Table des matières

Emergence agitation

Agitation au reveil

1. Systematic Reviews and Meta-Analysis

1.1. Generic acupuncture

1.1.1. Prandeh Afshar 2026

Prandeh Afshar P, Dehghan F, Ali ESA, Alnaiem M, Dehghan M. Nonpharmacological Interventions to Prevent Postoperative Delirium and Agitation Among Children: A Systematic Review. J Perianesth Nurs. 2026 Feb 28:S1089-9472(25)00557-X. https://doi.org/10.1016/j.jopan.2025.12.011

Purpose	To systematically review nonpharmacological interventions to prevent postoperative delirium and agitation among children.
Design	A systematic review.
Methods	Our systematic review used specific criteria to identify randomized controlled trials and quasi-experimental research focused on postoperative delirium and agitation among children. From the period 2000 to January 25, 2025, six databases, namely Web of Science, Scopus, PubMed, EMBASE, Cochrane, and Google Scholar, were searched through search strategy and the use of Boolean operators.
Findings	We screened 1,300 titles and abstracts, which resulted in the review of 21 full texts, and inclusion of 10 studies in the final analysis. Several nonpharmacological interventions, such as lollipop sucking, maternal voice recordings, eye-covering techniques, and bispectral index-guided anesthesia, significantly reduce postoperative delirium in children. However, methods like tablet use and virtual reality exposure have not shown significant benefits (P > .05). More research is necessary to confirm whether **acupuncture electrical stimulation of the heart 7** acupuncture point can effectively prevent emergence delirium in children.
Conclusions	Based on these findings, nonpharmacological interventions like lollipop sucking, maternal voice, bispectral index-guided anesthesia, and eye covering may effectively reduce postoperative delirium in children, while others like tablets and virtual reality need further study. More research is necessary to confirm whether acupuncture and other interventions can effectively prevent emergence delirium in children.

1.1.2. Chen 2025

Chen YC, Foster J, Rohmah I, Schmied V, Marks A, Wang ML, Chiu HY. Comparative effect of nonpharmacological interventions on emergence delirium prevention in children following sevoflurane general anesthesia: A systematic review and network meta-analysis of randomized controlled trials. Int J Nurs Stud. 2025 Feb 22;165:105035. https://doi.org/10.1016/j.ijnurstu.2025.105035

Backgound	Children receiving general anesthesia while undergoing surgery have a significantly high incidence of emergence delirium (ED). Nonpharmacological interventions yield beneficial effects on preventing pediatric ED. However, the relative effects of nonpharmacological interventions on pediatric ED prevention based on various perioperative phases remain unknown.
Objective	To compare the effects of nonpharmacological interventions on pediatric ED prevention at different surgical phases. Design: A systematic review and network meta-analysis. Data sources: A comprehensive search of five electronic databases (PubMed, CINAHL via EBSCOhost, Embase via Elsevier, Cochrane Trials, and ProQuest Dissertations and theses) for identifying randomized control trials published from inception to October 15, 2023.
Methods	Two reviewers independently screened, assessed, and extracted data from the eligible studies. A random-effects network meta-analysis was used to determine the comparative effect of nonpharmacological interventions on preventing pediatric ED.
Results	A total of 19 studies involving 2522 children were included in this network meta-analysis. Thirteen studies reported on the prevention of pediatric ED in the preoperative phase, and six studies reported on the prevention of pediatric ED in the intraoperative phases. Multimedia devices (OR 0.39, 95 % CIs 0.20-0.74), a multicomponent program (OR 0.20, 95 % CI 0.14-0.28) significantly reduced the incidence of pediatric ED during the preoperative phase compared with usual care. During the intraoperative phase, listening to regular heartbeat sounds significantly reduced the risk of pediatric ED compared with usual care (OR 0.06, 95 % CI 0.02-0.22), placebo (OR 0.11, 95 % CI 0.03-0.36), acupuncture (OR 0.17, 95 % CI 0.03-0.88), acupuncture with electrical stimulus (OR 0.16, 95 % CI 0.04-0.68), and acupuncture with midazolam (OR 0.04, 95 % CI 0.00-0.41).
Conclusions	Our study results suggest that the multicomponent program and listening to heartbeat sounds are relatively effective nonpharmacological interventions for preventing pediatric ED during the perioperative phase. This study compared the effectiveness and ranking of various interventions, and the findings can serve as a guide to assist health professionals in choosing the optimal strategy for preventing ED.

1.1.3. Mihara 2023

Mihara T, Nakajima D, Hijikata T, Tomita M, Goto T. Effectiveness of acupuncture therapy for the prevention of emergence agitation in children: A systematic review and meta-analysis with trial sequential analysis. PLoS One. 2023 Jun 6;18(6):e0286790.
https://doi.org/10.1371/journal.pone.0286790

Objective	This study aimed to evaluate the effectiveness of acupuncture therapy in preventing emergence agitation (EA) in children.
Methods	A systematic review and meta-analysis were conducted across multiple locations according to the articles searched. Seven databases, including trial registration sites, were searched.

Results	A total of **six trials** were included involving **489 patient**s; of them, 244 received acupuncture therapy. Randomized clinical trials (RCTs) evaluating the incidence of EA compared with placebo/sham or standard care in children were included. The primary outcome was the incidence of EA, as evaluated using a specific assessment tool. Data about the incidence rate of EA, heterogeneity, quality of trials and evidence, and adverse events were collected. Additionally, data about patient demographic characteristics, type of anesthesia, duration and onset of acupuncture therapy, EA and pain score, time taken for extubation, and post-anesthesia care unit length of stay were collected. The results indicated that the overall incidence of EA in the acupuncture therapy group and the control group was 23.4% and 39.5%, respectively, with no significant difference (risk ratio, 0.62; 95% confidence interval, 0.26-1.48; I2 = 63%). Subgroup analysis showed a significant difference in the overall incidence of EA in the acupuncture therapy and control groups according to surgery type (high-risk vs. low-risk surgery), suggesting that acupuncture therapy may be effective in reducing EA for patients undergoing high-risk surgery. The quality of evidence was downgraded to “very low” due to the study designs, inconsistency, and possible publication bias.
Conclusions	In conclusion, this meta-analysis shows that the currently available RCTs are insufficient to determine the effectiveness of acupuncture therapy in preventing EA in children undergoing general anesthesia.