

Effectiveness of Auricular Acupressure for Acute Postoperative Pain after Surgery: A Systematic Review and Meta-Analysis

Chinese Journal of Integrative Medicine

March 2019, Volume 25, Issue 3, pp 225–232 | Cite as

Evidence-Based Integrative Medicine

First Online: 28 February 2019

- 123 Downloads

Abstract

Objective

To identify the effectiveness of auricular acupressure (AA) in patients with acute postoperative pain after surgery by systematic review.

Methods

A search of randomized controlled trials was conducted in 5 English medical electronic databases and 4 Chinese databases. Two reviewers independently retrieved related studies, assessed the methodological quality, and extracted data with a standardized data form. Meta-analyses were performed using all time-points meta-analysis.

Results

A total of 26 studies with 1,682 participants were included. Results showed that compared with conventional therapy, AA significantly improved the total effective rate [risk ratio=1.25, 95% confidence interval (CI), 1.13 to 1.37, *P*<0.0001; heterogeneity: *P*<0.0001, *I*²=85%]. In the subgroup analysis, the results changed in different follow-up time and surgery categories. The pain relief in the AA group might be the most significant at 72 h after surgery (mean difference=-0.85, 95% CI,-1.20 to-0.50, *P*<0.0001) and in abdominal surgery (mean difference=-1.15, 95% CI,-1.41 to-0.90, *P*<0.0001). Sensitivity analysis demonstrated that the results of this meta-analysis were stable. No serious adverse effects were recorded.

Conclusion

It was recommended to provide AA to patients with acute postoperative pain. However, a more accurate estimate of the effect requires further rigorously designed large-scale and high-quality RCTs for improving acute postoperative pain after surgery.

Keywords

auricular acupressure acute postoperative pain
systematic review meta-analysis

This is a preview of subscription content, [log in](#) to check access.

Preview

Unable to display preview. [Download preview PDF.](#)

References

1. Hines R, Barash PG, Watrous G, et al. Complications occurring in the postanesthesia care unit: a survey. *Anesthes Analges* 1992;74:503–509.
CrossRef (<https://doi.org/10.1213/00000539-199204000-00006>)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Complications%20occurring%20in%20the%20postanesthesia%20care%20unit%3A%20a%20survey&author=R.%20Hines&author=PG.%20Barash&author=G.%20Watrous&journal=Anesthes%20Analges&volume=74&pages=503-509&publication_year=1992)
2. Brown AK, Christo PJ, Wu CL. Strategies for postoperative pain management. *Best Pract Res Clin Anaesthesiol* 2004;18:703–717.
CrossRef (<https://doi.org/10.1016/j.bpa.2004.05.004>)
PubMed
(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=15460554)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Strategies%20for%20postoperative%20pain%20management&author=AK.%20Brown&author=PJ.%20Christo&author=CL.%20Wu&journal=Best%20Pract%20Res%20Clin%20Anaesthesiol&volume=18&pages=703-717&publication_year=2004)
3. Chang LH, Hsu CH, Jong GP, et al. Auricular acupuncture for managing postoperative pain and knee motion in patients with total knee replacement: a randomized sham control study. *Evid Based Complement Alternat Med* 2012;2012:528452.
PubMed
(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=22844334)
PubMedCentral
(<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3403627>)
Google Scholar
(http://scholar.google.com/scholar_lookup?

title=Auricular%20acupressure%20for%20managing%20postoperative%20pain%20and%20knee%20motion%20in%20patients%20with%20total%20knee%20replacement%3A%20a%20randomized%20sham%20control%20study&author=LH.%20Chang&author=CH.%20Hsu&author=GP.%20Jong&journal=Evid%20Based%20Complement%20Alternat%20Med&volume=2012&pages=528452&publication_year=2012)

4. Sharma S, Balireddy RK, Vorenkamp KE, et al. Beyond opioid patient-controlled analgesia: a systematic review of analgesia after major spine surgery. *Region Anesth Pain Med* 2012;37:79–98.

CrossRef

(<https://doi.org/10.1097/AAP.ob013e3182340869>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Beyond%20opioid%20patient%E2%80%93controlled%20analgesia%3A%20a%20systematic%20review%20of%20analgesia%20after%20major%20spine%20surgery&author=S.%20Sharma&author=RK.%20Balireddy&author=KE.%20Vorenkamp&journal=Region%20Anesth%20Pain%20Med&volume=37&pages=79-98&publication_year=2012)

5. He BJ, Tong PJ, Li J, et al. Auricular acupressure for analgesia in perioperative period of total knee arthroplasty. *Pain Med* 2010;14:1608–1613.

CrossRef (<https://doi.org/10.1111/pme.12197>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Auricular%20acupressure%20for%20analgesia%20in%20perioperative%20period%20of%20total%20knee%20arthroplasty&author=BJ.%20He&author=PJ.%20Tong&author=J.%20Li&journal=Pain%20Med&volume=14&pages=1608-1613&publication_year=2010)

6. Oleson T, ed. *Auriculotherapy manual: Chinese and Western systems of ear acupuncture*. Kidlington: Churchill Livingstone;2003:1–16.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=ed.%20Auriculotherapy%20manual%3A%20Chinese%20and%20Western%20systems%20of%20ear%20acupuncture&author=T.%20Oleson&publication_year=2003)

7. Wa-Watson J, Stevens B, Gaffmkel P, et al. Relationship between nurses' pain knowledge and pain management

outcomes for their postoperative cardiac patients. *J*

Advanc Nurs 2001;36:535–545.

CrossRef (<https://doi.org/10.1046/j.1365-2648.2001.02006.x>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Relationship%20between%20nurses%E2%80%99%20pain%20knowledge%20and%20pain%20management%20outcomes%20for%20their%20postoperative%20cardiac%20patients&author=J.%20Wa%E2%80%93Watson&author=B.%20Stevens&author=P.%20Gaffmkel&journal=J%20Advanc%20Nurs&volume=36&pages=535-545&publication_year=2001)

8. Jonas WB, Bellanti DM, Paat CF, et al. A randomized exploratory study to evaluate two acupuncture methods for the treatment of headaches associated with traumatic brain injury. *Med Acupunct* 2016;28:113–130.

CrossRef (<https://doi.org/10.1089/acu.2016.1183>)

PubMed

(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=27458496)

PubMedCentral

(<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4926228>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=A%20randomized%20exploratory%20study%20to%20evaluate%20two%20acupuncture%20methods%20for%20the%20treatment%20of%20headaches%20associated%20with%20traumatic%20brain%20injury&author=WB.%20Jonas&author=DM.%20Bellanti&author=CF.%20Paat&journal=Med%20Acupunct&volume=28&pages=113-130&publication_year=2016)

9. Vas J, Aguilar I, Campos MA, et al. Randomised controlled study in the primary healthcare sector to investigate the effectiveness and safety of auriculotherapy for the treatment of uncomplicated chronic rachialgia: a study protocol. *BMC Complement Alternat Med* 2008;8:36.

CrossRef (<https://doi.org/10.1186/1472-6882-8-36>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Randomised%20controlled%20study%20in%20the%20primary%20healthcare%20sector%20to%20investigate%20the%20effectiveness%20and%20safety%20of%20auri

culotherapy%20for%20the%20treatment%20of%20unco
mplicated%20chronic%20rachialgia%3A%20a%20study%
20protocol&author=J.%20Vas&author=I.%20Aguilar&aut
hor=MA.%20Campos&journal=BMC%20Complement%20
Alternat%20Med&volume=8&pages=36&publication_year
=2008)

10. Suen LK, Wong EM. Longitudinal changes in the disability level of the elders with low back pain after auriculotherapy. *Complement Therap Med* 2008;16:28–35.
CrossRef (<https://doi.org/10.1016/j.ctim.2007.09.002>)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Longitudinal%20changes%20in%20the%20disability%20level%20of%20the%20elders%20with%20low%20bac k%20pain%20after%20auriculotherapy&author=LK.%20S uen&author=EM.%20Wong&journal=Complement%20Th erap%20Med&volume=16&pages=28-35&publication_year=2008)
11. Zeng J, Cui LY, Feng Y, et al. Electroacupuncture relieves neuropathic pain via upregulation of glutamate transporters in the spinal cord of rats. *Neurosci Lett* 2016;620:38–42.
CrossRef (<https://doi.org/10.1016/j.neulet.2016.03.041>)
PubMed
(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=27026488)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Electroacupuncture%2orelieves%2oneuropathic%20 pain%20via%20upregulation%20of%20glutamate%20tran sporters%20in%20the%20spinal%20cord%20of%20rats& author=J.%20Zeng&author=LY.%20Cui&author=Y.%20Fe ng&journal=Neurosci%20Lett&volume=620&pages=38-42&publication_year=2016)
12. Suen LK, Wong TK, Chung JW, et al. Auriculotherapy on low back pain in the elderly. *Complement Therap Clin Pract* 2007;13:63–69.
CrossRef (<https://doi.org/10.1016/j.ctcp.2006.10.005>)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Auriculotherapy%20on%20low%20back%20pain%20 in%20the%20elderly&author=LK.%20Suen&author=TK.%20Wong&author=JW.%20Chung&journal=Complement

13. Gao SX, Zhu ZX. Effect of auricular point pressing and soothing massage on perioperative stress in patients undergoing abdominal surgery. *Chin Med Emerg (Chin)* 2010;19:1499–1451.
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Effect%20of%20auricular%20point%20pressing%20and%20soothing%20massage%20on%20perioperative%20stress%20in%20patients%20undergoing%20abdominal%20surgery&author=SX.%20Gao&author=ZX.%20Zhu&journal=Chin%20Med%20Emerg%20%28Chin%29&volume=19&pages=1499-1451&publication_year=2010)
14. Yeh ML, Tsou MY, Lee BY, et al. Effects of auricular acupuncture on pain reduction in patient–controlled analgesia after lumbar spine surgery. *Acta Anaesthes Taiwan* 2010;48:80–86.
CrossRef ([https://doi.org/10.1016/S1875-4597\(10\)60018-5](https://doi.org/10.1016/S1875-4597(10)60018-5))
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Effects%20of%20auricular%20acupuncture%20on%20pain%20reduction%20in%20patient%20controlled%20analgesia%20after%20lumbar%20spine%20surgery&author=ML.%20Yeh&author=MY.%20Tsou&author=BY.%20Lee&journal=Acta%20Anaesthes%20Taiwan&volume=48&pages=80-86&publication_year=2010)
15. Yeh CH, Chiang YC, Hoffman SL, et al. Efficacy of auricular therapy for pain management: a systematic review and metaanalysis. *Evid Based Complement Altern Med* 2014;2014:934670.
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Efficacy%20of%20auricular%20therapy%20for%20pain%20management%20a%20systematic%20review%20and%20metaanalysis&author=CH.%20Yeh&author=YC.%20Chiang&author=SL.%20Hoffman&journal=Evid%20Based%20Complement%20Altern%20Med&volume=2014&pages=934670&publication_year=2014)
16. Yang LH, Duan PP, Hou QM, et al. Efficacy of auricular acupuncture for chronic low back pain: a systematic review and meta–analysis of randomized controlled trials. *Evid Based Complement Alternat Med* 2017;2017:6383649.

PubMed

(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=28804504)

PubMedCentral

(<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5539928>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Efficacy%20of%20auricular%20acupressure%20for%20chronic%20low%20back%20pain%3A%20a%20systematic%20review%20and%20meta%E2%80%93analysis%20of%20randomized%20controlled%20trials&author=LH.%20Yang&author=PP.%20Duan&author=QM.%20Hou&journal=Evid%20Based%20Complement%20Alternat%20Med&volume=2017&pages=6383649&publication_year=2017)

17. Cho YH, Kim CK, Heo KH, et al. Acupuncture for acute postoperative pain after back surgery: a systematic review and meta-analysis of randomized controlled trials. *Pain Pract* 2015;15:279–291.

CrossRef (<https://doi.org/10.1111/papr.12208>)

PubMed

(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=24766648)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Acupuncture%20for%20acute%20postoperative%20pain%20after%20back%20surgery%3A%20a%20systematic%20review%20and%20meta%E2%80%93analysis%20of%20randomized%20controlled%20trials&author=YH.%20Cho&author=CK.%20Kim&author=KH.%20Heo&journal=Pain%20Pract&volume=15&pages=279-291&publication_year=2015)

18. Liu XL, Tan JY, Molassiotis A, et al. Acupuncture-point stimulation for postoperative pain control: a systematic review and meta-analysis of randomized controlled trials. *Evid Based Complement Alternat Med* 2015;2015:657809.

PubMed

(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=26568767)

PubMedCentral

(<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4620376>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Acupuncture%E2%80%93point%20stimulation%20for%20postoperative%20pain%20control%3A%20a%20systematic%20review%20and%20meta%E2%80%93analysis%20of%20randomized%20controlled%20trials&author=X.L.%20Liu&author=J.Y.%20Tan&author=A.%20Molassiotis&journal=Evid%20Based%20Complement%20Alternat%20Med&volume=2015&pages=657809&publication_year=2015)

19. Zheng XY, ed. Clinical guideline of new drugs for traditional Chinese medicine. Beijing: Medicine Science and Technology Press of China;1993:301–303.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=ed.%20Clinical%20guideline%20of%20new%20drugs%20for%20traditional%20Chinese%20medicine&author=XY.%20Zheng&publication_year=1993)

20. Higgins JP, Green S, eds. Cochrane handbook for systematic reviews of interventions: Cochrane Book Series. Oxford: The Cochrane Collaboration;2011:537–538.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=eds.%20Cochrane%20handbook%20for%20systematic%20reviews%20of%20interventions%3A%20Cochrane%20Book%20Series&author=JP.%20Higgins&author=S.%20Green&publication_year=2011)

21. Huang M, Huo ZM. Clinical study of auricular acupressure in prevention and treatment of postoperative pain after combined hemorrhoids and internal. Chin J Front Med Sci (Chin) 2017;7:339–340.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Clinical%20study%20of%20auricular%20acupressure%20in%20prevention%20and%20treatment%20of%20postoperative%20pain%20after%20combined%20hemorrhoids%20and%20internal&author=M.%20Huang&author=Z.M.%20Huo&journal=Chin%20J%20Front%20Med%20Sci%20%28Chin%29&volume=7&pages=339-340&publication_year=2017)

22. Deng DP, Xiong J. Clinical observation on ear acupuncture pressure beans in mixed hemorrhoid external incision and postoperative naturopathic pain nursing. J Jiangxi Tradit Chin Med (Chin) 2016;47:51–53.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Clinical%20observation%20on%20ear%20acupuncture%20pressure%20beans%20in%20mixed%20hemorrhoid%20external%20incision%20and%20postoperative%20anuropathic%20pain%20nursing&author=DP.%20Deng&author=J.%20Xiong&journal=J%20Jiangxi%20Tradit%20Chin%20Med%20%28Chin%29&volume=47&pages=51-53&publication_year=2016)

23. He XP, Guo S. The effect of auricular acupressure combined with conventional treatment on postoperative pain in mixed hemorrhoids. *J Hubei Tradit Chin Med (Chin)* 2016;38:67–68.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=The%20effect%20of%20auricular%20acupressure%20combined%20with%20conventional%20treatment%20on%20postoperative%20pain%20in%20mixed%20hemorrhoids&author=XP.%20He&author=S.%20Guo&journal=J%20Hubei%20Tradit%20Chin%20Med%20%28Chin%29&volume=38&pages=67-68&publication_year=2016)

24. Huang YF, Liu XF. The effectiveness of auricular point sticking with vaccaria seeds on postoperative pain in patients after mixed hemorrhoid surgery. *Chin Nurs Educat (Chin)* 2016;13:219–221.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=The%20effectiveness%20of%20auricular%20point%20sticking%20with%20vaccaria%20seeds%20on%20postoperative%20pain%20in%20patients%20after%20mixed%20hemorrhoid%20surgery&author=YF.%20Huang&author=XF.%20Liu&journal=Chin%20Nurs%20Educat%20%28Chin%29&volume=13&pages=219-221&publication_year=2016)

25. Li ZM. Nursing observation of the auricular point pressing on abdominal postoperative pain. *Bright Chin Med (Chin)* 2016;31:1815–1817.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Nursing%20observation%20of%20the%20auricular%20point%20pressing%20on%20abdominal%20postoperative%20pain&author=ZM.%20Li&journal=Bright%20Chin%20Med%20%28Chin%29&volume=31&pages=1815-1817&publication_year=2016)

26. Liu HM, Chen CL, Liang DX. Nursing intervention effect of auricular point sticking on pain of patients with closed fracture of upper limb after operation. Clin J Chin Med (Chin) 2016;8:114–116.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Nursing%20intervention%20effect%20of%20auricular%20point%20sticking%20on%20pain%20of%20patients%20with%20closed%20fracture%20of%20upper%20limb%20after%20operation&author=HM.%20Liu&author=CL.%20Chen&author=DX.%20Liang&journal=Clin%20J%20Chin%20Med%20%28Chin%29&volume=8&pages=114-116&publication_year=2016)

27. Sun JY, Chen CX. The influence of auricular–plaster therapy on postoperative pain and urinary function of mixed hemorrhoid. J Guiyang Coll Tradit Chin Med (Chin) 2016;38:49–52.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=The%20influence%20of%20auricular%E2%80%93plaster%20therapy%20on%20postoperative%20pain%20and%20urinary%20function%20of%20mixed%20hemorrhoid&author=JY.%20Sun&author=CX.%20Chen&journal=J%20Guiyang%20Coll%20Tradit%20Chin%20Med%20%28Chin%29&volume=38&pages=49-52&publication_year=2016)

28. Tian JJ, Zhai KK. The therapeutic effect observation of auricular acupoint pressing in relieving pain after total hip replacement. Clin J Tradit Chin Med (Chin) 2016;28:127–129.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=The%20therapeutic%20effect%20observation%20of%20auricular%20acupoint%20pressing%20in%20relieving%20pain%20after%20total%20hip%20replacement&author=JJ.%20Tian&author=KK.%20Zhai&journal=Clin%20J%20Tradit%20Chin%20Med%20%28Chin%29&volume=28&pages=127-129&publication_year=2016)

29. Zhang HL. Effect of ear point pressure bean care on pain after mixed hemorrhoids. J Med Theory Pract (Chin) 2016;29:954–955.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Effect%20of%20ear%20point%20pressure%20bean

%20care%20on%20pain%20after%20mixed%20hemorrhoids&author=HL.%20Zhang&journal=J%20Med%20Theory%20Pract%20%28Chin%29&volume=29&pages=954-955&publication_year=2016)

30. Zhang W. Observation and nursing of hepatic regional pain treated with ear buried seeds. *J Inner Mongolia Chin Med (Chin)* 2015;34:72–73.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Observation%20and%20nursing%20of%20hepatic%20regional%20pain%20treated%20with%20ear%20buried%20seeds&author=W.%20Zhang&journal=J%20Inner%20Mongolia%20Chin%20Med%20%28Chin%29&volume=34&pages=72-73&publication_year=2015)

31. Dong LN, Yu Q, Ye JE, et al. Effect of auricular point sticking on the pain and serum cortisol and interleukin–6 after cesarean section. *Chin J Nurs (Chin)* 2015;50:839–844.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Effect%20of%20auricular%20point%20sticking%20on%20the%20pain%20and%20serum%20cortisol%20and%20interleukin%E2%80%936%20after%20cesarean%20section&author=LN.%20Dong&author=Q.%20Yu&author=JE.%20Ye&journal=Chin%20J%20Nurs%20%28Chin%29&volume=50&pages=839-844&publication_year=2015)

32. Lv HY. Nursing care of 65 cases of postoperative tonsil pain after acupressure. *Hunan J Tradit Chin Med (Chin)* 2015;31:119–120.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Nursing%20care%20of%2065%20cases%20of%20postoperative%20tonsil%20pain%20after%20acupressure&author=HY.%20Lv&journal=Hunan%20J%20Tradit%20Chin%20Med%20%28Chin%29&volume=31&pages=119-120&publication_year=2015)

33. Wang CY. Ear pressure bean method to improve postoperative pain of simple anal fistula and nursing experience. *Hunan J Tradit Chin Med (Chin)* 2015;31:116–117.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Ear%20pressure%20bean%20method%20to%20improve%20postoperative%20pain%20of%20simple%20anal

%20ofistula%20and%20nursing%20experience&author=CY.
%20Wang&journal=Hunan%20J%20Tradit%20Chin%20
Med%20%28Chin%29&volume=31&pages=116-
117&publication_year=2015)

34. Zhang Y, Wei DJ, Chen SG, et al. Treating 30 cases of pharyngodynia after tonsillectomy by ear pressure. *Henan Tradit Chin Med (Chin)* 2015;35:164–165.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Treating%2030%20cases%20of%20pharyngodynia%20after%20tonsillectomy%20by%20ear%20pressure&author=Y.%20Zhang&author=DJ.%20Wei&author=SG.%20Chen&journal=Henan%20Tradit%20Chin%20Med%20%28Chin%29&volume=35&pages=164-165&publication_year=2015)

35. Mu X, Zhao SM, Wang D, et al. Observation on curative effect of sticking and pressing ear acupoint in prevention and treatment of pain in patients after acute appendectomy. *Chin Nurs Res (Chin)* 2014;28:978.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Observation%20on%20curative%20effect%20of%20sticking%20and%20pressing%20ear%20acupoint%20in%20prevention%20and%20treatment%20of%20pain%20in%20patients%20after%20acute%20appendectomy&author=X.%20Mu&author=SM.%20Zhao&author=D.%20Wang&journal=Chin%20Nurs%20Res%20%28Chin%29&volume=28&pages=978&publication_year=2014)

36. Shi FJ, Sun Y, Yue LH. 216 cases of ear acupressure treatment of endoscopic pain after surgery. *Zhejiang J Tradit Chin Med (Chin)* 2014;49:333.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=216%20cases%20of%20ear%20acupressure%20treatment%20of%20endoscopic%20pain%20after%20surgery&author=FJ.%20Shi&author=Y.%20Sun&author=LH.%20Yue&journal=Zhejiang%20J%20Tradit%20Chin%20Med%20%28Chin%29&volume=49&pages=333&publication_year=2014)

37. Wang QX, Ou GX, Sun M, et al. Effect of auricular point embedding on postoperative analgesia nursing of anorectal diseases. *Med J Chin People's Health (Chin)* 2014;26:122–128.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Effect%20of%20auricular%20point%20embedding%20on%20postoperative%20analgesia%20nursing%20of%20anorectal%20diseases&author=QX.%20Wang&author=GX.%20Ou&author=M.%20Sun&journal=Med%20J%20Chin%20People%E2%80%99s%20Health%20%28Chin%29&volume=26&pages=122-128&publication_year=2014)

38. Zhang H. Observation on the effect of analgesic nursing on patients after anorectal operation with ear pressure and beans method. *Contempor Med Forum (Chin)* 2014;12:138.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Observation%20on%20the%20effect%20of%20analgesic%20nursing%20on%20patients%20after%20anorectal%20operation%20with%20ear%20pressure%20and%20beans%20method&author=H.%20Zhang&journal=Contempor%20Med%20Forum%20%28Chin%29&volume=12&pages=138&publication_year=2014)

39. Zhu WP, Su ZF, Ling ZM. Effect of perioperative earplugs on the pain, nausea and vomiting after knee joint replacement. *J Inner Mongol Chin Med (Chin)* 2014;33:77-78.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Effect%20of%20perioperative%20earplugs%20on%20the%20pain%20nausea%20and%20vomiting%20after%20knee%20joint%20replacement&author=WP.%20Zhu&author=ZF.%20Su&author=ZM.%20Ling&journal=J%20Inner%20Mongol%20Chin%20Med%20%28Chin%29&volume=33&pages=77-78&publication_year=2014)

40. Zhu ZH, Wang DM, Yao WY, et al. Observation on analgesic effect of auricular buried bean on after finger replantation surgery. *Clin J Tradit Chin Med (Chin)* 2014;26:162-163.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Observation%20on%20analgesic%20effect%20of%20auricular%20buried%20bean%20on%20after%20finger%20replantation%20surgery&author=ZH.%20Zhu&author=DM.%20Wang&author=WY.%20Yao&journal=Clin%20J%20Tradit%20Chin%20Med%20%28Chin%29&volume=26&pages=162-163&publication_year=2014)

41. Chen J, Xu JM, Weng N, et al. Clinical efficacy of earculum

embedding in waist and back pain after nephrolithotomy. *J Zhejiang Univ Tradit Chin Med (Chin)* 2013;37:345–346.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Clinical%20efficacy%20of%20ear%20aculum%20embeddi%20ng%20in%20waist%20and%20back%20pain%20after%20nephrolithotomy&author=J.%20Chen&author=JM.%20Xu&author=N.%20Weng&journal=J%20Zhejiang%20Univ%20Tradit%20Chin%20Med%20%28Chin%29&volume=37&pages=345-346&publication_year=2013)

42. Liu HM. Research on alleviating postoperative pains of four limbs closed fracture with auricular point sticking. *Clin J Chin Med (Chin)* 2013;5:44–46.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Research%20on%20alleviating%20postoperative%20pains%20of%20four%20limbs%20closed%20fracture%20with%20auricular%20point%20sticking&author=HM.%20Liu&journal=Clin%20J%20Chin%20Med%20%28Chin%29&volume=5&pages=44-46&publication_year=2013)

43. Chai CY, Feng Q. Nursing effect of ear pressure bean intervention on pain after hemorrhoid operation. *North Pharm (Chin)* 2013;10:181.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Nursing%20effect%20of%20ear%20pressure%20bean%20intervention%20on%20pain%20after%20hemorrhoid%20operation&author=CY.%20Chai&author=Q.%20Feng&journal=North%20Pharm%20%28Chin%29&volume=10&pages=181&publication_year=2013)

44. Li WS, Liu XJ, Li WY, et al. Effect of assisted anesthesia of auricular point magnetic sticking on postoperative recovery of gynecological surgery. *Chin Acupunct Moxibust (Chin)* 2013;33:648–652.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Effect%20of%20assisted%20anesthesia%20of%20auricular%20point%20magnetic%20sticking%20on%20postoperative%20recovery%20of%20gynecological%20surgery&author=WS.%20Li&author=XJ.%20Liu&author=WY.%20Li&journal=Chin%20Acupunct%20Moxibust%20%28Chin%29&volume=33&pages=648-652&publication_year=2013)

45. Liu Y, Zeng GH. Clinical observation on relieving mixed

hemorrhoids postoperative pain by ear buried beans. Clin J Chin Med (Chin) 2013;5:81–82.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Clinical%20observation%20on%20relieving%20mixed%20hemorrhoids%20postoperative%20pain%20by%20ear%20buried%20beans&author=Y.%20Liu&author=GH.%20Zeng&journal=Clin%20J%20Chin%20Med%20%28Chin%29&volume=5&pages=81-82&publication_year=2013)

46. Fang F, Dai QA, Chen SK, et al. Application of pressing ear acupoint with magnetic beads to pain after mixed hemorrhoid surgery. West J Tradit Chin Med (Chin) 2012;25:89–91.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Application%20of%20pressing%20ear%20acupoint%20with%20magnetic%20beads%20to%20pain%20after%20mixed%20hemorrhoid%20surgery&author=F.%20Fang&author=QA.%20Dai&author=SK.%20Chen&journal=West%20J%20Tradit%20Chin%20Med%20%28Chin%29&volume=25&pages=89-91&publication_year=2012)

47. Gao XY, Wang L, Gaischek I, et al. Brain–modulated effects of auricular acupressure on the regulation of autonomic function in healthy volunteers. Evid Based Complement Alternat Med 2012;2012:714391.

PubMed

(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=21904563)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Brain%E2%80%93modulated%20effects%20of%20auricular%20acupressure%20on%20the%20regulation%20of%20autonomic%20function%20in%20healthy%20volunteers&author=XY.%20Gao&author=L.%20Wang&author=I.%20Gaischek&journal=Evid%20Based%20Complement%20Alternat%20Med&volume=2012&pages=714391&publication_year=2012)

48. Han JS. Acupuncture analgesia: areas of consensus and controversy. Pain 2011;152:S41–S48.

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Acupuncture%20analgesia%3A%20areas%20of%20consensus%20and%20controversy&author=JS.%20Han&p

49. Langford RM, Joshi GP, Gan TJ, et al. Reduction in opioid-related adverse events and improvement in function with parecoxib followed by valdecoxib treatment after non-cardiac surgery: a randomized, double-blind, placebo-controlled, parallel-group trial. *Clin Drug Invest* 2009;29:577-590.
CrossRef (<https://doi.org/10.2165/11317570-000000000-00000>)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Reduction%20in%20opioidrelated%20adverse%20events%20and%20improvement%20in%20function%20with%20parecoxib%20followed%20by%20valdecoxib%20treatment%20after%20non%E2%80%93cardiac%20surgery%3A%20a%20randomized%2C%20double%E2%80%93blind%2C%20placebo%E2%80%93controlled%2C%20parallelgroup%20trial&author=RM.%20Langford&author=GP.%20Joshi&author=TJ.%20Gan&journal=Clin%20Drug%20Invest&volume=29&pages=577-590&publication_year=2009)
50. Nüesch E, Trelle S, Reichenbach S, et al. Small study effects in meta-analyses of osteoarthritis trials: meta-epidemiological study. *Brit Med J* 2010;341:c3515.
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Small%20study%20effects%20in%20meta%E2%80%93analyses%20of%20osteoarthritis%20trials%3A%20meta%E2%80%93epidemiological%20study&author=E.%20N%C3%BCesch&author=S.%20Trelle&author=S.%20Reichenbach&publication_year=2010)
51. Pildal J, Hróbjartsson A, Jørgensen KJ, et al. Impact of allocation concealment on conclusions drawn from meta-analyses of randomized trials. *Int J Epidemiol* 2007;36:847-857.
CrossRef (<https://doi.org/10.1093/ije/dym087>)
PubMed
(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=17517809)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Impact%20of%20allocation%20concealment%20on%20conclusions%20drawn%20from%20meta%E2%80%93analyses%20of%20randomized%20trials&author=J.%20

Pildal&author=A.%20Hr%C3%B3bjartsson&author=KJ.%20J%C3%B6rgensen&journal=Int%20J%20Epidemiol&volume=36&pages=847-857&publication_year=2007)

52. Wood L, Egger M, Gluudetal LL. Empirical evidence of bias in treatment effect estimates in controlled trials with different interventions and outcomes: meta-epidemiological study. *Brit Med J* 2008;336:601-605.
CrossRef (<https://doi.org/10.1136/bmj.39465.451748.AD>)
PubMed
(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=18316340)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Empirical%20evidence%20of%20bias%20in%20treatment%20effect%20estimates%20in%20controlled%20trials%20with%20different%20interventions%20and%20outcomes%3A%20meta%20E%28%29%20epidemiological%20study&author=L.%20Wood&author=M.%20Egger&author=LL.%20Gluudetal&journal=Brit%20Med%20J&volume=336&pages=601-605&publication_year=2008)
53. Yeh ML, Chung YC, Chen KM, et al. Pain reduction of acupoint electrical stimulation for patients with spinal surgery: a placebocontrolled study. *Int J Nurs Stud* 2011;48:703-709.
CrossRef (<https://doi.org/10.1016/j.ijnurstu.2010.10.009>)
PubMed
(http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Abstract&list_uids=21122849)
Google Scholar
(http://scholar.google.com/scholar_lookup?title=Pain%20reduction%20of%20acupoint%20electrical%20stimulation%20for%20patients%20with%20spinal%20surgery%3A%20a%20placebocontrolled%20study&author=ML.%20Yeh&author=YC.%20Chung&author=KM.%20Chen&journal=Int%20J%20Nurs%20Stud&volume=48&pages=703-709&publication_year=2011)
54. Hugh MP, Altman DG, Richard H, et al. Revised standards for reporting interventions in clinical trials of acupuncture (STRICTA): extending the CONSORT statement. *J Evid Based Med* 2010;3:140-155.
CrossRef (<https://doi.org/10.1111/j.1756-5391.2010.01086.x>)

Google Scholar

(http://scholar.google.com/scholar_lookup?title=Revised%20standards%20for%20reporting%20interventions%20in%20clinical%20trials%20of%20acupuncture%20%28STRICTA%29%3A%20extending%20the%20CONSORT%20statement&author=MP.%20Hugh&author=D.G.%20Altman&author=H.%20Richard&journal=J%20Evidence%20Based%20Med&volume=3&pages=140-155&publication_year=2010)

Copyright information

© The Chinese Journal of Integrated Traditional and Western Medicine Press and Springer-Verlag GmbH Germany, part of Springer Nature 2019

About this article

Cite this article as:

Zhong, Q., Wang, D., Bai, Y. et al. Chin. J. Integr. Med. (2019) 25: 225.
<https://doi.org/10.1007/s11655-019-3063-1>

- Accepted 23 April 2018
- First Online 28 February 2019
- DOI <https://doi.org/10.1007/s11655-019-3063-1>
- Publisher Name Springer Berlin Heidelberg
- Print ISSN 1672-0415
- Online ISSN 1993-0402
- [About this journal](#)
- [Reprints and Permissions](#)

Personalised recommendations

1. [An evaluation of acupressure on the Sanyinjiao \(SP6\) and Hugo \(LI4\) points on the pain severity and length of](#)
Sayehmiri, Kourosh... Khajavikhan, Javaher
Iranian Journal of Nursing and Midwifery Research (2018)
2. [Beneficial effects of auricular acupressure on preventing constipation in breast cancer patients undergoing](#)
Zheng, Su-Hua... Xu, Xiao
Frontiers of Nursing (2018)
3. [Auricular acupressure is an alternative in treating constipation in leukemia patients undergoing](#)
Jing, Xueming... Zhu, Qi rong
Complementary Therapies in Clinical Practice (2018)

Want recommendations via email? [Sign up now](#)

Covered by [Recommended](#) 

SPRINGER NATURE

© 2019 Springer Nature Switzerland AG. Part of [Springer Nature](#).

Not logged in Not affiliated 95.233.251.108