

# Acupuncture during pregnancy

## Research

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## Overview

- ❖ **Does acupuncture have a place as an adjunct treatment during pregnancy?** Smith CA, Cochrane S. A review of randomized controlled trials and systematic reviews. Birth 2009 Sep;36(3):246-53.

This **systematic review** summarised the evidence examining the effectiveness of acupuncture during pregnancy and birthing. All placebo-controlled randomised trials of parallel design, and systematic reviews that evaluated the role of acupuncture during pregnancy and birthing were included. A critical appraisal of clinical trials and systematic reviews was undertaken.

The **results** of the findings indicated that there is evidence suggesting a benefit from acupuncture to treat nausea in pregnancy, and promising evidence for the effectiveness of acupuncture to manage back and pelvic pain, acupuncture-type interventions to induce change in breech presentation and pain relief in labour.

The reviewers concluded that evidence is beginning to consolidate that shows acupuncture may assist with the management of some complaints during pregnancy.

# Nausea and vomiting

- ❖ **Success of Acupuncture and Acupressure of the Pc 6 Acupoint in the Treatment of Hyperemesis Gravidarum.** D. Habek et al. *Research in Complementary and Classical Natural Medicine* 2004;11:20-23

The **aim** of this study was to evaluate the antiemetic effect of acupuncture in pregnant women with hyperemesis gravidarum (HG). 36 pregnant women with HG received acupuncture (group 1), acupressure (group 2), intracutaneous placebo acupuncture (group 3) or placebo acupuncture (group 4).

The **results** showed anxiodepressive symptoms occurred in 9 pregnant women with HG from group 1, 8 women from group 2, 7 women from group 3, and 5 women from group 4. The efficiency of the HG treatment in group 1 was 90%, 63.6% in group 2, 12.5% in group 3 and 0% in group 4 showing that acupuncture and acupressure are effective methods for the treatment of HG.

- ❖ **Acupuncture to treat nausea and vomiting in early pregnancy: A randomised controlled trial.** Smith et al. *Birth* 2002; 29(1): 1-9.

The **aim** was to compare 'traditional acupuncture', the use of 'one acupuncture point', 'sham acupuncture' and 'no acupuncture' on nausea and vomiting in 593 pregnant women. The outcomes of treatment were measured in terms of nausea, dry retching, vomiting and 5 aspects of general health.

The **results** showed that the 'traditional acupuncture' had the fastest response and also improved the general health status the most. The 'one acupuncture point' group reported improvements in nausea from the second week and dry retching in the third, and improvement in two general health aspects. The 'sham acupuncture' reported improvements in nausea and dry retching from the third week and two general health aspects. The 'no acupuncture' group reported no improvement in nausea or dry retching and improvement in only one general health aspect.

- ❖ **Manual acupuncture reduces hyperemesis gravidarum. A placebo-controlled, randomized, single-blind, crossover study.** Carlsson CP et al. *Physical Medicine Unit, Department of Rehabilitation, University Hospital, Lund, Sweden.*

The **aim** of the study was to see if acupuncture, in addition to standard treatment, could hasten the improvement of hyperemesis gravidarum (severe vomiting). 33 women with hyperemesis were evaluated and the daily number of episodes were documented.

The **results** showed that there was a significantly faster reduction of nausea and more women stopped vomiting after active acupuncture than after placebo acupuncture. This suggests that acupuncture, in combination with standard treatment, can help women with hyperemesis gravidarum.

# Mental health

## ❖ **Acupuncture for depression during pregnancy: a randomized controlled trial.** Manber R et al. *Obstet Gynecol* 2010;115:511-20.

The **aim** was to assess the efficacy of acupuncture for depression during pregnancy. 150 pregnant women were given acupuncture specific for depression or one of two active controls: control acupuncture or massage.

The **results** show that women who received acupuncture specific for depression experienced a greater rate of decrease in symptom severity compared with the combined controls or control acupuncture alone. They also had significantly greater response rate (63.0%) than the combined controls and control acupuncture alone. Symptom reduction and response rates did not differ significantly between controls. The researchers concluded that acupuncture specific for depression reduces symptoms and increases response rate in similar amounts to those observed with standard depression treatments and could be a viable treatment option for depression during pregnancy.

## ❖ **Acupuncture for mild to moderate emotional complaints in pregnancy—a prospective, quasirandomised, controlled study.** da Silva JBG. *Acupunct Med* 2007;25:65-71.

The **aim** of this quasi-randomised controlled study was to assess the effects of acupuncture under real life conditions, in the treatment of emotional complaints during pregnancy in 51 women (conventionally-treated with counselling by their physicians and nurses). They were either treated or not by acupuncture. Both groups presented with emotional complaints such as anxiety, depression and irritability.

The **results** show that the impact of distress was significantly less in the acupuncture group when compared with the control group. The researchers concluded that acupuncture seemed to be an efficacious means of reducing symptoms and improving the quality of life of women with emotional complaints during pregnancy.

# Pain during pregnancy

- ❖ **Acupuncture for pelvic and back pain in pregnancy: a systematic review.** Ee CC et al. *Am J Obstet Gynecol* 2008;198:254-9.

A **systematic review** that looked at the effectiveness of acupuncture in treating pelvic and back pain in pregnancy. Two small trials on mixed pelvic/back pain and one large high-quality trial on pelvic pain were included.

Overall **results** show acupuncture, as an adjunct to standard treatment, was superior to standard treatment alone and physiotherapy in relieving mixed pelvic/back pain. Women with well-defined pelvic pain had greater relief of pain with a combination of acupuncture and standard treatment, compared to standard treatment alone or stabilizing exercises and standard treatment. Few and minor adverse events were reported. The reviewers concluded that limited evidence supports acupuncture use in treating pregnancy-related pelvic and back pain.

- ❖ **Effects of acupuncture and stabilising exercises as adjunct to standard treatment in pregnant women with pelvic girdle pain: randomised single blind controlled trial.** Elden H, Ladfors L, et al. *BMJ*. 2005;330(7494):761.

The **aim** was to compare the effects of standard treatment, standard treatment with acupuncture, and standard treatment with stabilizing exercises for pelvic girdle pain during pregnancy.

386 pregnant women with pelvic girdle pain were randomly assigned to three groups: for six weeks with standard treatment (n=130), standard treatment plus acupuncture (n= 125), or standard treatment plus stabilizing exercises (n= 131).

The **results** found that after treatment the stabilizing exercise group had less pain than the standard group but the acupuncture group was the most effective. It was effective for one-sided sacroiliac pain, one sided sacroiliac pain combined with symphysis pubis pain and double sided sacroiliac pain.

- ❖ **Acupuncture for low back pain in pregnancy – a prospective, quasi-randomised, controlled study.** Guerreiro da Silva JB et al. *Acupunct. Med.* 2004 Jun;22(2):60-7

This **aim** was to investigate the effects of acupuncture in low back and pelvic pain during pregnancy under real life conditions, as compared with patients undergoing conventional treatment alone.

61 conventionally treated pregnant women were allocated randomly into two groups to be treated by acupuncture and a control that had no acupuncture. 27 patients formed the acupuncture group and 34 the control group.

The severity of pain was reported using a Numerical Rating Scale from 0 to 10, and their capacity to perform general activities, to work, and to walk. The need for the use of analgesic drugs to help the pain was also assessed.

The **results** showed that the acupuncture group had a larger reduction in pain than the control group with pain scores decreased by at least 50% in 21 patients (78%) of the acupuncture group and in 5 patients (15%) of the control group. Maximum pain and pain at the moment of interview were also less in the acupuncture group compared with the control group. The capacity to perform general activities, to work and to walk was improved significantly more in the acupuncture group than in the control group and the use of paracetamol was lower in the acupuncture group.

❖ **Acupuncture relieves low-back and pelvic pain without serious adverse effects in late pregnancy.** Kvorning N, et al. *Acta obstetricia et gynecologica Scandinavica* 83(3):246-50.

The **aim** was to evaluate the analgesic effect and possible adverse effects of acupuncture for pelvic and low-back pain during the last trimester of pregnancy.

72 women, 24-37 weeks pregnant, with pelvic or low-back pain were randomized to an acupuncture group (n = 37) or to a control group (n = 35). Traditional acupuncture points and local tender points (TP) were chosen according to individual pain patterns and stimulated once or twice a week until delivery or complete recovery in acupuncture patients.

Control patients were given no sham stimulation. Throughout the study period each patient made weekly visual analog scale (VAS) evaluations of maximal and minimal pain intensity as well as three-point assessments of pain intensity during various activities.

The **results** showed that VAS scores decreased over time in 60% of patients in the acupuncture group and in 14% of those in the control group. No serious adverse effects of acupuncture were found in the patients, and there were no adverse effects at all in the infants.

## Dyspepsia (indigestion)

❖ **Acupuncture for dyspepsia in pregnancy: a prospective, randomised, controlled study.** da Silva JB et al. *Acup Med* 2009;27:50-3.

The **aim** was to assess the effects of acupuncture on symptomatic dyspepsia (indigestion) during pregnancy and compare this with a group of patients undergoing conventional treatment alone. A total of 42 conventionally treated pregnant women were treated, or not, by acupuncture. They reported the severity of symptoms and the disability these were causing in daily aspects of life such as sleeping and eating, using a numerical rating scale. The study also observed the use of medications.

The **results** showed significant improvements in symptoms in the acupuncture group. This group also used less medication and had a greater improvement in their disabilities when compared with the control group. The researchers concluded that acupuncture can alleviate dyspepsia during pregnancy.



## Breech presentation

Research into moxibustion at BL-67 for the correction of breech presentation, after the thirty-third week of gestation, found a good success rate (84.6%). Being a cheap, safe, simple, non-invasive, and painless technique, there is an on-going trend toward offering this treatment as an option in breech baby cases (Ewies & Olah, 2002).

Research has shown that moxibustion for one to two weeks at BL-67 increased fetal activity during the treatment period and cephalic presentation after the treatment period, at delivery (Cardini & Weixin, 1998) but that it may be more successful at around 33<sup>rd</sup> week of gestation and less successful after the 34<sup>th</sup> week of gestation.

❖ **Correction of nonvertex presentation with moxibustion: a systematic review and metaanalysis.** Vas J et al. *Am J Obstet Gynecol* 2009;201:241- 59.

A systematic review, including 6 randomised controlled trials and a total of 1,087 pregnant women, to assess moxibustion for breech presentation.

The **results** show the rate of cephalic version among the moxibustion group was 72.5% versus 53.2% in the control group. No significant differences were found in the comparison of moxibustion with other techniques in terms of safety.

The reviewers concluded that moxibustion at acupuncture point BL67 has been shown to produce a positive effect, whether used alone or in combination with acupuncture or postural measures, in comparison with observation or postural methods alone, for the correction of breech presentation.

❖ **Moxibustion and other acupuncture point stimulation methods to treat breech presentation: a systematic review of clinical trials.** Li X et al. *Chin Med* 2009;4:4.

A systematic review to evaluate the efficacy and safety of moxibustion to treat breech presentation. Ten randomized controlled trials involving 2,090 women and 7 controlled clinical trials involving 1,409 women were included. Meta-analysis of randomised controlled trials showed significant differences between moxibustion and no treatment but not between moxibustion and knee-chest position. Moxibustion plus other therapeutic methods showed significant beneficial effect. For non-randomised controlled trials, moxibustion was more effective than no-treatment but not more effective than the knee-chest position treatment. The reviewers concluded that moxibustion, acupuncture and laser acupoint stimulation tend to be effective in the correction of breech presentation.

❖ **Moxibustion for correction of breech presentation.** Cardini F, Weixin H. *Journal of American Association (JAMA)* 1998; 280:1580-1584.

The **aim** was to evaluate the efficacy and safety of moxibustion on acupuncture point 'Zhiyin' to correct breech presentation.

130 women having their first baby at 33 weeks received moxibustion to acupuncture point 'Zhiyin' while 130 women received no intervention.

The moxibustion was administered for 7 days. Women were then assessed and a further 7 days of moxibustion treatment given if the position had not changed. Outcomes were measured in terms of fetal movements (counted by the mother) and the number of cephalic presentations both at 35 weeks gestation and at delivery.

The **results**, at 35 weeks, showed 75.4% in the moxibustion group and 47.7% in the control were cephalic. The presentation did not change in any of the groups after 35 weeks except in those that underwent subsequent external cephalic version (ECV).

Women in both groups then had the option of undergoing external cephalic version (ECV). One woman took this option from the intervention group and 24 from the control group. As a result, at delivery 75.4% of the moxibustion group were cephalic compared to 62.3% in the control group.

In terms of fetal movement the moxibustion group experienced a greater number of movements (a mean of 48.45 compared to the control group with a mean of 35.35).

No adverse events were noted in the moxibustion group. Also, while the number of premature rupture of membranes was similar in both groups the number of premature births was lower in the moxibustion group and the use of oxytocin, before or during labour, was also reduced in the moxibustion group (8.6% compared to 31.3%).

❖ **Non-stress test changes during acupuncture plus moxibustion on BL67 point in breech presentation.** Neri I, Fazzio M, Menghini S, Volpe A, Facchinetti F., Clinica Ostetrica, Università di Roma-Tor Vergata, Rome, Italy.

The **aim** was to assess the fetal heart variability and activity during acupuncture with moxibustion on the point BL 67 compared with placebo acupuncture (minimal acupuncture) in the same subjects.

12 women in the 33rd week of gestation, carrying singletons in the breech presentation received a session of minimal acupuncture followed 1-2 days later by true acupuncture. During the sessions, women were monitored using computerized non-stress testing starting 20 minutes before the stimuli and continuing for 20 minutes after treatment.

The **results** showed a significant reduction in fetal baseline heart rate, and more accelerations and movement were observed during true acupuncture. During minimal acupuncture, there were no significant changes in these variables. No signs of fetal distress or changes in short- or long-term variability were noted, and there were no uterine contractions.

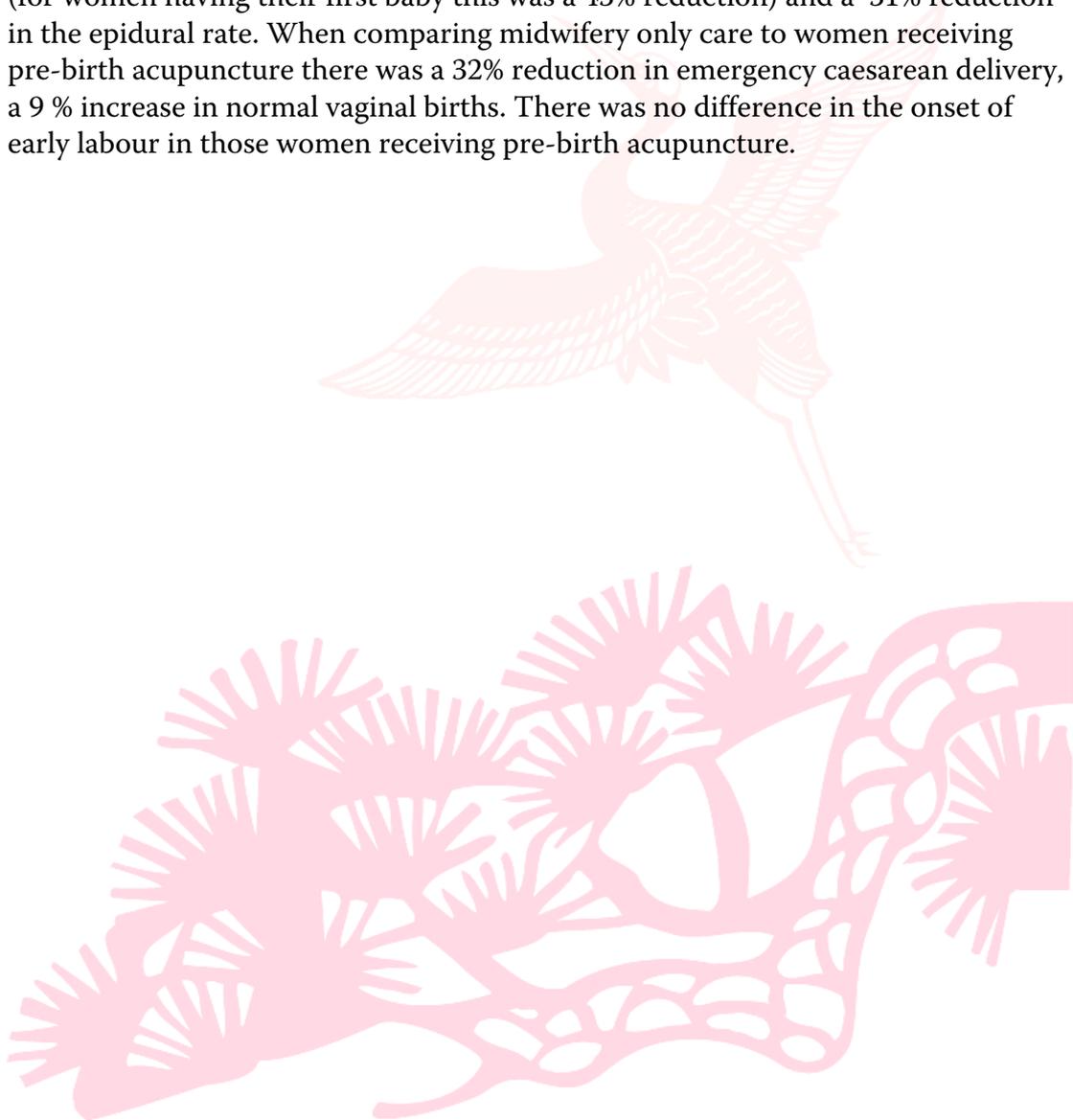
In our study population, acute application of acupuncture plus moxibustion did not cause fetal distress as assessed by either fetal heart rate decelerations or changes in either short- or long-term variability. Considering that the modifications in fetal movement and heart rate occurred in true but not during minimal acupuncture, we could consider that such changes are related to the effect of the acupuncture stimulation. The mechanisms leading to the cephalic version remain to be clearly established.



## Pre-birth weekly treatment from 36 weeks

### ❖ **Acupuncture for pre-birth treatment: An observational study of its use in midwifery practice.** Debra Betts and Sue Lennox

Data on 169 women was gathered by 14 midwives as part of their midwifery practice in Wellington, New Zealand. It was found that when comparing all caregivers (Midwives GP's and Specialists) to those women who had received pre-birth acupuncture there was an overall 35% reduction in the number of inductions (for women having their first baby this was a 43% reduction) and a 31% reduction in the epidural rate. When comparing midwifery only care to women receiving pre-birth acupuncture there was a 32% reduction in emergency caesarean delivery, a 9% increase in normal vaginal births. There was no difference in the onset of early labour in those women receiving pre-birth acupuncture.



## Affect on Cervix

- ❖ **Acupuncture for cervical ripening and induction of labour at term – a randomised controlled trial.** Rabl M, Ahner R, Bitschnau M, Zeisler H, Husslein P. *Wien Klin Wochenschr* 2001; 113 (23-24): 942-6

The **aim** to evaluate whether acupuncture at term can influence cervical ripening and thus reduce the need for postdates induction.

45 women were randomized into an acupuncture group (25) and control group (20) on their due dates. They were examined twice daily for cervical length. The acupuncture group also received acupuncture every two days. If they hadn't delivered after 10 days, labour was induced with vaginal prostaglandin tablets.

The **results** showed that time period from the woman's due date to delivery averaged 5 days in the acupuncture group compared to 7.9 days in the control group. Labour was induced in 20% of women in the acupuncture group compared to 35% in the control group.

This shows that acupuncture supports cervical ripening and can shorten the time interval between the woman's expected date of delivery and the actual time of delivery.

- ❖ **Acupuncture for Cervical Maturation.** Tremeau et al. *Journal de Gynecologie, Obstetrique et Biologie de la Reproduction*, 1992, 21(4):375-80.

The **aim** was to establish whether acupuncture can be used to improve cervical maturation in pregnancy.

98 patients were divided into three groups selected as (a control group, a "placebo" group, and an acupuncture group).

The **results** showed that it was possible to improve cervical maturation if acupuncture sessions were carried out at the beginning of the 9th month.

# Induction of labour

- ❖ **Effect of acupuncture on induction of labor.** Lim CE et al. *J Altern Complement Med* 2009;15:1209-14.

This **systematic review** looked at the existing scientific evidence on the potential role of acupuncture for induction of labour during pregnancy. Ten studies were identified. The duration of labour as a result of acupuncture treatment ranged from 10 hours 20 minutes to 29.1 hours. All of the studies demonstrated labour induction by acupuncture treatment. However, because two (of the five) randomised controlled trials reported that there was no statistically significant effect of acupuncture, these results are more suggestive than definitive.

The reviewers **conclude** that, although the definitive role of acupuncture in inducing labour is still yet to be established, the existing studies suggest that acupuncture may be beneficial in labour induction.

- ❖ **Acupuncture to initiate labor (Acumoms 2): a randomized, sham-controlled clinical trial.** Asher GN et al. *J Matern Fetal Neonatal Med* 2009;22:843-8.

The **aim** was to study the effect of acupuncture on time from enrolment to delivery. Secondary outcomes included rates of spontaneous labour and caesarean delivery. 89 nulliparous women at 38 weeks or greater were randomised to acupuncture, sham acupuncture, or usual care only groups.

The **results** showed that there were no statistically significant differences among groups for time from enrolment to delivery, rates of spontaneous labour, or rates of caesarean delivery. Rates of maternal and neonatal outcomes were not significantly different. The researchers concluded that TCM acupuncture was not effective in initiating spontaneous labour or reducing the rate of caesarean delivery compared with sham acupuncture or usual medical care.

- ❖ **The safety of electroacupuncture at Hegu (LI 4) plus oxytocin for hastening uterine contraction of puerperants - a randomized controlled clinical observation.** Liu J et al. *J Tradit Ch Med* 2008;28:163-7.

The **aim** was to investigate the safety of electroacupuncture plus oxytocin for uterine contraction in 276 puerperants with difficult labour. The women were allocated to intravenous oxytocin, or electroacupuncture plus intravenous oxytocin.

The **results** showed that during labour, heart rate, respiratory frequency, blood pressure, fetal heart rate and the birth process were all within the normal range in all of the women with better effects in the acupuncture plus oxytocin group. The researchers concluded electroacupuncture plus intravenous oxytocin can intensify uterine contraction, shorten the birth process to avoid probable systemic exhaustion consumption, and with no side effects in either puerperants and newborns.

# Effects during labour

- ❖ **Complementary and alternative therapies for pain management in labour.** Smith CA et al. Cochrane Database Syst Rev 2006 Oct 18;(4):CD003521.

A **systematic review** that examined currently available evidence supporting the use of alternative and complementary therapies for pain management in labour. It included three trials of acupuncture involving 496 women. These showed a decreased need for pain relief. The reviewers concluded that acupuncture may be beneficial for the management of pain during labour, but the small number of women studied was a limitation.

- ❖ **Acupuncture in labor management.** Allais, G., et al. *Minerva ginecologica* 55(6): 503-10.

The **aim** was to review was the various applications of acupuncture during labour.

The **results** showed that acupuncture has a significant percentage of positive results to induce labor in post-term pregnancies, to strengthen uterine contractility and to favor cervical maturation. It stated that the treatment is effective in about 75% of patients.

It also **concluded** that the use of acupuncture to achieve pain relief and analgesia during labor is more controversial, mainly due to the great heterogeneity of applied treatments and some methodological biases. Nevertheless, the general evidence also seems to be positive for this application.

- ❖ **Influence of acupuncture on duration of labor.** Zeisler H et al. Department of Obstetrics and Gynecology, University of Vienna, Austria. (Case study)

The **aim** of this case control study was to evaluate the thus far controversially discussed influence of acupuncture (AP) on the duration of labor. Fifty-seven women with AP treatment (group A) were included in our study after spontaneous vaginal full-term delivery. The control group included 63 women (group B).

The **results** showed that the median duration of the first stage of labor was 196 minutes in group A and 321 minutes in group B. Median duration of the second stage of labor was 57 min in group A and 57 min in group B. 66.7% had a premature rupture of the membranes (PROM), in group A and 33.3% in group B. Women in group B received significantly more often oxytocin during the first and second stage of labor. The study suggests that AP treatment is a recommendable form of childbirth preparation due to its positive effect on the duration of labor.

# Post-partum surgical recovery

❖ **Ear acupuncture or local anaesthetics as pain relief during postpartum surgical repair: a randomised controlled trial.** Kindberg S et al. BJOG 2009;116:569-76.

The **aim** was to evaluate two methods of pain relief during postpartum surgical repair in regard to effectiveness, wound healing and patient evaluation. A total of 207 primiparous women with a vaginal delivery at term who needed surgical repair of lacerations to the labia, vagina or perineum were allocated to receive ear acupuncture or local anaesthetics.

The **results** showed that pain during surgical repair was more frequently reported by participants given ear acupuncture than those given a local anaesthetics. Pain intensity was also reported as higher and the ear acupuncture group received more additional pain relief. No difference was observed in wound healing. Comparable proportions of participants reported dyspareunia at 6 months. Patient satisfaction with the allocated pain-relief method was lower in the ear acupuncture group. The researchers concluded that ear acupuncture as used in this trial was less effective for pain relief compared with a local anesthetic, and patient satisfaction with allocated pain-relief method was lower in the ear acupuncture group.

