quality, reduced the need for rescue antiemetics, and shortened hospital stays. Leave-one-out sensitivity analyses confirmed the robustness of these findings. Assessment of publication bias was attempted, but was not feasible due to the small number of studies included in the quantitative synthesis. The overall certainty of evidence was rated as moderate.
Conclusion	P6 stimulation using wearable devices is an effective adjunctive therapy for PONV prevention. Future RCTs should emphasize age-stratified analyses, protocol standardization, and high-quality sham-controlled designs.

3.2.2.2. Zhang 2020 (Children)

Zhang Y, Zhang C, Yan M, Wang N, Liu J, Wu A. The effectiveness of PC6 acupuncture in the prevention of postoperative nausea and vomiting in children: A systematic review and meta-analysis. *Paediatr Anaesth.* 2020;30(5):552-63. [168211]. doi

Background	A growing number of studies have demonstrated the effectiveness of acupuncture in preventing and treating postoperative nausea and vomiting. Here, we used meta-analysis to confirm these benefits in children and to determine the optimal time to perform this treatment.
Methods	Four databases (MEDLINE, EMBASE, CENTRAL, and Chinese Database of Biology and Medicine) were searched from inception until January 16, 2019. We included randomized controlled trials for evaluating the effectiveness of acupuncture in the prevention and treatment of postoperative nausea and vomiting during the early stage (0-4 hours) and within 24 hours postoperatively in pediatrics. Control groups received standardized care control or standardized care combined with sham control.
Results	Sixteen literatures and 1773 patients undergoing general anesthesia were included in the study. The results indicated that acupuncture was effective in reducing postoperative vomiting, both during the first 4 hours (RR = 0.47, 95% CI 0.26, 0.84; low quality) and within 24 hours postoperatively (RR = 0.74, 95% CI 0.60, 0.91; low quality). Stratifying by the timing of acupuncture, acupuncture was effective in reducing the first 4 hours (RR = 0.34, 95% CI 0.18, 0.64; moderate quality), and 0-24 hours postoperative vomiting (RR = 0.81, 95% CI 0.70, 0.93; moderate quality) when performed before and during anesthesia, respectively. Further, the RR value was more robust when acupuncture was performed before anesthesia. Acupuncture was also effective in treating 0-24 hours postoperative nausea (RR = 0.73, 95% CI 0.60, 0.88; moderate quality) and in reducing the utilization of remedies during the first 4 hours (RR = 0.64, 95% CI 0.45, 0.89; moderate quality).
Conclusion	Acupuncture reduces the incidence of postoperative nausea and vomiting as well as the utilization of antiemetic remedies, particularly during the first 4 hours following the operation. Acupuncture performed before anesthesia was demonstrated to be the most ideal intervention time for children.

3.2.2.3. Lee 2015

lee A, Chan SK, Fan LT. stimulation of the wrist acupuncture point pc6 for preventing postoperative nausea and vomiting. *Cochrane Database Syst Rev.* 2015. [184060].

Background	Postoperative nausea and vomiting (PONV) are common complications following surgery and anaesthesia. Antiemetic drugs are only partially effective in preventing PONV. An alternative approach is to stimulate the PC6 acupoint on the wrist. This is an update of a Cochrane review first published in 2004, updated in 2009 and now in 2015.
Objectives	To determine the effectiveness and safety of PC6 acupoint stimulation with or without antiemetic drug versus sham or antiemetic drug for the prevention of PONV in people undergoing surgery.

Methods	SEARCH METHODS: We searched the Cochrane Central Register of Controlled Trials (CENTRAL) (Cochrane Library, Issue 12, 2014), MEDLINE (January 2008 to December 2014), EMBASE (January 2008 to December 2014), ISI Web of Science (January 2008 to December 2014), World Health Organization Clinical Trials Registry, ClinicalTrials.gov, and reference lists of articles to identify additional studies. We applied no language restrictions. SELECTION CRITERIA: All randomized trials of techniques that stimulated the PC6 acupoint compared with sham treatment or drug therapy, or combined PC6 acupoint and drug therapy compared to drug therapy, for the prevention of PONV. Interventions used in these trials included acupuncture, electro-acupuncture, transcutaneous electrical acupoint stimulation, transcutaneous nerve stimulation, laser stimulation, capsicum plaster, acu-stimulation device, and acupressure in people undergoing surgery. Primary outcomes were the incidences of nausea and vomiting after surgery. Secondary outcomes were the need for rescue antiemetic therapy and adverse effects. DATA COLLECTION AND ANALYSIS: Two review authors independently extracted the data and assessed the risk of bias domains for each trial. We used a random-effects model and reported risk ratio (RR) with associated 95% confidence interval (95% CI). We used trial sequential analyses to help provide information on when we had reached firm evidence in cumulative meta-analyses of the primary outcomes, based on a 30% risk ratio reduction in PONV.
Main Results	We included 59 trials involving 7667 participants. We rated two trials at low risk of bias in all domains (selection, attrition, reporting, blinding and other). We rated 25 trials at high risk in one or more risk-of-bias domains. Compared with sham treatment, PC6 acupoint stimulation significantly reduced the incidence of nausea (RR 0.68, 95% CI 0.60 to 0.77; 40 trials, 4742 participants), vomiting (RR 0.60, 95% CI 0.51 to 0.71; 45 trials, 5147 participants) and the need for rescue antiemetics (RR 0.64, 95% CI 0.55 to 0.73; 39 trials, 4622 participants). As heterogeneity among trials was substantial and there were study limitations, we rated the quality of evidence as low. Using trial sequential analysis, the required information size and boundary for benefit were reached for both primary outcomes. PC6 acupoint stimulation was compared with six different types of antiemetic drugs (metoclopramide, cyclizine, prochlorperazine, droperidol, Ondansetron and dexamethasone). There was no difference between PC6 acupoint stimulation and antiemetic drugs in the incidence of nausea (RR 0.91, 95% CI 0.75 to 1.10; 14 trials, 1332 participants), vomiting (RR 0.93, 95% CI 0.74 to 1.17; 19 trials, 1708 participants), or the need for rescue antiemetics (RR 0.87, 95% CI 0.65 to 1.16; 9 trials, 895 participants). We rated the quality of evidence as moderate, due to the study limitations. Using trial sequential analyses, the futility boundary was crossed before the required information size was surpassed for both primary outcomes. Compared to antiemetic drugs, the combination of PC6 acupoint stimulation and antiemetic therapy reduced the incidence of vomiting (RR 0.56, 95% CI 0.35 to 0.91; 9 trials, 687 participants) but not nausea (RR 0.79, 95% CI 0.55 to 1.13; 8 trials, 642 participants). We rated the quality of evidence as very low, due to substantial heterogeneity among trials, study limitations and imprecision. Using trial sequential analysis, none of the boundaries for benefit, harm or futility were crossed for PONV. The need for rescue antiemetic was lower in the combination PC6 acupoint stimulation and antiemetic group than the antiemetic group (RR 0.61, 95% CI 0.44 to 0.86; 5 trials, 419 participants). The side effects associated with PC6 acupoint stimulation were minor, transient and self-limiting (e.g. skin irritation, blistering, redness and pain) in 14 trials. Publication bias was not apparent in the contour-enhanced funnel plots.

Authors' Conclusions	There is low-quality evidence supporting the use of PC6 acupoint stimulation over sham. Compared to the last update in 2009, no further sham comparison trials are needed. We found that there is moderate-quality evidence showing no difference between PC6 acupoint stimulation and antiemetic drugs to prevent PONV. Further PC6 acupoint stimulation versus antiemetic trials are futile in showing a significant difference, which is a new finding in this update. There is inconclusive evidence supporting the use of a combined strategy of PC6 acupoint stimulation and antiemetic drug over drug prophylaxis, and further high-quality trials are needed.
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3.2.2.4. Zhu 2010

Zhu Dan, Lv Huang-Wei. [Effectiveness of P6 stimulation on postoperative nausea and vomiting: a meta-analysis]. Chinese Journal of EBM. 2010;10(8):923-31. [168119].

Objective	To compare the effectiveness of P6 stimulation and sham stimulation/ drug intervention on prevention of postoperative nausea and vomiting (PONV).
Methods	
Results	A total of 21 studies were included . The results of meta-analyses indicated that: (1) Compared with sham stimulation, P6 stimulation could be effective in preventing postoperative nausea (beginning to termination) ($P < 0.0001$), postoperative early nausea (<after surgery 6 h) ($P = 0.0006$) and postoperative late nausea (>after surgery 6 h) ($P = 0.001$). (2) Compared with sham stimulation, P6 stimulation could be effective in preventing postoperative vomiting (beginning to termination) ($P < 0.0001$) and postoperative early vomiting ($P = 0.002$), but as to postoperative late vomiting (>after surgery 6 h), P6 stimulation had no effective preventive effect ($P = 0.08$). (3) Compared with the drug intervention, P6 stimulation had little effect on preventing postoperative nausea ($P = 0.29$) and vomiting ($P = 0.15$).
Conclusion	Compared with sham stimulation, P6 stimulation can be effective in preventing postoperative early nausea and vomiting as well as postoperative late nausea, but not effective in preventing postoperative late vomiting. In comparison with drugs, a large number of clinical trials are needed to prove P6 stimulation can replace drugs to prevent postoperative nausea and vomiting.

3.2.2.5. Lee 2009

Lee A, Fan Lt. Stimulation of the wrist acupuncture point p6 for preventing postoperative nausea and vomiting. Cochrane Database Syst Rev. 2009;15(2):3281.152667

Purpose	To determine the efficacy and safety of P6 acupoint stimulation in preventing PONV.
Methods	Search strategy : we searched CENTRAL (The Cochrane Library, Issue 3, 2008), MEDLINE (January 1966 to September 2008), EMBASE January 1988 to September 2008), ISI Web of Science (January 1965 to September 2008), the National Library of Medicine publication list of acupuncture studies, and reference lists of articles. Selection criteria : all randomized trials of techniques that stimulated the P6 acupoint compared with sham treatment or drug therapy for the prevention of PONV. Interventions used in these trials included acupuncture, electro-acupuncture, transcutaneous nerve stimulation, laser stimulation, capsicum plaster, an acu-stimulation device, and acupressure in patients undergoing surgery. Primary outcomes were the risks of nausea and vomiting. Secondary outcomes were the need for rescue antiemetic therapy and adverse effects. Data collection and analysis: two review authors independently assessed trial quality and extracted the data. We collected adverse effect information from the trials. We used a random-effects model and reported relative risk (RR) with associated 95% confidence intervals (95% CI).

Results	We included 40 trials involving 4858 participants ; four trials reported adequate allocation concealment. Twelve trials did not report all outcomes. Compared with sham treatment P6 acupoint stimulation significantly reduced: nausea (RR 0.71, 95% CI 0.61 to 0.83); vomiting (RR 0.70, 95% CI 0.59 to 0.83), and the need for rescue antiemetics (RR 0.69, 95% CI 0.57 to 0.83). Heterogeneity among trials was moderate. There was no clear difference in the effectiveness of P6 acupoint stimulation for adults and children; or for invasive and noninvasive acupoint stimulation. There was no evidence of difference between P6 acupoint stimulation and antiemetic drugs in the risk of nausea (RR 0.82, 95% CI 0.60 to 1.13), vomiting (RR 1.01, 95% CI 0.77 to 1.31), or the need for rescue antiemetics (RR 0.82, 95% CI 0.59 to 1.13). The side effects associated with P6 acupoint stimulation were minor. There was no evidence of publication bias from contour-enhanced funnel plots.
Conclusion	P6 acupoint stimulation prevented PONV. There was no reliable evidence for differences in risks of postoperative nausea or vomiting after P6 acupoint stimulation compared to antiemetic drugs.

3.2.2.6. Lee 2004

Lee A, Done ML. Stimulation of the wrist acupuncture point p6 for preventing postoperative nausea and vomiting. Cochrane Database Syst Rev. 2004. [141284].

Background	Postoperative nausea and vomiting (PONV) are common complications following surgery and anaesthesia. Drug therapy to prevent PONV is only partially effective. An alternative approach is to stimulate a P6 acupoint on the wrist. Although there are many trials examining this technique, the results are conflicting.
Objectives	To determine the efficacy and safety of P6 acupoint stimulation in preventing PONV.
Methods	Search strategy: We searched CENTRAL (The Cochrane Library, Issue 1, 2003), MEDLINE (January 1966 to January 2003), EMBASE (January 1988 to January 2003) and the National Library of Medicine publication list of acupuncture studies up to and including January 2003. Reference lists of retrieved papers and reviews were consulted for additional references. Selection criteria: All randomized trials of techniques that stimulated the P6 acupoint compared with: sham treatment or drug therapy for the prevention of PONV. Interventions used in these trials included acupuncture, electro-acupuncture, transcutaneous nerve stimulation, laser stimulation, acustimulation device and acupressure. Data collection and analysis: Two reviewers independently assessed methodological quality and extracted the data. Primary outcomes were incidences of nausea and vomiting. Secondary outcomes were the need for rescue antiemetic therapy and adverse effects. A random effects model was used and relative risk (RR) with associated 95% confidence intervals (95% CI) are reported. Egger's test was used to measure the asymmetry of the funnel plot.
Main results	Twenty-six trials (n = 3347) were included, none of which reported adequate allocation concealment. There were significant reductions in the risks of nausea (RR 0.72, 95% CI 0.59 to 0.89), vomiting (RR 0.71, 95% CI 0.56 to 0.91) and the need for rescue antiemetics (RR 0.76, 95% CI 0.58 to 1.00) in the P6 acupoint stimulation group compared with the sham treatment, although many of the trials were heterogeneous. There was no evidence of difference in the risk of nausea and vomiting in the P6 acupoint stimulation group versus individual antiemetic groups. However, when different antiemetics were pooled, there was significant reduction in the risk of nausea but not vomiting in the P6 acupoint stimulation group compared with the antiemetic group (RR 0.70, 95% CI 0.50 to 0.98; RR 0.92, 95% CI 0.65 to 1.29 respectively). The side effects associated with P6 acupoint stimulation were minor. There was some evidence of asymmetry of the funnel plot.

Reviewers' conclusions	This systematic review supports the use of P6 acupoint stimulation in patients without antiemetic prophylaxis. Compared with antiemetic prophylaxis, P6 acupoint stimulation seems to reduce the risk of nausea but not vomiting.
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3.2.3. Acupression

3.2.3.1. Zhang 2015

Zhang GL, Yang SY, Zhu ZL, Mu PX. Meta-analysis on postoperative complications of wristband acupoint pressure therapy. J Biol Regul Homeost Agents. 2015;29(1):187-93. [126161].

Methods	Through searching database such as MEDLINE, CNKI, etc., this paper assesses the effect of wristband acupoint pressure, acting on the neiguan acupoint, to relieve postoperative complications of adults (mainly nausea and vomiting) using nine randomized controlled trials (RCT) and RevMan5.0.
Results	In the experimental group, acupoint pressure wristband effectively reduced the incidence rate of postoperative vomiting by acting on the neiguan point, compared to the placebo control group (RR=0.50, 95% CI: 0.37~0.66, $P < 0.01$). As to the incidence rate of postoperative nausea, there was no statistical significance between the experimental group and the placebo control group (RR=0.85, 95% CI: 0.72~1.00, $P < 0.05$).
Conclusions	It was revealed that the application of acupoint pressure wristband on neiguan point in postoperative care could effectively relieve postoperative vomiting; while postoperative nausea was not relieved distinctly. Therefore, researchers are required to carry out more reliable RCT test for further study and discussion, and nurses can bring in acupoint pressure wristband for researches on its effectiveness and adaptability

3.2.3.2. Zhou 2011

Zhou Xuan, Wang Qi. [Acupressure wristbands prevent postoperative nausea and vomiting: a Meta-analysis]. Journal of Nursing Science. 2011;26(6):81-4. [168372].

Objective	To examine the impact of acupressure wristbands encircling the wrist and compressing Neiguan acupuncture point on prevention of postoperative nausea and vomiting in adults.
Methods	MEDLINE, CNKI and other databases were searched, and the randomized controlled trials were enrolled and analysed with Revman 5.0.
Results	Nine studies were recruited. Compared with the placebo controls, acupressure wristbands encircling the wrist and compressing Neiguan acupuncture point reduced vomiting (RR=0.50, 95% CI: 0.37-0.66, $P=0.01$). No statistical difference was found in occurrence of nausea between the acupressure wristbands group and the placebo group (RR=0.85, 95% CI: 0.72-1.00, $P=0.05$).
Conclusion	Usage of acupressure wristbands encircling the wrist and compressing Neiguan acupuncture point can ease postoperative vomiting, but it cannot reduce postoperative nausea. High quality RCTs are still needed to assess the effects of acupressure wristbands on prevention of postoperative nausea and vomiting and Chinese nurses can bring in these wristbands to prove their effectiveness and applicability.

3.2.3.3. Doran 2010

Doran K, Halm MA. Integrating Acupressure to Alleviate Postoperative Nausea and Vomiting. American Journal of Critical Care. 2010;19(6):553-6. [168528].

Overall, “class 1” evidence exists for the efficacy of acupressure on PONV in surgical populations.

3.2.4. Electro-acupuncture

3.2.4.1. Wang 2026 (gynecological laparoscopic surgery)

Wang K, Xiang S, Zuo H, Wu S. Effect of transcutaneous electrical acupoint stimulation on recovery following gynecological laparoscopic surgery: a meta-analysis. BMC Surg. 2026;26(1):400. <https://doi.org/10.1186/s12893-026-03730-5>

Background This meta-analysis aimed to evaluate the efficacy of transcutaneous electrical acupoint stimulation (TEAS) for postoperative recovery following gynecological laparoscopic surgery. Seven electronic databases (CNKI, Wanfang, VIP, Embase, Web of Science, PubMed, and Cochrane Library) were searched up to September 24, 2025. Continuous outcomes were pooled as mean differences (MDs) and dichotomous outcomes as risk ratios (RRs), both with 95% confidence intervals. Risk of bias was assessed using the Cochrane Risk of Bias tool (RoB 1). Sensitivity analyses and publication bias assessments were performed. Meta-analysis was conducted using Stata 15.0 and Review Manager 5.4.

4.14. Scottish Intercollegiate Guidelines Network (SIGN, Scotland) 2010 ⊕

Management of sore throat and indications for tonsillectomy. Scottish Intercollegiate Guidelines Network (SIGN). 2010:44p. [196482].

Interventions considered for prevention of PONV include anti-emetic drugs, single dose dexamethasone, acupuncture, and preoperative fasting.

4.15. Société française d'anesthésie et de réanimation (SFAR, France) 2008 ⊕

Diemunsch P. Conférence d'experts – Texte court. Prise en charge des nausées et vomissements postopératoires. Ann Fr Anesth Reanim. 2008;27:866-878.

https://sfar.org/wp-content/uploads/2015/10/2_AFAR_Prise-en-charge-des-nausees-et-vomissements-postoperatoires.pdf

Recommandation : chez les patients à risque de NVPO qui sont opposés à une prophylaxie pharmacologique et qui recherchent des alternatives thérapeutiques, une technique par stimulation de points d'acupuncture peut être considérée (G2+)

4.16. Society of Obstetricians and Gynecologists of Canada (SOGC, Canada) 2008 ⊕

Mccracken G, Houston P, Lefebvre G; Society of Obstetricians and Gynecologists of Canada. Guideline for the management of postoperative nausea and vomiting. J Obstet Gynaecol Can. 2008;30(7):600-7. [151002].

Acupoint electrical stimulation may be used as an alternative or adjuvant therapy for prevention of PONV. (II-1A)

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