1. How effective are warm compresses and perineal massage at reducing perineal trauma? A review of the evidence.

**Author(s):** Newman, Melissa

**Source:** MIDIRS Midwifery Digest; Dec 2017; vol. 27 (no. 4); p. 479-482

**Publication Date:** Dec 2017

**Publication Type(s):** Academic Journal

**Abstract:** The second stage of labour is defined as full cervical dilation until delivery of the baby, but in reality it is so much more than this. The woman is encompassed in a paradox of physical strength but emotional vulnerability, as with each push she journeys closer to the life-changing rite of passage that is motherhood. For many years pregnancy internet forums have been littered with questions concerning the emotive topic of how to prevent tears, and it continues to be a frequently asked question at antenatal appointments. Researchers are forever seeking the elusive answer. Midwives utilise a variety of hand techniques that they believe help to reduce genital trauma rates. Such techniques include the use of warm compresses and perineal massage in labour with the aim of potentially reducing trauma due to the effects of vasodilation and increased blood supply, muscle relaxation, altered pain perception and improving stretching and extensibility of the tissues. Part of the midwife’s role is to stay up to date with research in order to provide gold standard evidence-based care. However, midwives often feel uncertain about what can be done to reduce the chance of tearing and many women therefore accept it as a given that they will tear. Due to the lack of knowledge of both midwives and women regarding prevention techniques, the 'caring for your stitches' leaflet is handed out all too often.

**Database:** CINAHL
2. Perineal techniques during the second stage of labour for reducing perineal trauma.

**Author(s):** Aasheim, Vigdis; Nilsen, Anne Britt Vika; Reinar, Liv Merete; Lukasse, Mirjam

**Source:** The Cochrane database of systematic reviews; Jun 2017; vol. 6; p. CD006672

**Publication Date:** Jun 2017

**Publication Type(s):** Research Support, Non-u.s. Gov't Meta-analysis Journal Article Review

**PubMedID:** 28608597

Available at [Cochrane Database of Systematic Reviews](https://www.cochranelibrary.com) - from Cochrane Collaboration (Wiley)

**Abstract:**
BACKGROUND Most vaginal births are associated with trauma to the genital tract. The morbidity associated with perineal trauma can be significant, especially when it comes to third- and fourth-degree tears. Different interventions including perineal massage, warm or cold compresses, and perineal management techniques have been used to prevent trauma. This is an update of a Cochrane review that was first published in 2011.

OBJECTIVE To assess the effect of perineal techniques during the second stage of labour on the incidence and morbidity associated with perineal trauma.

SEARCH METHODS We searched Cochrane Pregnancy and Childbirth's Trials Register (26 September 2016) and reference lists of retrieved studies.

SELECTION CRITERIA Published and unpublished randomised and quasi-randomised controlled trials evaluating perineal techniques during the second stage of labour. Cross-over trials were not eligible for inclusion.

DATA COLLECTION AND ANALYSIS Three review authors independently assessed trials for inclusion, extracted data and evaluated methodological quality. We checked data for accuracy.

MAIN RESULTS Twenty-two trials were eligible for inclusion (with 20 trials involving 15,181 women providing data). Overall, trials were at moderate to high risk of bias; none had adequate blinding, and most were unclear for both allocation concealment and incomplete outcome data. Interventions compared included the use of perineal massage, warm and cold compresses, and other perineal management techniques. Most studies did not report data on our secondary outcomes. We downgraded evidence for risk of bias, inconsistency, and imprecision for all comparisons. Hands off (or poised) compared to hands on

Hands on or hands off the perineum made no clear difference in incidence of intact perineum (average risk ratio (RR) 1.03, 95% confidence interval (CI) 0.95 to 1.12; two studies, Tau² 0.00, \( I^2 \) 37%, 6547 women; moderate-quality evidence), first-degree perineal tears (average RR 1.32, 95% CI 0.99 to 1.77, two studies, 700 women; low-quality evidence), second-degree tears (average RR 0.77, 95% CI 0.47 to 1.28, two studies, 700 women; low-quality evidence), or third- or fourth-degree tears (average RR 0.68, 95% CI 0.21 to 2.26; five studies, Tau² 0.92, \( I^2 \) 72%, 7317 women; very low-quality evidence). Substantial heterogeneity for third- or fourth-degree tears means these data should be interpreted with caution. Episiotomy was more frequent in the hands-on group (average RR 0.58, 95% CI 0.43 to 0.79, Tau² 0.07, \( I^2 \) 74%, four studies, 7247 women; low-quality evidence), but there was considerable heterogeneity between the four included studies. There were no data for perineal trauma requiring suturing. Warm compresses versus control (hands off or no warm compress) A warm compress did not have any clear effect on the incidence of intact perineum (average RR 1.02, 95% CI 0.85 to 1.21; 1799 women; four studies; moderate-quality evidence), perineal trauma requiring suturing (average RR 1.14, 95% CI 0.79 to 1.66; 76 women; one study; very low-quality evidence), second-degree tears (average RR 0.95, 95% CI 0.58 to 1.56; 274 women; two studies; very low-quality evidence), or episiotomy (average RR 0.86, 95% CI 0.60 to 1.23; 1799 women; four studies; low-quality evidence). It is uncertain whether warm compress increases or reduces the incidence of first-degree tears (average RR 1.19, 95% CI 0.38 to 3.79; 274 women; two studies; \( I^2 \) 88%; very low-quality evidence). Fewer third- or fourth-degree perineal tears were reported in the warm-compress group (average RR 0.46, 95% CI 0.27 to 0.79; 1799 women; four studies; moderate-quality evidence). Massage versus control (hands off or routine care) The incidence of intact perineum was increased in the perineal-massage group (average RR 1.74, 95% CI 1.11 to 2.73; six studies, 2618 women; \( I^2 \) 83% low-quality evidence) but there was substantial heterogeneity between studies. This group experienced fewer third- or fourth-degree tears (average RR 0.49, 95% CI 0.25 to
There were no clear differences between groups for perineal trauma requiring suturing (average RR 1.10, 95% CI 0.75 to 1.61, one study, 76 women; very low-quality evidence), first-degree tears (average RR 1.55, 95% CI 0.79 to 3.05, five studies, Tau² 0.47, I² 85%, 537 women; very low-quality evidence), or second-degree tears (average RR 1.08, 95% CI 0.55 to 2.12, five studies, Tau² 0.32, I² 62%, 537 women; very low-quality evidence). Perineal massage may reduce episiotomy although there was considerable uncertainty around the effect estimate (average RR 0.55, 95% CI 0.29 to 1.03, seven studies, Tau² 0.43, I² 92%, 2684 women; very low-quality evidence). Heterogeneity was high for first-degree tear, second-degree tear and for episiotomy - these data should be interpreted with caution. Ritgen’s manoeuvre versus standard care: One study (66 women) found that women receiving Ritgen’s manoeuvre were less likely to have a first-degree tear (RR 0.32, 95% CI 0.14 to 0.69; very low-quality evidence), more likely to have a second-degree tear (RR 3.25, 95% CI 1.73 to 6.09; very low-quality evidence), and neither more nor less likely to have an intact perineum (RR 0.17, 95% CI 0.02 to 1.31; very low-quality evidence). One larger study reported that Ritgen’s manoeuvre did not have an effect on incidence of third- or fourth-degree tears (RR 1.24, 95% CI 0.78 to 1.96, 1423 women; low-quality evidence). Episiotomy was not clearly different between groups (RR 0.81, 95% CI 0.63 to 1.03, two studies, 1489 women; low-quality evidence). Other comparisons: The delivery of posterior versus anterior shoulder first, use of a perineal protection device, different oils/wax, and cold compresses did not show any effects on perineal outcomes. Only one study contributed to each of these comparisons, so data were insufficient to draw conclusions.

**AUTHORS’ CONCLUSIONS**

Moderate-quality evidence suggests that warm compresses, and massage, may reduce third- and fourth-degree tears but the impact of these techniques on other outcomes was unclear or inconsistent. Poor-quality evidence suggests hands-off techniques may reduce episiotomy, but this technique had no clear impact on other outcomes. There were insufficient data to show whether other perineal techniques result in improved outcomes. Further research could be performed evaluating perineal techniques, warm compresses and massage, and how different types of oil used during massage affect women and their babies. It is important for any future research to collect information on women’s views.

**Database:** Medline
3. Birth ball or heat therapy? A randomized controlled trial to compare the effectiveness of birth ball usage with sacrum-perineal heat therapy in labor pain management.

**Author(s):** Taavoni, Simin; Sheikhan, Fatemeh; Abdolahian, Somayeh; Ghavi, Fatemeh

**Source:** Complementary therapies in clinical practice; Aug 2016; vol. 24 ; p. 99-102

**Publication Date:** Aug 2016

**Publication Type(s):** Comparative Study Randomized Controlled Trial Journal Article

**PubMedID:** 27502808

**Abstract:**

**OBJECTIVE:** Labor pain and its management is a major concern for childbearing women, their families and health care providers. This study aimed to investigate the effects of two non-pharmacological methods such as birth ball and heat therapy on labor pain relief.

**METHODS:** This randomized control trial was undertaken on 90 primiparous women aged 18-35 years old who were randomly assigned to two intervention (birth ball and heat) and control groups. The pain score was recorded by using Visual Analogue Scale (VAS) before the intervention and every 30 min in three groups until cervical dilatation reached 8 cm.

**RESULT:** The mean pain severity score in the heat therapy group was less than that of in control group at 60 and 90 min after intervention (p < 0.05). In addition there were significantly differences between the pain scores in the birth ball group after all three investigated times in comparison to control group.

**CONCLUSION:** Both heat therapy and birth ball can use as inexpensive complementary and low risk treatment for labor pain.

**Database:** Medline

4. Labor pain management: Effect of pelvic tilt by birth ball, sacrum-perineal heat therapy, and combined use of them, a randomized controlled trial

**Author(s):** Taavoni S.; Abdolahian S.; Neisani L.; Hamid H.

**Source:** European Psychiatry; Mar 2016; vol. 33

**Publication Date:** Mar 2016

**Publication Type(s):** Conference Abstract

**Abstract:**

There are various safe non-pharmacologic methods for labor pain management, which mostly decrees suffering of mother and some of them significantly decrease pain too. Aim: To assess effect of pelvic tilt by birth ball, sacrum-perineal heat therapy and combination use of them on active phase of physiologic labor. Method: In this randomized control trial, 120 primiparous volunteer with age 18-35 years, gestational age of 38-40 weeks, in one of hospitals of Iran university of medical sciences were randomly selected and divided in four groups: Pelvic tilt by using birth ball, sacrum perinea heat therapy, combined use of two mentioned methods and control group. Tools had 3 main parts of personal characteristic, client examination form and pain visual analogue scale (VAS). All ethical points were considered. Results: Equality of four groups had been checked before intervention. Lowest pain score first belong to pelvic tilt by birth ball then combined group and finally in heat therapy, which all were significantly less than control group. Significant decrease of pain had been seen in birth ball group and combined group during after 30 minutes intervention, but in the heat therapy group, it was seen after 60 minutes intervention (P-value < 0.05). Conclusion: All three interventions of this study had significant effect and decreased labor pain during active phase, but highest decrease was in pelvic tilt by birth ball group and its effect started after 30 minutes intervention. It is suggested that that Obstetrics and Midwives consider these safe methods for labor pain management.

**Database:** EMBASE
5. The Effect of Warm Compress BiStage Intervention on the Rate of Episiotomy, Perineal Trauma, and Postpartum Pain Intensity in Primiparous Women with Delayed Valsalva Maneuver Referring to the Selected Hospitals of Shiraz University of Medical Sciences in 2012-2013.

Author(s): Akbarzadeh, Marzieh; Vaziri, Faride; Farahmand, Mahnaz; Masoudi, Zahra; Amooee, Sedigheh; Zare, Najaf

Source: Advances in skin & wound care; Feb 2016; vol. 29 (no. 2); p. 79-84

Publication Date: Feb 2016

Publication Type(s): Research Support, Non-u.s. Gov't Randomized Controlled Trial Journal Article

PubMedID: 26765160

Available at Advances in skin & wound care - from Ovid (LWW Total Access Collection 2015 - Q1 with Neurology)

Abstract: BACKGROUND Genital trauma during vaginal delivery may result from episiotomy, spontaneous perineal tears (perineum, vagina), or both. In 2012, this study aimed to investigate the effect of warm compress bi stage intervention on the rate of episiotomy, perineal trauma, and postpartum pain intensity in the primiparous woman with delayed Valsalva maneuver. METHODS In this randomized clinical trial, which was performed in hospitals in Shiraz, Iran, in 2012-2013, 150 women were randomly divided into 2 groups: 1 intervention and 1 control. The intervention group received warm compress bi stage intervention at 7-cm and 10-cm dilatation and zero position during the first and second stages of labor for 15 to 20 minutes, whereas the control group received the hospitals' routine care. After delivery, the prevalence of episiotomy; intact perineum; location, degree, and length of rupture; and postpartum pain intensity were assessed in the 2 groups. Following that, the data were analyzed with SPSS statistical software (version 16) using χ test, t test, and odds ratio. RESULTS The results revealed a significant difference between the intervention and control groups regarding the frequency of intact perineum (27% vs 6.7%) and the frequency of episiotomy (45% vs 90.70%). In addition, the frequency of the location of rupture (P = .019), mean length of episiotomy incision (P = .02), and mean intensity of pain the day after delivery (P < .001) were significantly lower in the intervention group compared with the control group. However, the rate of ruptures was higher in the intervention group. CONCLUSIONS Warm compress bi stage intervention was effective in reducing episiotomies and the mean length of episiotomy incision, reducing pain after delivery, and increasing the rate of intact perineum. However, the rate of ruptures slightly increased in the intervention group compared with the control group.

Database: Medline

Author(s): Kapoor, Dharmesh S; Thakar, Ranee; Sultan, Abdul H

Source: International urogynecology journal; Dec 2015; vol. 26 (no. 12); p. 1725-1734

Publication Date: Dec 2015

Publication Type(s): Journal Article Review

PubMedID: 26044511

Available at International Urogynecology Journal - from SpringerLink
Available at International Urogynecology Journal - from ProQuest (Hospital Premium Collection) - NHS Version

Abstract: INTRODUCTION AND HYPOTHESIS Obstetric anal sphincter injuries (OASIs) are the leading cause of anal incontinence in women. Modification of various risk factors and anatomical considerations have been reported to reduce the rate of OASI. METHODS A PubMed search (1989-2014) of studies and systematic reviews on risk factors for OASI. RESULTS Perineal distension (stretching) of 170% in the transverse direction and 40% in the vertical direction occurs at crowning, leading to significant differences (15-30°) between episiotomy incision angles and suture angles. Episiotomies incised at 60° achieve suture angles of 43-50°; those incised at 40° result in a suture angle of 22°. Episiotomies with suture angles too acute (60°) are associated with an increased risk of OASI. Suture angles of 40-60° are in the safe zone. Clinicians are poor at correctly estimating episiotomy angles on paper and in patients. Sutured episiotomies originating 10 mm away from the midline are associated with a lower rate of OASIs. Compared to spontaneous tears, episiotomies appear to be associated with a reduction in OASI risk by 40-50%, whereas shorter perineal lengths, perineal oedema and instrumental deliveries are associated with a higher risk. Instrumental deliveries with mediolateral episiotomies are associated with a significantly lower OASI risk. Other preventative measures include warm perineal compresses and controlled delivery of the head. CONCLUSIONS Relieving pressure on the central posterior perineum by an episiotomy and/or controlled delivery of the head should be important considerations in reducing the risk of OASI. Episiotomies should be performed 60° from the midline. Prospective studies should evaluate elective episiotomies in women with a short perineal length and application of standardised digital perineal support.

Database: Medline
7. Three noninvasive interventions for physiologic labour pain management: Use of birth ball, sacrum-perinea heat therapy, and combined use of them during active phase

Author(s): Taavoni S.; Abdolahian S.; Neisani L.; Haghani H.

Source: International Journal of Gynecology and Obstetrics; Oct 2015; vol. 131

Publication Date: Oct 2015

Publication Type(s): Conference Abstract

Abstract: Background: Labor pain is a natural, and unique which could bring major distress for women. Two general approaches for labor pain management, are use of pharmacologic and non-pharmacologic methods. Pharmacologic approach may associate with side effects but non-pharmacologic could be safer. Objective: To evaluate the effectiveness of birth ball usage for pelvic tilt, sacrum-perinea heat therapy and combination use of them on active phase of physiologic labor and delivery process. Method: In this Randomized control trial, 120 Primiparous volunteer with age 18-35 years old, gestational age of 38-40 weeks, whom admitted in one of Hospitals of Iran University of Medical Sciences in Tehran, were randomly selected and divided in four groups: Pelvic tilt by using birth ball, sacrum perinea heat therapy, combined use of two mentioned methods and control group. In this study our tools had 3 main parts of personal characteristic, Client examination form and pain visual analogue scale (VAS). All ethical points were considered. Results: Equality of Personal characteristics of four groups had been checked and there were no significant differences between gestational age, educational level, occupational, wanted pregnancy, history of abortion. Average of pain score first in birth ball group, then combined group and finally in heat therapy were significantly, less than control group. Average of pain score in birth ball group and combined group during after 30 minutes use were significantly less than control group but in the heat therapy group average after 60 minutes use were significantly less than control group. (P.value <0.05). Conclusions: Since all noninvasive intervention had significant effect on decreasing physiologic labour pain, but Highest decrease of labor pain was in birth ball group. It is suggested that that Obstetrics and Midwives consider and use these safe methods for Physiologic labour pain management.

Database: EMBASE
8. Application of perineum heat therapy during partum to reduce injuries that require post-partum stitches.

Author(s): Terré-Rull, Carmen; Beneit-Montesinos, Juan Vicente; Gol-Gómez, Roser; Garriga-Comas, Neus; Ferrer-Comalat, Alicia; Salgado-Poveda, Isabel

Source: Enfermeria clinica; 2014; vol. 24 (no. 4); p. 241-247

Publication Date: 2014

Publication Type(s): Research Support, Non-u.s. Gov't Randomized Controlled Trial English Abstract Multicenter Study Journal Article

PubMedID: 24878363

Abstract: OBJECTIVE Evaluate the effectiveness of heat, moist or dry to the perineum during delivery in order to reduce injuries requiring perineal suturing after birth, and to assess its safety in relation to the adaptation of the newborn to extrauterine life. METHOD An open multicentre clinical trial directed from the School of Nursing at the University of Barcelona was carried out between 2009 and 2010 in 5 Catalan Hospitals. The sample consisted of 198 pregnant women subjected to the natural protocol for normal delivery assistance. The pregnant women were randomized to three study groups: moist heat (MHG), dry heat (DHG), and control (CG). Usual care of the perineum was performed during labour in all groups and MHG or GCS was also applied in the perineum in the intervention groups. The Apgar score in the newborn and perineum postpartum was then assessed. Statistical tests were performed using a 95% confidence interval. Statistical analyses were performed using the SPSS version 17. RESULTS Perineum that required no suturing: MHG 71% (47) versus CG 56% (37), OR: 1.803; (95% CI: 0.881-3.687); DHG 62% (41) versus CG 56% (37), OR:1.285 (95% CI: 0.641-2.577); MHG 71% (47) versus DHG 62% (41), OR:1.402 (95% CI: 0.680-2.890). MEAN: Apgar score 5', MHG: 9.91; DHG: 9.98, CG: 9.98. p=0.431. CONCLUSION The application of heat therapy to the perineum during labour did not significantly reduce perineal suturing after birth. However, better perineal results were observed with moist heat. Heat therapy does not alter neonatal outcomes measured by Apgar score.

Database: Medline
9. Factors associated with perineal lacerations requiring suture in vaginal births without episiotomy

**Author(s):** Amorim M.M.; Franca-Neto A.H.; Leite D.F.; Melo F.O.; Alves J.N.; Leal N.V.

**Source:** Obstetrics and Gynecology; May 2014; vol. 123

**Publication Date:** May 2014

**Publication Type(s):** Conference Abstract

Available at Obstetrics & Gynecology - from Free Medical Journals . com

Available at Obstetrics & Gynecology - from Ovid (Journals @ Ovid) - Remote Access

**Abstract:** INTRODUCTION: With the adoption of a policy of restrictive episiotomy, the interest in studying and preventing spontaneous lacerations in childbirth has increased. The present study was conducted to determine the main risk factors for perineal lacerations requiring suture in vaginal deliveries without episiotomy. METHODS: We conducted a prospective cohort study including 400 vaginal deliveries assisted in a public hospital in Brazil. During the second stage of labor, maneuvers as such directed pushing, fundal pressure, and Valsalva maneuver were avoided. A policy of no episiotomy was followed with strategies for perineal protection that included warm compresses and intrapartum perineal massage. We calculated the relative risk and its 95% confidence interval (95% CI). Multivariate analysis was performed to determine the adjusted risk of need for suture. RESULTS: We analyzed 400 women who had vaginal deliveries with no episiotomy and 6% of instrumental deliveries. The rate of perineal lacerations in primiparous (210) was 56.7% and in multiparous (190) 30%. Suture was necessary in 23% of women (30% of primiparous and 15.3% of multiparous). In multivariate analysis, the factors that remained associated with increased risk of need for suture were primiparity (adjusted risk 1.81, 95% CI 1.25-2.89) and instrumental delivery (adjusted risk 3.78, 95% CI 1.21-18.66). CONCLUSION: There was a reduced need for suture in vaginal deliveries with the application of a protocol of perineal protection and no episiotomy. Primiparity and instrumental delivery were associated with increased risk of need for suture.

**Database:** EMBASE
10. Effect of sacrum-perineum heat therapy on active phase labor pain and client satisfaction: a randomized, controlled trial study.

**Author(s):** Taavoni, Simin; Abdolahian, Somayeh; Haghani, Hamid

**Source:** Pain medicine (Malden, Mass.); Sep 2013; vol. 14 (no. 9); p. 1301-1306

**Publication Date:** Sep 2013

**Publication Type(s):** Research Support, Non-u.s. Gov't Randomized Controlled Trial Journal Article

**PubMedID:** 23746110

**Abstract:**

**AIM:** Reduction of labor pain is one of the most important aspects of obstetric care. Heat therapy, typically applied to the woman's back, lower abdomen, groin, and/or perineum during last stage of labor, is an easy pain relief method that does not require highly skilled care. The effectiveness of heat therapy applied to the perineum during the first stage of labor has not been evaluated. This study aimed to evaluate the effectiveness of heat therapy for pain and woman's satisfaction during physiological labor.

**SUBJECTS AND METHODS:** Sixty primiparous women aged 18-35 years old were randomly assigned to heat therapy and control groups. Pain and satisfaction scores were measured by visual analog scale. The measurements of satisfaction were accomplished after birth. Data were analyzed by using the t-test and chi-square.

**RESULTS:** Mean pain scores in the heat therapy group were significantly lower than the control group (P < 0.05). The mean satisfaction score in the heat therapy group was significantly higher than in the control group (P < 0.05).

**CONCLUSION:** Heat therapy, an inexpensive complementary treatment with low risk, can reduce the intensity of pain and increase mothers' satisfaction with care during the active phase of labor.

**Database:** Medline

11. Perineal warm compress reduces risk of third- and fourth-degree tears and should be part of second stage care.

**Author(s):** Dahlen, Hannah G.

**Source:** Evidence Based Nursing; Oct 2012; vol. 15 (no. 4); p. 103-104

**Publication Date:** Oct 2012

**Publication Type(s):** Academic Journal

**Available at:** Evidence-based nursing - from BMJ Journals - NHS

**Available at:** Evidence-based nursing - from ProQuest (Hospital Premium Collection) - NHS Version

**Abstract:** The author comments on a study by Aasheim and colleagues which revealed that the use of perineal technique such as warm compresses during the second stage of labour decreases the occurrence of perineal trauma. The author mentions that the study failed to include evaluations of the various perineal techniques by women and clinicians. She states that reducing perineal trauma during birth is important to women, therefore, future research should include women's evaluations and long-term follow-up.

**Database:** CINAHL
12. Sacrum-perineal heat therapy for physiologic labor pain management: A randomized control trial study

**Author(s):** Taavoni S.; Abdolahian S.; Haghani H.

**Source:** Regional Anesthesia and Pain Medicine; 2011; vol. 36 (no. 5)

**Publication Date:** 2011

**Publication Type(s):** Conference Abstract

**Abstract:** Background and aims: One of the safe non-pharmacologic/noninvasive interventions could be heat therapy by using warm moisture towel on perineasacrum, since a few data are available for significant efficacy of it. Aim: To evaluate effectiveness of perinea-sacrum heat therapy on labor pain, contraction and duration of active phase of physiologic labor. Methods: In this randomized control trial study 60 volunteer 18-35 years old healthy primiparous women during their active phase of physiologic labor process after feeling in informed consent, were randomly divided in two groups. Tools have three main parts (Personal characteristics, Labor process chart, and Pain Visual Analogue Scale (VAS)). Results: There were no significant differences between age, educational level, having job, planned pregnancy and duration of pregnancy in two groups. There was no significant difference on average of pain score during first 30 minutes of intervention, but after 60, 90 and 120 minutes average of pain score in heat therapy group were significantly less than control group. (P<0.05) There were no significant differences between uterine contraction and duration of active phase in two groups. Conclusions: Perinea-Sacrum Heat Therapy during active phase did not have significant effect on labor pain during first 30 minutes, duration of active phase, uterine contraction and it’s duration, but this safe noninvasive intervention significantly reduced the intensity of pain during active phase of Physiologic labor/delivery after one hour intervention. It is recommended to study the effects of combining of this method, with other complementary, especially comparing results during various times after intervention.

**Database:** EMBASE

13. Physiologic labor pain management by using

**Author(s):** Somayeh A.; Taavoni S.; Haghani H.

**Source:** Journal of Psychosomatic Obstetrics and Gynecology; Oct 2010; vol. 31 ; p. 84

**Publication Date:** Oct 2010

**Publication Type(s):** Conference Abstract

**Abstract:** With respect to women’s reproductive rights it is necessary to deliver safe labor pain management. One of the safe non-pharmacologic/ noninvasive interventions could be heat therapy by using warm moisture towel on perinea- sacrum. Aim: To evaluate the effectiveness of perinea-sacrum heat therapy on labor pain, contraction and duration of active phase of physiologic labor/delivery process. Material and Methods: In this randomized control trial study 60 volunteer 18-35 years old healthy primiparous women during their active phase of physiologic labor process after feeling in informed consent, were randomly divided in two groups (Heat therapy and control groups). Tools have three main parts (Personal characteristics, Labor process chart, and Pain Visual Analogue Scale (VAS)). Results: There were no significant differences between age, educational level, having job, planned pregnancy and duration of pregnancy in two groups. There weren’t significant difference on average of pain score during first 30 minutes of intervention, but after 60, 90 and 120 minutes average of pain score in heat therapy group were significantly less than control group. (P<0.05) There were no significant differences between uterine contraction and duration of active phase in two groups. Conclusion: Perinea- Sacrum Heat Therapy during first 30 minutes did not have significant effect on labor pain, duration of active phase, but this safe noninvasive intervention significantly reduced the intensity of pain during active phase of Physiologic labor/delivery after one
hour intervention. It is recommended to study the effects of combining of this method, with other complementary and comparing results.

**Database:** EMBASE

14. The effect of heat therapy on labor pain severity and delivery outcome in parturient women

**Author(s):** Behmanesh F.; Pasha H.; Zeinalzadeh M.

**Source:** Iranian Red Crescent Medical Journal; 2009; vol. 11 (no. 2); p. 188-192

**Publication Date:** 2009

**Publication Type(s):** Article

**Abstract:** Background: Pain relief for labor, as an acute and severe pain, has been considered for many years. The aim of this study was to determine the effect of heat therapy on labor pain and the time of labor in primigravida women referring to the affiliated hospitals of Babol University of Medical Sciences during 2006-2007. Methods: In this study, 64 nulliparous women were randomly divided into two groups (heat therapy and routine care group). The control group received routine care in the obstetrics ward but the heat therapy group used warm bag for the low back since the cervix dilated about 3-4 cm to the end of the first stage of labor and for perinea at the second stage as well as the routine cares. The severity of pain was determined on dilatation of 3-4, 6-7 and 9-10 cm and at the end of the second stage of labor by Mc Gill pain questionnaire. Results: Comparison of the two groups showed a significant decrease in the intensity (severity) of pain in the heat therapy group in the first stage, and on dilatation of 6-7 cm and 9-10 cm, and in the second stage of labor. Also, in the heat therapy group duration of the first and third stages of labor decreased but that of the second stage of labor showed no significant difference between the two groups. Conclusion: According to the results of this study, it seems that heat affects the intensity of pain in the first and second stages of labor and shortens the first and third stages of labor. © Iranian Red Crescent Medical Journal.

**Database:** EMBASE
15. 'Soothing the ring of fire': Australian women's and midwives' experiences of using perineal warm packs in the second stage of labour.

Author(s): Dahlen, Hannah G; Homer, Caroline S E; Cooke, Margaret; Upton, Alexis M; Nunn, Rosalie A; Brodrick, Belinda S

Source: Midwifery; Apr 2009; vol. 25 (no. 2); p. e39

Publication Date: Apr 2009

Publication Type(s): Randomized Controlled Trial Journal Article

PubMedID: 18031878

Available at Midwifery - from Patricia Bowen Library & Knowledge Service West Middlesex University Hospital NHS Trust (lib302631) Local Print Collection

Abstract: OBJECTIVE: To determine women's and midwives' experiences of using perineal warm packs in the second stage of labour. DESIGN: As part of a randomised controlled trial (Warm Pack Trial), women and midwives were asked to complete questionnaires about the effects of the warm packs on pain, perineal trauma, comfort, feelings of control, satisfaction and intentions for use during future births. SETTING: Two hospitals in Sydney, Australia. PARTICIPANTS: A randomised controlled trial was undertaken. In the late second stage of labour, nulliparous women (n=717) giving birth were randomly allocated to having warm packs (n=360) applied to their perineum or standard care (n=357). Standard care was defined as any second stage practice carried out by midwives that did not include the application of warm packs to the perineum. Three hundred and two nulliparous women randomised to receive warm packs (84%) received the treatment. Questionnaires were completed by 266 (88%) women who received warm packs, and 270 (89%) midwives who applied warm packs to these women. INTERVENTION: Warm, moist packs were applied to the perineum in the late second stage of labour. FINDINGS: Warm packs were highly acceptable to both women and midwives as a means of relieving pain during the late second stage of labour. Almost the same number of women (79.7%) and midwives (80.4%) felt that the warm packs reduced perineal pain during the birth. Both midwives and women were positive about using warm packs in the future. The majority of women (85.7%) said that they would like to use perineal warm packs again for their next birth and would recommend them to friends (86.1%). Likewise, 91% of midwives were positive about using the warm packs, with 92.6% considering using them in the future as part of routine care in the second stage of labour. KEY CONCLUSION: Responses to questionnaires, eliciting experiences of women and midwives involved in the Warm Pack Trial, demonstrated that the practice of applying perineal warm packs in the late second stage of labour was highly acceptable and effective in helping to relieve perineal pain and increase comfort. IMPLICATIONS FOR PRACTICE: Perineal warm packs should be incorporated into second stage pain relief options available to women during childbirth.

Database: Medline
16. Warm packs beneficial in labor

**Author(s):** anonymous

**Source:** Journal of the National Medical Association; Mar 2008; vol. 100 (no. 3); p. 348

**Publication Date:** Mar 2008

**Publication Type(s):** Article

**Abstract:** In this randomized controlled trial of 717 women, the use of warm packs from late second-stage labor until crowning was compared with usual care that did not include warm packs. Although masking of women and their birth attendants was not possible, the outcome assessors were masked. Eligible women were nulliparous with singleton term pregnancy in cephalic presentation who anticipated a normal delivery and had not performed perineal massage. Warm packs consisted of perineal pads soaked in boiled tap water at a temperature of approximately 45°C. The trial was conducted in an ethnically diverse population in Australia, where 75% of women are immigrants from other countries. With a study size adequate to detect a 10% difference, there was no difference between groups for the principal outcome of need for perineal suture. However, the number of third- and fourth-degree lacerations was reduced in the warm-pack group [31/357 vs. 15/360; number needed to treat (NNT)=22; 95% CI: 12-109]. Women receiving warm packs were less likely to report severe pain during birth than women who were not given warm packs (59% vs. 82%, respectively). There were also modest, statistically significant reductions in mean perineal pain scores on days 1 and 2 postpartum using a 10-point visual analog scale, with <1-point mean differences. At three months postpartum, women who had received warm packs were less likely to report urinary incontinence (36/276 vs. 46/277; NNT=28).

**Database:** EMBASE

17. Getting through birth in one piece: protecting the perineum.

**Author(s):** Hastings-Tolsma, Marie; Vincent, Deborah; Emeis, Cathy; Francisco, Teresa

**Source:** MCN. The American journal of maternal child nursing; 2007; vol. 32 (no. 3); p. 158-164

**Publication Date:** 2007

**Publication Type(s):** Research Support, Non-u.s. Gov't Journal Article

**PubMedID:** 17479052

**Abstract:** PURPOSE: To identify factors related to perineal trauma in childbirth, replicating the work of .STUDY DESIGN AND METHOD:A retrospective descriptive analysis of pregnancy and birth data recorded into the Nurse Midwifery Clinical Data Set for women (N = 510) with a singleton pregnancy and largely uncomplicated prenatal course. Prenatal care occurred at four prenatal clinics with births at a tertiary care facility during 1996-1997, with care provided by nurse midwifery faculty. Multivariate statistics detailed clinical characteristics associated with perineal trauma. RESULT: Episiotomy was related to parity, marital status, infant weight, fetal bradycardia, prolonged second stage labor, and lack of perineal care measures. Factors related to laceration were age, insurance status, and marital status. For all women, laceration was more likely when in lithotomy position for birth (p = .002) or when prolonged second stage labor occurred (p = .001). Factors that were protective against perineal trauma included massage, warm compress use, manual support, and birthing in the lateral position. found that ethnicity and education were related to episiotomy and that warm compresses were protective. In this study, use of oils/lubricants increased
lacerations, as did lithotomy positioning. Laceration rates were similar in both studies. Episiotomy use was lower in this study.

**CLINICAL IMPLICATIONS**

Side-lying position for birth and perineal support and compress use are important interventions for decreasing perineal trauma. Strategies to promote perineal integrity need to be implemented by nurses who provide prenatal education and care for the laboring woman.

**Database:** Medline

18. Perineal outcomes and maternal comfort related to the application of perineal warm packs in the second stage of labor: a randomized controlled trial.

**Author(s):** Dahlen, Hannah G; Homer, Caroline S E; Cooke, Margaret; Upton, Alexis M; Nunn, Rosalie; Brodrick, Belinda

**Source:** Birth (Berkeley, Calif.); Dec 2007; vol. 34 (no. 4); p. 282-290

**Publication Date:** Dec 2007

**Publication Type(s):** Randomized Controlled Trial Journal Article

**PubMedID:** 18021143

Available at Birth (Berkeley, Calif.) - from Wiley Online Library Science, Technology and Medicine Collection 2017

**Abstract:**

**BACKGROUND**

Perineal warm packs are widely used during childbirth in the belief that they reduce perineal trauma and increase comfort during late second stage of labor. The aim of this study was to determine the effects of applying warm packs to the perineum on perineal trauma and maternal comfort during the late second stage of labor.

**METHODS**

A randomized controlled trial was undertaken. In the late second stage of labor, nulliparous women (n = 717) giving birth were randomly allocated to have warm packs (n = 360) applied to their perineum or to receive standard care (n = 357). Standard care was defined as any second-stage practice carried out by midwives that did not include the application of warm packs to the perineum. Analysis was on an intention-to-treat basis, and the primary outcome measures were requirement for perineal suturing and maternal comfort.

**RESULTS**

The difference in the number of women who required suturing after birth was not significant. Women in the warm pack group had significantly fewer third- and fourth-degree tears and they had significantly lower perineal pain scores when giving birth and on "day 1" and "day 2" after the birth compared with the standard care group. At 3 months, they were significantly less likely to have urinary incontinence compared with women in the standard care group.

**CONCLUSIONS**

The application of perineal warm packs in late second stage does not reduce the likelihood of nulliparous women requiring perineal suturing but significantly reduces third- and fourth-degree lacerations, pain during the birth and on days 1 and 2, and urinary incontinence. This simple, inexpensive practice should be incorporated into second stage labor care.

**Database:** Medline
19. Midwifery care measures in the second stage of labor and reduction of genital tract trauma at birth: a randomized trial.

Author(s): Albers, Leah L; Sedler, Kay D; Bedrick, Edward J; Teaf, Dusty; Peralta, Patricia

Source: Journal of midwifery & women's health; 2005; vol. 50 (no. 5); p. 365-372

Publication Date: 2005

Publication Type(s): Research Support, N.i.h., Extramural Comparative Study Randomized Controlled Trial Journal Article Research Support, U.s. Gov't, P.h.s.

PubMedID: 16154062

Available at Journal of midwifery & women's health - from Wiley Online Library Science, Technology and Medicine Collection 2017

Available at Journal of midwifery & women's health - from PubMed Central

Abstract: Genital tract trauma after spontaneous vaginal childbirth is common, and evidence-based prevention measures have not been identified beyond minimizing the use of episiotomy. This study randomized 1211 healthy women in midwifery care at the University of New Mexico teaching hospital to 1 of 3 care measures late in the second stage of labor: 1) warm compresses to the perineal area, 2) massage with lubricant, or 3) no touching of the perineum until crowning of the infant's head. The purpose was to assess whether any of these measures was associated with lower levels of obstetric trauma. After each birth, the clinical midwife recorded demographic, clinical care, and outcome data, including the location and extent of any genital tract trauma. The frequency distribution of genital tract trauma was equal in all three groups. Individual women and their clinicians should decide whether to use these techniques on the basis of maternal comfort and other considerations.

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