

Clinical evidence tables for review question: what interventions are effective in treating mild to moderate pelvic girdle pain during pregnancy?

Table 4: Clinical evidence tables

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>Full citation</p> <p>Elden, H., Ladfors, L., Olsen, M. F., Ostgaard, H. C., Hagberg, H., Effects of acupuncture and stabilising exercises as adjunct to standard treatment in pregnant women with pelvic girdle pain: randomised single blind controlled trial, BMJ (Clinical research ed.), 330, 761, 2005</p> <p>Ref Id</p> <p>929048</p> <p>Country/ies where the study was carried out</p> <p>Sweden</p> <p>Study type</p> <p>RCT</p>	<p>Sample size</p> <p>N=386</p> <p>Acupuncture + Standard treatment (n=125)</p> <p>Physiotherapy-delivered in-home exercise advice + Standard treatment (n=130)</p> <p>Standard treatment (n=131)</p> <p>Inclusion criteria</p> <ol style="list-style-type: none"> 1. Healthy women 2. between 12 to 31 weeks' gestation 3. fluent in Swedish 4. singleton fetus 5. had defined pregnancy-related PGP <p>Exclusion criteria</p> <p>Other pain conditions, systemic disorders,</p>	<p>Interventions</p> <p>Standard treatment: general information about the condition and anatomy of the back and pelvis, adequate advice about activities of daily living, pelvic belt, home exercise programme designed to increase strength in the abdominal and gluteal muscles.</p> <p>Acupuncture: needles (Hegu AB, Landsbro, Sweden) were made of stainless steel (Ø 0.30) and inserted intramuscularly to a depth of 15-70 mm to evoke needle sensation (De Qi), described as tension, numbness, and often a radiating sensation from the point of insertion, reflecting activation of muscle-nerve afferents. The needles were left in situ for 30 minutes and manually stimulated every 10 minutes. Treatment was given twice a week over six weeks.</p> <p>Physiotherapy-delivered in-home exercise advice: The training programme started by emphasising activation and control of local deep lumbopelvic muscles. Training of more superficial muscles in dynamic exercises to improve mobility, strength, and endurance capacity was gradually included. Patients received treatments individually for a total</p>	<p>Power analysis</p> <p>For 90% power of detecting a significance at the two sided 5% level, 103 participants needed for each study group. To compensate for loss to follow up of 20%, 386 participants needed.</p> <p>Statistical analysis</p> <p>Intention to treat analysis. Significance level set at $p < 0.05$. Medians, quartiles, means, and standard deviations were calculated when possible. Mann-Whitney U test used to compare changes between groups for continuous outcomes.</p>	<p>Results</p> <p>Outcomes for the woman</p> <p>Pain intensity during pregnancy</p> <p><u>Pain at morning (visual analogue scale (VAS))- median (IQR 25-75 centile)</u></p> <p>Acupuncture: 15 (7-29), n=107</p> <p>Physiotherapy advice: 18 (9-37), n=106</p> <p>Standard treatment: 27 (12-58), n=108</p> <p>Standard vs acupuncture, $p = ns$; standard vs physiotherapy, $p = 0.0312$; acupuncture vs physiotherapy, $p < 0.001$.</p> <p><u>Pain at evening (VAS) - median (IQR 25-75 centile)</u></p> <p>Acupuncture: 31 (12-58), n=107</p> <p>Physiotherapy advice: 45 (21-68), n=106</p> <p>Standard treatment: 58 (40-74), n=108</p> <p>Standard vs acupuncture, $p < 0.001$; standard vs physiotherapy, $p = 0.0245$; acupuncture vs physiotherapy, $p = 0.0130$.</p>	<p>Limitations</p> <p>Cochrane RoB tool, v.2</p> <p>Randomisation process: Low risk (computer-generated random table was used. Allocation - pre-sealed opaque envelopes used, but no further information provided)</p> <p>Deviations from intended interventions: High risk (participants and providers were not blinded)</p> <p>Measurement of the outcome: Low risk (results coded and entered by personnel from independent institution; statistician blinded to group and treatment)</p> <p>Missing outcome data: Low risk (attrition and exclusions reported, similar reasons between the groups, and numbers add up)</p> <p>Selection of the reported result: Some concern (no protocol was found)</p> <p>Other bias: Low risk (groups similar at baseline)</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>Aim of the study To compare the efficacy of standard treatment, standard treatment plus acupuncture, and standard treatment plus stabilising exercises for pelvic girdle pain during pregnancy.</p> <p>Study dates August 2000 - May 2002</p> <p>Source of funding The Vardal Foundation, the Dagmar Foundation, the Trygg- Hansa Insurance Company, and Sahlgrenska University Foundation.</p>	<p>contraindications to treatment</p> <p>Characteristics Baseline characteristics were similar in both groups. Maternal age (years) - mean (SD): Standard group: 30.8 (4.8) Acupuncture group: 30.6 (4) Stabilising exercise group: 30.0 (4) <u>Gestation weeks (+ days) at inclusion - mean</u> Standard group: 24 (+3) Acupuncture group: 24 (+3) Stabilising exercise group: 24 (+3) <u>First pregnancy - number (%)</u> Standard group: 33 (25%) Acupuncture group: 34 (27%) Stabilising exercise group: 36 (27%) <u>Smoker - number (%)</u> Standard group: 12 (9%) Acupuncture group: 11 (9%) Stabilising exercise group: 13 (10%)</p>	<p>of six hours during six weeks. They were told to integrate the exercises in daily activities and to exercise in short sessions on several occasions during the day.</p>			<p>Overall: Some concern</p> <p>Other information Note: Elden 2008b reports additional data on adverse events of these treatments.</p>

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	<p>Previous low back pain number (%)</p> <p>Standard group: 90 (69%)</p> <p>Acupuncture group: 89 (71%)</p> <p>Stabilising exercise group: 84 (64%)</p>				
<p>Full citation</p> <p>Elden, H., Fagevik-Olsen, M., Ostgaard, H. C., Stener-Victorin, E., Hagberg, H., Acupuncture as an adjunct to standard treatment for pelvic girdle pain in pregnant women: Randomised double-blinded controlled trial comparing acupuncture with non-penetrating sham acupuncture, BJOG: An International Journal of Obstetrics and Gynaecology, 115, 1655-1668, 2008</p> <p>Ref Id</p> <p>911769</p>	<p>Sample size</p> <p>N=115</p> <p>Acupuncture + Standard treatment (n = 58)</p> <p>Sham acupuncture + Standard treatment (n = 57)</p> <p>Inclusion criteria</p> <ol style="list-style-type: none"> 1. healthy pregnant women 2. who are acupuncture-naive 3. with singleton fetuses at 12–29 completed gestational weeks 4. who experienced evening pain (according to the patient-kept diary) of more than 50-mm on a 100-mm visual analogue scale (VAS) during the baseline week 5. fluent in Swedish 	<p>Interventions</p> <p>Standard treatment: general information about condition and anatomy of back and pelvis, pelvic belt, advice and HEP designed to increase strength in the abdominal and gluteal muscles. Information supplemented by leaflet. Instructed to avoid other treatments during the intervention period.</p> <p>Acupuncture: Sterilised disposable needles were used and inserted intramuscularly to depth of 15-50mm. Needles were left in situ for 30 minutes and manually stimulated every 10 minutes.</p> <p>Sham acupuncture: used a validated sham acupuncture device (which looks like real acupuncture needles but the tip of needle is blunted). The shaft of the sham needle did not penetrate the skin, it collapsed into the handle and creates an illusion of insertion. Needles were left in situ for 30 minutes and manually stimulated every 10 minutes.</p>	<p>Power analysis</p> <p>100 participants needed to detect an improvement of 15mm on the visual analogue scale, with 80% power and 5% significance level.</p> <p>Statistical analysis</p> <p>Intention to treat analysis. Significance level set at $p < 0.05$. The median, CI, quartiles, means and SD were calculated when appropriate. The Mann-Whitney U test was used to compare differences between the groups for continuous outcomes.</p>	<p>Results</p> <p>Note: Number of participants in the intervention and control groups for all outcomes are $n=58$ and $n=57$ respectively, unless otherwise stated</p> <p>Outcomes for the woman</p> <p>Pain intensity during pregnancy</p> <p><u>Pain at morning during last treatment week (visual analogue scale (VAS))- median (95% CI)</u></p> <p>Intervention: 25 (18-31)</p> <p>Control: 24 (13-33); $p=0.727$</p> <p><u>Pain at evening (VAS) during last treatment week- median (95% CI)</u></p> <p>Intervention: 36 (30-46)</p> <p>Control: 41 (31-52); $p=0.483$</p> <p><u>Discomfort of PGP (VAS) - median (95% CI)</u></p> <p>Intervention: 36 (21–42)</p> <p>Control: 41 (26–53); $p=0.146$</p> <p><u>Women fulfilling all Ostgaards criteria for PGP</u></p> <p>Intervention: 29/57</p> <p>Control: 35/57; $p=0.112$</p> <p><u>Severity of PGP assessed by an independent examiner</u></p>	<p>Limitations</p> <p>Cochrane RoB tool, v.2</p> <p>Randomisation process: Low risk (computer-generated random table was used. Allocation - pre-coded numbered identical opaque envelopes to assign participants to the groups)</p> <p>Deviations from intended interventions: Low risk (participants were blinded, not possible to blind personnel who delivered intervention)</p> <p>Measurement of the outcome: Low risk (blinded to treatment allocation, doctors handling decisions about sick-listing were also blinded)</p> <p>Missing outcome data: Low risk (attrition and exclusions were presented along with reasons, and numbers at each stage add up)</p> <p>Selection of the reported result: Low risk (study reported all</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>Country/ies where the study was carried out</p> <p>Sweden</p> <p>Study type</p> <p>RCT</p> <p>Aim of the study</p> <p>To investigate whether acupuncture has a greater treatment effect than non-penetrating sham acupuncture in women with pelvic girdle pain (PGP) during pregnancy</p> <p>Study dates</p> <p>June 2006 - May 2007</p> <p>Source of funding</p> <p>Grants from the Foundation of the Health and Medical care committee of the Region of Vastra Gotaland (Sweden), the Swedish Medical Research Council, and Swedish</p>	<p>6. diagnosis of PGP according to Ostgaards criteria</p> <p>Exclusion criteria</p> <ol style="list-style-type: none"> with other pain conditions history of orthopaedic disease or surgery in the spine or pelvic girdle systemic disorders coagulation disturbances increased risk of infection <p>Characteristics</p> <p>Baseline characteristics were similar in both groups.</p> <p><u>Maternal age (years) - mean (SD):</u></p> <p>Intervention group: 31 (4)</p> <p>Control group: 30 (4)</p> <p><u>Nulliparous women - number (%):</u></p> <p>Intervention group: 21/58 (36)</p> <p>Control group: 28/57 (49)</p> <p><u>Body mass - mean (SD):</u></p> <p>Intervention group: 24 (5)</p> <p>Control group: 25 (4)</p>			<p>(<u>active straight leg (ASLR) test</u>) - mean (95% CI)</p> <p>Intervention: 2 (0–8), n=57</p> <p>Control: 2.5 (0–9), n=57; p=0.705</p> <p>Pelvic-related functional disability</p> <p><u>Disability rating index (DRI) - median (IQR 25-75 centile)</u></p> <p>Intervention: 44 (30-56)</p> <p>Control: 55 (44-73); p<0.001</p> <p><u>Oswestry disability index (ODI) - median (95% CI)</u></p> <p>Intervention: 35 (30–42)</p> <p>Control: 37 (30–42); p=0.473</p> <p>Adverse effects during pregnancy</p> <p><u>Fainting</u></p> <p>Intervention: 5/58</p> <p>Control: 4/57; p=1.000</p> <p><u>Slight bleeding</u></p> <p>Intervention: 35/58</p> <p>Control: 34/57; p=1.000</p> <p><u>Haematoma</u></p> <p>Intervention: 17/58</p> <p>Control: 17/57; p=1.000</p> <p><u>Needle pain</u></p> <p>Intervention: 12/58</p> <p>Control: 13/57; p=0.824</p> <p><u>Experience of de qi sensation</u></p> <p>Intervention: 54/58</p> <p>Control: 16/57; p<0.001</p> <p><u>Sleepiness</u></p> <p>Intervention: 3/58</p> <p>Control: 2/57; p=1.000</p>	<p>outcomes as indicated in the protocol)</p> <p>Other bias: Low risk (no other concerns that may affect the results)</p> <p>Overall: Low risk</p> <p>Other information</p> <p>Note: 48% of the sample are women with severe pelvic pain.</p>

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governmental grants to researchers in the public health service.	<u>Gestational weeks + days - mean (SD):</u> Intervention group: 22+3 (4+2) Control group: 23+4 (4+2) <u>Previous PGP - number (%)</u> Intervention group: 29/58 (50) Control group: 22/58 (39)				
<p>Full citation</p> <p>Elden,H., Ostgaard,H.C., Fagevik-Olsen,M., Ladfors,L., Hagberg,H., Treatments of pelvic girdle pain in pregnant women: adverse effects of standard treatment, acupuncture and stabilising exercises on the pregnancy, mother, delivery and the fetus/neonate, BMC Complementary and Alternative Medicine, 8, 34-, 2008</p> <p>Ref Id</p> <p>123922</p>	<p>Sample size</p> <p>N=386</p> <p>Acupuncture + Standard treatment (n=124)</p> <p>Physiotherapy-delivered in-home exercise advice + Standard treatment (n=130)</p> <p>Standard treatment (n=129)</p> <p>Inclusion criteria</p> <ol style="list-style-type: none"> 1. Healthy pregnant women 2. between 12 to 31 weeks' gestation 3. fluent in Swedish, 4. singleton fetus, 5. had defined pregnancy-related PGP <p>Exclusion criteria</p>	<p>Interventions</p> <p>Standard treatment: general information about the condition and anatomy of the back and pelvis, adequate advice about activities of daily living, pelvic belt, home exercise programme designed to increase strength in the abdominal and gluteal muscles.</p> <p>Acupuncture: needles (Hegu AB, Landsbro, Sweden) were made of stainless steel (Ø 0.30) and inserted intramuscularly to a depth of 15-70 mm to evoke needle sensation (De Qi), described as tension, numbness, and often a radiating sensation from the point of insertion, reflecting activation of muscle-nerve afferents. The needles were left in situ for 30 minutes and manually stimulated every 10 minutes. Treatment was given twice a week over six weeks.</p> <p>Physiotherapy-delivered in-home exercise advice: The training programme</p>	<p>Power analysis</p> <p>For 90% power of detecting a significance at the two sided 5% level, 103 participants needed for each study group.</p> <p>Statistical analysis</p> <p>Continuous data were tested for significance with Kruskal-Wallis test. Dichotomous data were tested for significance with Fischer's exact test.</p>	<p>Results</p> <p>Outcomes for the woman</p> <p>Adverse effects during pregnancy</p> <p><u>Number of women who experienced minor adverse events during treatment</u></p> <p>Acupuncture: 43/125</p> <p>Physiotherapy advice: 22/131</p> <p>Standard treatment: 8/130</p> <p>Women's experience and satisfaction</p> <p><u>Overall satisfaction within one week of treatment</u></p> <p>Acupuncture: n=108, No help=4; Some help=21; Good help=37; Very good help=46</p> <p>Physiotherapy advice:n=111, No help=2; Some help=28; Good help=38; Very good help=43</p> <p>Standard treatment: n=100, No help=25; Some help=53; Good help=14; Very good help=8</p> <p><u>No pain relief within one week of treatment</u></p> <p>Acupuncture: 2/108</p>	<p>Limitations</p> <p>Cochrane RoB tool, v.2</p> <p>Randomisation process: Low risk (computer-generated random table was used. Allocation - pre-sealed opaque envelopes to assign participants to the groups)</p> <p>Deviations from intended interventions: High risk (participants and providers were not blinded)</p> <p>Measurement of the outcome: Low risk (results coded and entered by personnel from independent institution; statistician blinded to group and treatment)</p> <p>Missing outcome data: Low risk (attrition and exclusions reported, similar reasons between the groups, and numbers add up, no differences between the women who withdrew during the trial and those who completed therapy)</p>

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<p>Country/ies where the study was carried out</p> <p>Sweden</p> <p>Study type</p> <p>RCT</p> <p>Aim of the study</p> <p>To assess adverse effects of acupuncture on the pregnancy, mother, delivery and the fetus/neonate in comparison with women that received stabilising exercises as adjunct to standard treatment or standard treatment alone.</p> <p>Study dates</p> <p>August 2000 - May 2002</p> <p>Source of funding</p> <p>The Vardal Foundation, the Dagmar Foundation, the Trygg- Hansa Insurance</p>	<p>Women with other pain conditions, systemic disorders, or contraindications to treatment</p> <p>Characteristics</p> <p><u>Maternal age (years) - mean (SD)</u></p> <p>Intervention group: 30.5 (4.4)</p> <p>Control group: 30.4 (4.7)</p> <p><u>Primipara - number (%)</u></p> <p>Intervention group: 34/125 (27.4%)</p> <p>Control group: 33/130 (25.6%)</p>	<p>started by emphasising activation and control of local deep lumbopelvic muscles. Training of more superficial muscles in dynamic exercises to improve mobility, strength, and endurance capacity was gradually included. Patients received treatments individually for a total of six hours during six weeks. They were told to integrate the exercises in daily activities and to exercise in short sessions on several occasions during the day.</p>		<p>Physiotherapy advice: 5/111</p> <p>Standard treatment: 3/100</p> <p><u>Treatment harmful</u></p> <p>Acupuncture: 43/108</p> <p>Physiotherapy advice: 22/111</p> <p>Standard treatment: 51/100</p> <p>Outcomes for the baby</p> <p><u>Admission at birth to the neonatal unit- number</u></p> <p>Acupuncture: 6/124</p> <p>Physiotherapy advice: 9/130</p> <p>Standard treatment: 6/129</p>	<p>Selection of the reported result: Some concern (no protocol was found)</p> <p>Other bias: Low risk (groups similar at baseline)</p> <p>Overall: Some concern</p>

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Company, and Sahlgrenska University Foundation.					
<p>Full citation</p> <p>Elden, H., Ostgaard, H. C., Glantz, A., Marciniak, P., Linner, A. C., Olsen, M. F., Effects of craniosacral therapy as adjunct to standard treatment for pelvic girdle pain in pregnant women: A multicenter, single blind, randomized controlled trial, Acta Obstetrica et Gynecologica Scandinavica, 92, 775-782, 2013</p> <p>Ref Id</p> <p>911772</p> <p>Country/ies where the study was carried out</p> <p>Sweden</p> <p>Study type</p> <p>RCT</p> <p>Aim of the study</p>	<p>Sample size</p> <p>N=123</p> <p>Manual therapy (Craniosacral therapy) + Standard treatment (n=63)</p> <p>Standard treatment (n=60)</p> <p>Inclusion criteria</p> <p>Healthy pregnant women</p> <ol style="list-style-type: none"> 1. with singleton fetuses 2. at 12–29 completed gestational weeks 3. experiencing moderate evening pain, that is equal to or exceeding 40 mm on VAS 4. understand and read Swedish 5. diagnosed with PGP according to European guidelines. <p>Exclusion criteria</p> <ol style="list-style-type: none"> 1. women with other pain conditions 2. history of orthopaedic disease 	<p>Interventions</p> <p>Craniosacral therapy (CST) consisted of 'a manual release technique of the pelvis whilst supine' which lasted 45 minutes on each occasion and was delivered by 2 qualified CS therapists with 14 to 16 years experience each. Women received CST weekly for 2 weeks and then every second week for 6 weeks.</p> <p>Standard treatment consisted of general information about the condition and anatomy of the back and pelvis. Advice was given with respect to activities of daily living. The women received an elastic pelvic belt and a home training program including exercises to strengthen and stretch the trunk, hip and shoulder muscles. They could always call the physiotherapist if they had questions or needed additional advice or crutches.</p>	<p>Power analysis</p> <p>50 women needed in each group to detect a change of 15 mm on the visual analogue scale between groups with 80% power and a 5% significance level. 123 women included to compensate for dropouts.</p> <p>Statistical analysis</p> <p>Intention to treat analysis. Significance level set at 5%. Medians, confidence intervals, quartiles, means and SDs were calculated when possible. Mann-Whitney U-test was used to calculate medians and confidence intervals. Mann-Whitney U-test was used to compare differences between groups for continuous outcomes. Chi-squared test or Fisher's exact test was used for categorical variables.</p>	<p>Results</p> <p>Note: N in the intervention and control group is n=63 and n=60 respectively for all outcomes, unless otherwise stated.</p> <p>Outcomes for the woman</p> <p>Pain intensity during pregnancy</p> <p><u>Pain in morning in last treatment week (visual analogue scale (VAS))- median (95% CI)</u></p> <p>Intervention: 27 (25-36)</p> <p>Control: 35 (34-46); p=0.017</p> <p><u>Pain in evening in last treatment week (VAS) - median (95% CI)</u></p> <p>Intervention: 58 (48-60)</p> <p>Control: 66 (55-67); p=0.084</p> <p>Discomfort of pain (VAS) in last treatment week - median (95% CI)</p> <p>Intervention: 51.5 (45-59)</p> <p>Control: 51 (42-70); p=0.432</p> <p>Pelvic-related functional disability</p> <p><u>Disability rating index (DRI) within one week of treatment - median (95% CI)</u></p> <p>Intervention: 58.0 (50-66)</p> <p>Control: 61.5 (54-72); p=0.303</p> <p><u>Oswestry disability index (ODI) within one week of treatment - median (95% CI)</u></p>	<p>Limitations</p> <p>Cochrane RoB tool, v.2</p> <p>Randomisation process: Low risk (computer-generated random table was used. Allocation - research assessor not involved in the study administered pre-coded, numbered identical opaque envelopes to assign participants to groups)</p> <p>Deviations from intended interventions: Some concern (blinding not possible for participants or providers, however the researchers did assess the credibility of treatment to reduce the effect of treatment preference for participants)</p> <p>Measurement of the outcome: Low risk (independent observer measured and entered VAS without knowledge of group assignment; Statistician blinded to group allocation and treatments)</p> <p>Missing outcome data: Low risk (attrition and exclusions reported, similar reasons between the groups, and numbers add up)</p> <p>Selection of the reported result: Low risk (study reported all outcomes as indicated in the protocol)</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>To investigate the efficacy of craniosacral therapy as an adjunct to standard treatment compared with standard treatment alone for PGP during pregnancy.</p> <p>Study dates September 2009 - February 2011</p> <p>Source of funding Grants from the Health & Medical Care Committee of the Regional Executive Board, Region Vastra Gotaland (Sweden)</p>	<p>or surgery of the spine or pelvic girdle 3. with systemic disorders.</p> <p>Characteristics Baseline characteristics (Table 1) were similar in the treatment groups except for higher discomfort in the intervention group (p = 0.046). <u>Maternal age (year) - mean (SD):</u> Intervention group: 30.6 (3.9) Control group: 31.3 (4.3) <u>Nulliparous women - number (%):</u> Intervention group: 19/63 (30.2) Control group: 18/58 (31) <u>Body mass index before pregnancy - mean (SD):</u> Intervention group: 23.4 (3.4) Control group: 23.7 (3.6) <u>Gestational weeks - mean (SD):</u> Intervention group: 21.0 (5.2) Control group: 22.3 (5.6)</p>			<p>Intervention: 40 (34-46) Control: 48 (40-56); p=0.016 Days off work/sick leave during pregnancy and prior to maternity leave <u>Sick leave in last treatment week</u> Intervention: 15/63 Control: 10/60 ; p=0.275</p>	<p>Other bias: Low risk (groups similar at baseline, women asked to conceal information about their treatment during assessment, interventions carried out by 2 experienced craniosacral therapists who met to ensure consistent approach throughout study)</p> <p>Overall: Low risk</p> <p>Other information Note: 48% of the sample are women with severe pelvic pain.</p>

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	<p><u>Previous PGP - number (%)</u> Intervention group: 39/63 (61.9) Control group: 32/58 (55.2)</p> <p><u>Previous LBP - number (%)</u> Intervention group: 38/63 (60.3) Control group: 37/58 (63.8)</p> <p><u>Discomfort of PGP, visual analog scale (VAS)</u> Intervention group: 55 (51 to 59) Control group: 45 (38 to 54)</p>				
<p>Full citation</p> <p>Gausel, A. M., Kjaermann, I., Malmqvist, S., Andersen, K., Dalen, I., Larsen, J. P., Okland, I., Chiropractic management of dominating one-sided pelvic girdle pain in pregnant women; a randomized controlled trial, BMC Pregnancy and Childbirth, 17 (1) (no pagination), 2017</p> <p>Ref Id</p>	<p>Sample size N=56 Chiropractic treatment (n=28) Standard treatment (n=28)</p> <p>Inclusion criteria Pregnant women 1. with low risk 2. singleton pregnancy 3. comprehension of the Norwegian language 4. at 18 weeks of pregnancy</p>	<p>Interventions</p> <p>The intervention consisted of manipulation, mobilization, soft tissue treatment, exercises, and advices chosen by the chiropractor to fit each participant individually. The frequency and number of visits were also determined by the chiropractor. The chiropractic treatment was conducted in two different private clinics, by five different chiropractors. The control group were asked to return to conventional primary health care without any restrictions or recommendations (no further details reported).</p>	<p>Power analysis</p> <p>Not reported</p> <p>Statistical analysis</p> <p>Intention to treat analysis. Proportion of women reporting new occurrence of sick leave were compared using Chi squared tests. For the secondary outcomes, treatment effects were estimated using linear regression analysis.</p>	<p>Results</p> <p>Outcomes for the woman</p> <p>Pain intensity during pregnancy</p> <p><u>Pain intensity, between week 21 and 30 (VAS)- mean (95% CI)</u> Intervention: 42.7 (33.5-51.8); N= 25 Control: 46.4 (37.3-55.6); N= 21</p> <p><u>Pain intensity, between week 33 and 40 (VAS)- mean (95% CI)</u> Intervention: 40.3 (27.9-52.8); N= 24 Control: 44.2 (29.8-58.5); N= 21</p> <p>Pelvic-related functional disability during pregnancy</p>	<p>Limitations</p> <p>Cochrane RoB tool, v.2</p> <p>Randomisation process: Some concern (a closed envelope containing complete ID-code, even ID-code assigned to the intervention, odd ID-code to the control group, no further information. Allocation - insufficient information).</p> <p>Deviations from intended interventions: High risk (participants and providers were not blinded)</p> <p>Measurement of the outcome: Low risk (assessor for clinical measures blinded); Unclear risk for VAS score</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>911801</p> <p>Country/ies where the study was carried out</p> <p>Norway</p> <p>Study type</p> <p>RCT</p> <p>Aim of the study</p> <p>To investigate the outcome of chiropractic management for a subgroup of pregnant women with dominating one-sided pelvic girdle pain (PGP).</p> <p>Study dates</p> <p>March 2010 – December 2010</p> <p>Source of funding</p> <p>Grants from Stavanger University Hospital</p>	<p>5. diagnosed with dominating one-sided PGP</p> <p>Exclusion criteria</p> <p>Not reported</p> <p>Characteristics</p> <p><u>Age at inclusion (years) - mean (SD)</u></p> <p>Intervention group: 28.9 (4.5) Control group: 29.9 (4.8)</p> <p><u>Age ≥ 30 - number (%)</u></p> <p>Intervention group: 13/28 (46) Control group: 14/28 (50)</p> <p><u>Primiparous - number (%)</u></p> <p>Intervention group: 16/26 (62) Control group: 15/27 (56)</p> <p><u>Education length (years) - mean (SD)</u></p> <p>Intervention group: 14.7 (4.0) Control group: 14.8 (3.1)</p> <p><u>BMI before pregnancy - mean (SD)</u></p> <p>Intervention group: 23.4 (3.1)</p>			<p><u>Oswestry disability index (ODI) week 30 - mean (95% CI)</u></p> <p>Intervention: 29.7 (22.1-37.2); N= 25 Control: 27.1 (21.0-33.2); N= 21</p> <p>Days off work/sick leave during pregnancy prior to maternity leave</p> <p><u>New sick leave due to PGP and/or LBP (week 19-30) - number</u></p> <p>Intervention: 7/28 Control: 8/28; p=0.75</p> <p><u>New sick leave due to PGP and/or LBP (week 31-36) - number</u></p> <p>Intervention: 8/28 Control: 10/28; p=0.36</p>	<p>Missing outcome data: Low risk (very low drop-out rate, and similar reasons between the groups, and numbers add up)</p> <p>Selection of the reported result: High risk (study not reported all outcomes indicated in the protocol)</p> <p>Other bias: High risk (baseline imbalances between groups regarding exercise before pregnancy and having pelvic pain year before pregnancy)</p> <p>Overall: High risk</p> <p>Other information</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
	<p>Control group: 24.2 (4.0)</p> <p><u>Exercise before pregnancy - number (%)</u></p> <p>Intervention group: 5/26 (19)</p> <p>Control group: 12/27 (44)</p> <p><u>Exercise in early pregnancy (week 1 to 18) - number (%)</u></p> <p>Intervention group: 2/27 (7)</p> <p>Control group: 5/27 (19)</p> <p><u>PP one year before pregnancy - number (%)</u></p> <p>Intervention group: 9/27 (33)</p> <p>Control group: 4/27 (15)</p> <p><u>PP and LBP in early pregnancy (week 1 to 18) - number (%)</u></p> <p>Intervention group: 22/26 (85)</p> <p>Control group: 22/27 (82)</p> <p><u>Sick leave in early pregnancy (week 1 to 18) - number (%)</u></p> <p>Intervention group: 6 of 28 (21)</p> <p>Control group: 3 of 28 (11)</p>				
Full citation	Sample size N=105	Interventions	Power analysis Not specified	Results Note: number of participants in the belt, physiotherapy advice,	Limitations <u>Cochrane RoB tool, v.2</u>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>Kordi, R., Abolhasani, M., Rostami, M., Hantoushzadeh, S., Mansournia, M. A., Vasheghani-Farahani, F., Comparison between the effect of lumbopelvic belt and home based pelvic stabilizing exercise on pregnant women with pelvic girdle pain; A randomized controlled trial, Journal of Back and Musculoskeletal Rehabilitation, 26, 133-139, 2013</p> <p>Ref Id 911881</p> <p>Country/ies where the study was carried out Iran</p> <p>Study type RCT</p> <p>Aim of the study To compare the effect of lumbopelvic belt plus information,</p>	<p>Pelvic girdle support belt + Information (n=35) Physiotherapy-delivered in-home exercise advice + Information (n=35) Information (n=35)</p> <p>Inclusion criteria</p> <ol style="list-style-type: none"> 1. Healthy pregnant women 2. with pain in lumbar region radiating between gluteal fold and posterior iliac crest 3. gestational age between 20 and 32 weeks 4. mono fetus pregnancy 5. age less than 40 years 6. having pelvic girdle pain <p>Exclusion criteria</p> <ol style="list-style-type: none"> 1. contraindications of exercise in pregnancy 2. previous history of back surgery 3. coexisting neurologic deficit 4. depression 5. inability in attending the follow- 	<p>General information about the anatomy, body posture, and ergonomic advices regarding sitting, walking and lying. Women were asked to use non-rigid lumbopelvic belt during the course of the study, and they were allowed to remove the belt only during the sleeping. Women were asked to follow a home-based exercise program. Exercises were designed to strengthen the pelvic girdle muscles. The subjects in the exercise group were asked to perform aerobic, stretching, and strengthening exercises.</p>	<p>Statistical analysis Level of significance set at p=0.05 or less. No further detail given.</p>	<p>and information group for all outcomes are 34, 31 and 31, respectively.</p> <p>Outcomes for the woman</p> <p>Pain intensity during pregnancy</p> <p><u>Pain at 3rd week (visual analogue scale (VAS))- mean (SD)</u> Belt: 18.8 (15.76) Physiotherapy advice: 44.3 (14.87) Information: 44.2 (13.36)</p> <p><u>Pain at 6th week (VAS) - mean (SD)</u> Belt: 11.0 (15.94) Physiotherapy advice: 31.1 (17.59) Information: 45.2 (14.57)</p> <p>Pelvic-related functional disability during pregnancy</p> <p><u>Oswestry disability index (ODI) at 3rd week- mean (SD)</u> Belt: 23.9 (8.42) Physiotherapy advice: 24.8 (7.16) Information: 25.5 (9.26)</p> <p><u>Oswestry disability index at 6th week (ODI) - mean (SD)</u> Belt: 20.1 (7.61) Physiotherapy advice: 21.5 (7.71) Information: 25.7 (9.67)</p>	<p>Randomisation process: Low risk (computer-generated block randomisation sequence was used. Allocation -no information provided about allocation concealment)</p> <p>Deviations from intended interventions: High risk (participants and providers were not blinded, it is difficult to blind them)</p> <p>Measurement of the outcome: Some concern (all measures were self-assessed by participants)</p> <p>Missing outcome data: Low risk (very low drop-out rate, and similar reasons between the groups, and numbers add up)</p> <p>Selection of the reported result: Low risk (study reported all outcomes as indicated in protocol)</p> <p>Other bias: Low risk (Use of pain provocation tests as well as self-report to diagnose PP increases validity of diagnosis. No significant differences in any of the primary or secondary outcomes at baseline)</p> <p>Overall: Some concern</p> <p>Other information</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>home-based pelvic girdle stabilizing exercises plus information and information alone on pain intensity, functional status and quality of life of pregnant women with pelvic girdle pain.</p> <p>Study dates Not reported</p> <p>Source of funding Tehran University of Medical Sciences.</p>	<p>up sessions of the study</p> <p>6. history of any dermatologic reaction due to using a belt</p> <p>7. history of any following conditions in previous pregnancies: vaginal bleeding, preeclampsia, IUGR, placenta previa, preterm labor, incompetent cervix, cervix insufficiency or rupture of membrane</p> <p>8. systemic diseases such as restrictive lung diseases, heart diseases, diabetes</p> <p>9. use of any medicine or product containing corticosteroid in past 30 days</p> <p>10. current use of analgesic medications other than acetaminophen</p> <p>Characteristics <u>Maternal age (years)</u> <u>- mean (SD)</u> Belt group: 28.26 (4.82) Exercise group: 26.45 (5.37) Control group: 25.45 (5.59)</p>				

Study details	Participants	Interventions	Methods	Outcomes	Comments
	<p><u>Gestational age (week) - mean (SD)</u> Belt group: 26.5 (3.7) Exercise group: 24.7 (3.9) Control group: 25.3 (3.8)</p> <p><u>Gestational age at which present pain started (week) - mean (SD)</u> Belt group: 16.2 (6.5) Exercise group: 17.7 (5.3) Control group: 17.0 (6.2)</p>				
<p>Full citation Melkersson, C., Nasic, S., Starzmann, K., Bengtsson Bostrom, K., Effect of Foot Manipulation on Pregnancy-Related Pelvic Girdle Pain: A Feasibility Study, 16, 211-219, 2017</p> <p>Ref Id 758582</p> <p>Country/ies where the study was carried out Sweden</p> <p>Study type RCT</p>	<p>Sample size N=97 Manual therapy (Foot manipulation) + Physiotherapy-delivered in-home exercise advice (n=47) Sham manual therapy (sham foot manipulation) + Physiotherapy-delivered in-home exercise advice (n=50)</p> <p>Inclusion criteria 1. Swedish-speaking women 2. in weeks 12 to 31 of pregnancy 3. had PPGP as determined by</p>	<p>Interventions Foot manipulation: The subtalar joint was treated with gapping thrust with patient lying on the contra-lateral side. Mobilisation of the distal tibia-fibula was performed with the patient squatting and was repeated 10 times. Home training programs in order to maintain the mobility in the joints were given. Sham foot manipulation: it included downsizing (a massage technique) the section underneath the heel from the back forward with 4 grips and light palpation of the 5 metatarsal bones with the patient in the supine position on a psoas pillow. The comparative treatment was repeated 10 times. This group was also advised to perform home exercises in the mornings, repeating them 8 times: supine position, spreading and squeezing the toes; sitting position, lifting of heel and forefoot, with the feet</p>	<p>Power analysis 250 patients would be needed in each group to confirm the effect of foot manipulation compared with the comparator.</p> <p>Statistical analysis Intention to treat analysis. Level of significance was set at p=0.05 or less. The t test and the χ^2 test were used to compare continuous outcomes Differences in VAS scores were calculated using a sign test with binomial approximation and with adjustment for differences in baseline pain on the VAS.</p>	<p>Results Outcomes for the woman Pain intensity during pregnancy <u>Pain in pelvic region at morning after 1st session (visual analogue scale (VAS))- mean (SD)</u> Intervention: 19 (16); N = 35 Control: 24 (23); N = 40; p=0.24 <u>Pain in pelvic region at morning after 2nd session (VAS)- mean (SD)</u> Intervention: 18 (14); N = 35 Control: 24 (19); N = 41; p=0.77 <u>Pain in pelvic region at morning after 6th session (VAS)- mean (SD)</u> Intervention: 20 (20); N = 31 Control: 29 (26); N = 39; p=0.64</p>	<p>Limitations Cochrane RoB tool, v.2 Randomisation process: Some concern (sealed envelopes were used, but no further information provided. Allocation - sealed envelopes to assign participants to the groups, but no further information provided).</p> <p>Deviations from intended interventions: High risk (participants were blinded, one of the 2 physiotherapists was blinded, but not the other)</p> <p>Measurement of the outcome: Low risk (outcome assessment carried out by a blinded evaluator)</p> <p>Missing outcome data: Low risk (attrition and exclusions were presented along with reasons,</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>Aim of the study To investigate if the research process to evaluate the effect of foot manipulation on pregnancy-related pelvic girdle pain (PPGP) is feasible.</p> <p>Study dates September 2009 - August 2011</p> <p>Source of funding Grants from the Skaraborg Research and Development Council and the Skaraborg Primary Care Research and Development Council.</p>	<p>specific provocation tests 4. with joint dysfunction or decreased pain of foot movement</p> <p>Exclusion criteria 1. women with twin pregnancies 2. with lumbar pain 3. with rheumatic disease 4. with other serious diseases 5. non-Swedish-speaking women 6. had been treated with foot manipulation earlier 7. with only LBP</p> <p>Characteristics All baseline characteristics were similar in both groups <u>Age (year) - mean (SD)</u> Intervention group: 30 (6) Control group: 28 (6); p = 0.13 <u>Parity - mean (SD)</u> Intervention group: 2.0 (1.5) Control group: 1.8 (0.8); p = 0.36</p>	<p>remaining in plantar flexion; walking with small steps along a line with pelvis aligned over the feet, forward and backward; and tiptoeing in the erect position while maintaining normal lordosis.</p>		<p><u>Pain in pelvic region at evening after 1st session (VAS) - mean (SD)</u> Intervention: 39 (23); N = 36 Control: 45 (29); N = 41; p=0.33 <u>Pain in pelvic region at evening after 2nd session (VAS) - mean (SD)</u> Intervention: 34 (17); N = 35 Control: 41 (25); N = 42; p=0.90 <u>Pain in pelvic region at evening after 6th session (VAS) - mean (SD)</u> Intervention: 29 (21); N = 29 Control: 47 (27); N = 33; p=0.28 <u>Pain in symphysis after 1st session (VAS) - mean (SD)</u> Intervention: 8 (17); N = 46 Control: 11 (20); N = 47; p=0.34 <u>Pain in symphysis after 2nd session (VAS) - mean (SD)</u> Intervention: 11 (19); N = 32 Control: 11 (20); N = 33; p=0.62 <u>Pain in symphysis after 6th session (VAS) - mean (SD)</u> Intervention: 9 (14); N = 28 Control: 12 (18); N = 27; p=0.92</p>	<p>and numbers at each stage add up)</p> <p>Selection of the reported result: Low risk (study reported all outcomes indicated in protocol)</p> <p>Overall: Some concern</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
	<p><u>Gestational age (week) - mean (SD)</u> Intervention group: 24 (6) Control group: 23 (6); p = 0.52</p> <p><u>Former girdle pain - number (%)</u> Intervention group: 13/47 (37%) Control group: 22/50 (63%); p = 0.07</p> <p><u>Foot trauma - number (%)</u> Intervention group: 33/47 (44%) Control group: 30/50 (48%); p = 0.28</p>				
<p>Full citation</p> <p>Mirmolaei, S. T., Ansari, N. N., Mahmoudi, M., Ranjbar, F., Efficacy of a physical training program on pregnancy related lumbopelvic pain, International Journal of Women's Health and Reproduction Sciences, 6, 161-166, 2018</p> <p>Ref Id</p> <p>911929</p>	<p>Sample size N=171 Physiotherapy-delivered in-home exercise advice (n=88) Standard treatment (n=83)</p> <p>Inclusion criteria</p> <ol style="list-style-type: none"> 1. women between 18 to 35 years old 2. in the gestational week between 17 and 22 3. had singleton pregnancy 	<p>Interventions</p> <p>The intervention consists of a 12-week exercise program developed by an expert physiotherapist and included a prenatal education class about simple anatomy, physiological changes in pregnancy, factors causing low back pain, proper posture in lying, sitting and standing, proper lifting techniques, and specific exercises. The exercises consisted of stretching and strengthening such as pelvic tilting, knee pull, Kegel exercise, wall squats, adductor stretch, pelvic elevation, pelvic rotation, arm and leg raise. Women were encouraged to perform each exercise 10 times a day for 12 weeks.</p>	<p>Power analysis Not specified</p> <p>Statistical analysis Intention to treat analysis. Significance level set at p<0.05. Clinical data was assessed by independent t tests or chi square as appropriate. The paired t test was used to analyse within-group changes.</p>	<p>Results Note: Number of participants in the intervention and control groups for all outcomes are 88 and 83 respectively.</p> <p>Outcomes for the woman</p> <p>Pain intensity during pregnancy</p> <p><u>Pain intensity after treatment (VAS) (0-10) - mean (SD)</u> Intervention: 2.94 (2.39) Control: 5.01 (3.08); p<0.001</p> <p><u>Pelvic-related functional disability after treatment (ODI) - mean (SD)</u> Intervention: 16.2 (12.55) Control: 26.14 (18.53); p<0.001</p>	<p>Limitations</p> <p>Cochrane RoB tool, v.2</p> <p>Randomisation process: Some concern (it reported that subjects were randomly assigned into 2 groups but no further information reported. Allocation - no information provided regarding allocation concealment).</p> <p>Deviations from intended interventions: High risk (participants and personnel were not blinded, not possible to blind them)</p> <p>Measurement of the outcome: Some concern (no enough information reported regarding outcome assessment)</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>Country/ies where the study was carried out Iran</p> <p>Study type RCT</p> <p>Aim of the study To investigate the efficacy of a physical training program on lumbopelvic pain and its physical disability during pregnancy</p> <p>Study dates 2010-2011</p> <p>Source of funding Grant from Tehran University of Medical Sciences</p>	<p>Exclusion criteria</p> <ol style="list-style-type: none"> 1. the absolute or relative contraindications for exercise in pregnancy 2. history of surgery, fracture or disease of spinal column and pelvis 3. with inflammatory disease or rheumatoid arthritis 4. history of recent abdominal surgery 5. threatened abortion 6. absence of patients in training classes 7. censoring performing physical training exercises less than 3 times a week <p>Characteristics</p> <p><u>Age (years) - mean (SD)</u> Intervention group: 26.46 (3.93) Control group: 25.56 (3.54)</p> <p><u>BMI - mean (SD)</u> Intervention group: 23.97 (3.93) Control group: 23.63 (3.89)</p> <p><u>Gestational age - mean (SD)</u></p>	<p>The control group received routine prenatal care (no further details reported).</p>			<p>Missing outcome data: Low risk (attrition and exclusions were presented along with reasons, and numbers at each stage add up) Selection of the reported result: Some concern (no protocol was found)</p> <p>Overall: High risk</p> <p>Other information Note: 15% of the sample were women with back pain only.</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
	Intervention group: 19.04 (2.07) Control group: 19.03 (2.10) <u>Low back pain - %</u> Intervention group: 44.6 Control group: 34.1 <u>Pelvic girdle back pain - %</u> Intervention group: 61.4 Control group: 75 <u>Employment - %</u> Intervention group: 12.5 Control group: 12				
Full citation Nicolian, S., Butel, T., Gambotti, L., Durand, M., Filipovic-Pierucci, A., Mallet, A., Kone, M., Durand-Zaleski, I., Dommergues, M., Cost-effectiveness of acupuncture versus standard care for pelvic and low back pain in pregnancy: A randomized controlled trial, PLoS ONE [Electronic Resource], 14, e0214195, 2019 Ref Id	Sample size N=199 Acupuncture group: n=96 Standard treatment: n=104 Inclusion criteria 1. Singleton pregnancy. 2. Age 18 or older. 3. Gestational age between 16 and 34 weeks. 4. Low back pain for at least two weeks with pain greater than 4 on a 10-point numerical rating scale (NRS).	Interventions Intervention: Acupuncture plus standard care 5 acupuncture sessions performed by an acupuncturist midwife. 2 sessions in the first week, then 3 weekly sessions. Additional sessions could be done at the patient's request. Acupuncture points were selected based on pain location and traditional Chinese medicine diagnosis of 'Qi kidney deficiency' versus 'blood stagnation'. Woman lay on her left side, and points were needled bilaterally. Needles were retained for 30 minutes per treatment.	Power analysis: Based on the ability to detect a clinically relevant difference of 25% in percentage of days with pain (NRS) between 4 groups, 150 patients in each group needed to give a power of 80% at 5% significance level. Statistical analysis: Intention to treat analysis. Significance level set at p<0.05. Categorical data were reported as frequencies. Continuous data were reported as mean +/- the standard deviation. Discrete variables were compared using the	Results Outcomes: Critical: Pain intensity Mean pain at baseline (95% CI): <i>Self-assessed with the numerical rating scale (NRS). Self reported pain daily, the worst pain in 24 hours is recorded.</i> Acupuncture: 7.4 (7.1 to 7.6) Control: 7.5 (7.2 to 7.7) Mean pain at week 5 after imputation (95% CI): <i>Self-assessed with NRS</i> Acupuncture: 5 (4.6 to 5.5) Control: 6 (5.5 to 6.5) Mean difference in pain between baseline and week 5 after imputation <i>Self-assessed with NRS</i>	Limitations Cochrane risk of bias tool V2: Randomisation process: Low risk of bias. (Central web based generated allocation sequence. Allocation concealed as central method used. Baselines balanced). Deviations from intended interventions: Low risk of bias. (Participants aware of assignment, but deviations consistent with what could occur outside trial context. Appropriate analysis). Measurement of the outcome: Pain: High risk. (Appropriate method of measurement. Likely the assessment could have been influenced by knowledge of intervention).

Study details	Participants	Interventions	Methods	Outcomes	Comments
<p>1242097</p> <p>Country/ies where the study was carried out</p> <p>France</p> <p>Study type</p> <p>RCT</p> <p>Aim of the study</p> <p>Assess effectiveness of hospital acupuncture for pelvic girdle and low back pain.</p> <p>Study dates</p> <p>2012-2014</p> <p>Source of funding</p> <p>Not industry funded</p>	<p>5. At least one positive provocation test.</p> <p>Exclusion criteria</p> <ol style="list-style-type: none"> 1. Obstetrical complications such as preeclampsia. 2. Small for gestational age fetus. 3. Pelvic or low back pain before pregnancy. 4. If they did not have social insurance coverage. <p>Characteristics</p> <p>Mean age in years (SD): Intervention: 31 (5.2) Control: 30.7 (4.6)</p> <p>Mean gestational age at inclusion in weeks (SD): Intervention: 28 (4.7) Control: 27.4 (4.2)</p> <p>Mean pre gestational BMI (SD): Intervention: 23.7 (4.4) Control: 24.1 (5.3)</p> <p>Pain location number (%): Low back pain L3L5: 113/199 (56.8%)</p>	<p>Standard care.</p> <p>Control: Standard care Pregnancy belt. Lifestyle recommendations and exercises explained by the midwife in charge of the trial. Painkillers, rest and sick leave were prescribed by the doctor or the midwife.</p>	<p>Fisher exact test. Normally distributed continuous data compared using Student t-test, non-normally distributed data compared using Wilcoxon rank-sum test.</p>	<p>Acupuncture: -2.3 (-2.8 to 1.9) Control: -1.4 (-1.9 to -1.0) Difference: 0.9 (0.2 to 1.5) p=0.008</p> <p>Pelvic related functional disability/ functional status during pregnancy</p> <p>Mean Oswestry disability index (ODI) at baseline (95% CI): Acupuncture: 36.0 (33.4 to 38.7) Control: 38.2 (35.6 to 41.0) ODI at week 5 after imputation (95% CI): Acupuncture: 30.0 (26.4 to 33.5) Control: 35.7 (32.4 to 38.9) Mean difference in ODI between baseline and week after imputation Acupuncture: 6.1 (3.5 to 8.7) Control: 2.7 (0.0 to 5.4) Difference: 3.5 (0.4 to 9.7) p=0.07</p> <p>Percentage of weeks with ODI ≤20/100 after imputation (95% CI): <i>calculated between inclusion and delivery</i> Acupuncture: 30% (25 to 38) Control: 15% (11 to 21) Difference: 7% (-2 to 16) p<0.001</p> <p>Important: Adverse effects during pregnancy Acupuncture specific side effects (Acupuncture group only) - number/n (%): Total: 32/96 (33%)</p>	<p>Other outcomes: Low risk of bias. (Appropriate measures of outcomes).</p> <p>Missing outcome data: Some concern. (Incomplete data for pain and disability assessment. Possible that the missingness could depend on the true value).</p> <p>Selection of the reported result: Low risk of bias. (All outcomes reported at pre-specified. Not like to have been selected).</p> <p>Overall: Some concern</p>

Study details	Participants	Interventions	Methods	Outcomes	Comments
	<p>Back pain higher than L3: 53/199 (26.6%)</p> <p>Sacro-ileal pain: 144/199 (72.4%)</p> <p>Anterior pelvic pain: 80/199 (40.2%)</p> <p>Sciatica: 79/199 (39.7%)</p>			<p>Bruising 24/96 (25%)</p> <p>Fatigue 9/96 (8%)</p> <p>Dizziness 1/96 (1%)</p> <p>Headache 1/96 (1%)</p> <p>Number of women with non-specific adverse events - number/n (%):</p> <p>Acupuncture: 29/96 (30%)</p> <p>Control: 30/103/ (29%)</p> <p>Hospitalisation because of nonspecific adverse event number/n (%):</p> <p>Acupuncture: 10/96 (10%)</p> <p>Control: 9/103 (9%)</p> <p>Total number of adverse events number/n (%):</p> <p>Acupuncture: 40/96 (42%)</p> <p>Control: 36/103 (35%)</p> <p>Events included cholestasis, gestational diabetes, hypertension/preeclampsia, unexplained transient fever, urinary infection, viral infection, other infection, threatened premature labour, premature delivery (34–36 weeks), intrauterine growth restriction, and thrombocytopenia.</p>	

Study details	Participants	Interventions	Methods	Outcomes	Comments
				<p>Admission to the neonatal unit:</p> <p>Admission to neonatal care unit number/n (%): Acupuncture: 3/96 (3%) Control: 4/103 (4%)</p> <p>Admission to neonatal intensive care unit number/n (%): Acupuncture: 1/96 (1%) Control: 3/103 (3%)</p> <p>Combined number/n (%): Acupuncture: 4/96 (4%) Control: 7/103 (7%)</p>	
<p>Full citation</p> <p>Nilsson-Wikmar, L., Holm, K., Oijerstedt, R., Harms-Ringdahl, K., Effect of three different physical therapy treatments on pain and activity in pregnant women with pelvic girdle pain: A randomized clinical trial with 3, 6, and 12 months</p>	<p>Sample size N=118</p> <p>Physiotherapy-delivered in-home exercise advice + Information + Pelvic girdle support belt (n=41)</p> <p>Physiotherapy-delivered in-clinic exercise advice + Information + Pelvic girdle support belt (n=37)</p>	<p>Interventions</p> <p><u>Information Group</u>: information was about the pelvic girdle pain including anatomy, body posture, and ergonomic advice and were provided with a non-elastic sacroiliac belt.</p> <p><u>Physiotherapy-delivered in-home exercise advice</u>: The home exercise program consists of 3 exercises for stabilizing the muscles around the pelvic girdle. During the exercises, a ball</p>	<p>Power analysis Not specified.</p> <p>Statistical analysis Intention to treat analysis. Significance level set at p<0.05. Categorical variables were dichotomised, and the x² test was used to compare groups. The data were not normally distributed and measured on</p>	<p>Results</p> <p>Outcomes for the woman</p> <p>Pain intensity during pregnancy</p> <p><u>Pain intensity after treatment (VAS) - median (range)</u></p> <p>Information: 49 (0–98)</p> <p>Physiotherapy-delivered in-home exercise advice: 50 (18–99)</p> <p>Physiotherapy-delivered in-clinic exercise advice: 62 (0–100); p=0.82</p>	<p>Limitations</p> <p>Cochrane RoB tool, v.2</p> <p>Randomisation process: High risk (stratification factor was previous children)</p> <p>Allocation concealment: Some concern (no information provided regarding allocation concealment)</p> <p>Deviations from intended interventions: High risk (participants and physiotherapists were not blinded, it is difficult to blind them)</p>

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<p>follow-up postpartum, Spine, 30, 850-856, 2005</p> <p>Ref Id</p> <p>825565</p> <p>Country/ies where the study was carried out</p> <p>Sweden</p> <p>Study type</p> <p>RCT</p> <p>Aim of the study</p> <p>To compare 3 different physical therapy treatments with respect to pain and activity in women with pelvic girdle pain during pregnancy and 3, 6, and 12 months postpartum.</p> <p>Study dates</p> <p>Not specified</p> <p>Source of funding</p> <p>the Vårdal Foundation</p>	<p>Information + Pelvic girdle support belt (n=40)</p> <p>Inclusion criteria</p> <ol style="list-style-type: none"> 1. pregnant women until gestation week 35 2. with back pain 3. who attended 2 different antenatal clinics in a suburb of Stockholm, Sweden 4. who tested positive in at least 3 pelvic pain provocation tests including the symphysis <p>Exclusion criteria</p> <p>Not specified</p> <p>Characteristics</p> <p>All baseline characteristics were similar in the 3 groups except for mean gestation week at inclusion.</p> <p><u>Age (year) - mean (SD)</u></p> <p>Information group: 28.4 (3.9)</p> <p>Physiotherapy-delivered in-home exercise</p>	<p>between the knees was used in sitting, in standing, and in 4-point kneeling position with movements of the arms or the legs. The program was ended with stretching of the hamstrings, hip flexors, and calf muscles. The instructions about the program were given within 1 week after inclusion, and the women were followed up once shortly after receiving the program. Women received information and sacroiliac belt as in the information group.</p> <p><u>Physiotherapy-delivered in-clinic exercise advice</u>: it consists of 4 different strengthening and stabilization exercises with different pieces of equipment; the lateral pulls, standing leg-press, sit-down rowing, and curl-ups. For warm-up, biking on a stationary bike was used. The program was ended with stretching. The exercises were performed twice a week until gestation week 39. Women received information and sacroiliac belt as in the information group.</p>	<p>ordinal scales therefore nonparametric statistics were used. The Wilcoxon signed rank test or Friedman analysis of variance were used to assess changes in outcome within each group between inclusion and 38 weeks gestation, between 38 weeks gestation and 12 months postpartum and at follow ups.</p>	<p>p-value calculated for 3-way comparison</p> <p>Pelvic-related functional disability during pregnancy</p> <p><u>Pelvic-related functional disability after treatment (DRI) - median (range)</u></p> <p>Information group: 65 (13–92)</p> <p>Physiotherapy-delivered in-home exercise advice: 66 (21–91)</p> <p>Physiotherapy-delivered in-clinic exercise advice: 59 (14–91); p=0.58</p> <p>p-value calculated for 3-way comparison</p>	<p>Measurement of the outcome: Low risk (outcome assessment carried out by a blinded physical therapist)</p> <p>Missing outcome data: Low risk (attrition and exclusions were presented along with reasons, and numbers at each stage add up)</p> <p>Selection of the reported result: Some concern (no protocol was found)</p> <p>Other bias: High risk (baseline imbalances between groups regarding gestation week at inclusion)</p> <p>Overall: High risk</p>

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	advice group: 29.5 (3.3) Physiotherapy-delivered in-clinic exercise advice group: 29.7 (5.4) <u>Weight before pregnancy (kg) - mean (SD):</u> Information group: 60.4 (10.9) Physiotherapy-delivered in-home exercise advice group: 62.8 (9.7) Physiotherapy-delivered in-clinic exercise advice group: 63.4 (11.2) <u>Weight at inclusion (kg) - mean (SD):</u> Information group: 68.1 (11.7) Physiotherapy-delivered in-home exercise advice group: 69.2 (10.7) Physiotherapy-delivered in-clinic exercise advice group: 69.1 (11.4) <u>Height (m) - mean (SD)</u> Information group: 1.66 (0.06) Physiotherapy-delivered in-home exercise advice group: 1.67 (0.06)				

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	Physiotherapy-delivered in-clinic exercise advice group: 1.66 (0.06) <u>Gestation week at inclusion (wk) - mean (SD)</u> Information group: 25 (7) Physiotherapy-delivered in-home exercise advice group: 22 (7) Physiotherapy-delivered in-clinic exercise advice group: 21 (6)				
Full citation Wedenberg, K., Moen, B., Norling, A., A prospective randomized study comparing acupuncture with physiotherapy for low-back and pelvic pain in pregnancy, Acta obstetrica et gynecologica Scandinavica, 79, 331-5, 2000 Ref Id 929050 Country/ies where the study was carried out	Sample size N=60 Acupuncture (n=30) Physiotherapy (n=30) Inclusion criteria 1. pregnant women living in the eastern part of Östergötland 2. who were suffering from back and pelvic pain 3. with a gestational age of no more than 32 weeks Exclusion criteria Not specified	Interventions Acupuncture: it was given 3 times a week during the first two weeks, then twice a week, totalling 10 treatments within one month, each of 30 minutes. 2- 10 needles were used. it always started with ear-acupuncture, supplemented when needed by body-acupuncture. Needles were gently tapped or rotated about 15 minutes after insertion. Physiotherapy: it was given once or twice a week, totalling 10 treatments within 6–8 weeks, 50 minutes each. Individualised treatment based on assessment. information about the condition + advice on daily activities, ergonomics, correction of faulty posture and how to perform the physical exercises according to a home training program. Trochanter-belt for pelvic support, warmth, massage, soft-	Power analysis Not specified Statistical analysis Significance level set at $p < 0.05$. Two-tailed Student's <i>t</i> -test was used to compare the differences of mean values between groups. Chi square test was used to compare differences of proportions between the groups.	Results Outcomes for the woman Adverse effects during pregnancy <u>Serious adverse events during and after treatment:</u> Acupuncture: 0/28 Physiotherapy: 0/18 <u>Minor adverse events during and after treatment</u> Acupuncture: 2/28 (subcutaneous hematomas) Physiotherapy: 5/18 (pre-term uterine contractions, pre-eclampsia, spells of absence) Women's experience and satisfaction with care Acupuncture: n=28, No help=0; Some help=1; Good or Excellent help=27	Limitations Cochrane RoB tool, v.2 Randomisation process: Some concern (it reported that subjects were randomly assigned into 2 groups but no further information reported) Allocation concealment: Low risk (a closed envelope from a box) Deviations from intended interventions: High risk (participants and personnel were not blinded, not possible to blind them) Measurement of the outcome: Some concern (no enough information

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<p>Sweden</p> <p>Study type RCT</p> <p>Aim of the study To describe the effects of acupuncture in the treatment of low-back and pelvic pain during pregnancy and compare it with physiotherapy</p> <p>Study dates August 1996 - February 1997</p> <p>Source of funding Council of Research and Development (FoU rådet) of Vrinnevi Hospital</p>	<p>Characteristics Note: baseline characteristics were similar in both groups except for location of pain (back and/or pelvic pain)</p> <p><u>Maternal age (years) - mean (range)</u> Acupuncture group: 28.4 (21–36) Physiotherapy group: 29.4 (22–36)</p> <p><u>Gestational age (years) - mean (range)</u> Acupuncture group: 24.2 (20–32) Physiotherapy group: 24.2 (20–29)</p> <p><u>Primiparas - number (%)</u> Acupuncture group: 8 (29%) Physiotherapy group: 6 (33%)</p>	<p>tissue mobilisation were offered if needed. All women were offered water gymnastics once or twice a week according to a defined program.</p>		<p>Physiotherapy: n=18, No help=0; Some help=4; Good or Excellent help=14</p> <p>Outcomes for the baby <u>Admission at birth to the neonatal unit- number</u> Acupuncture: 0/28 Physiotherapy: 0/18</p>	<p>reported regarding outcome assessment)</p> <p>Missing outcome data: High risk (>20% dropout rate in control arm, imbalance in groups)</p> <p>Selection of the reported result: Some concern (no protocol was found)</p> <p>Other bias: High risk (other treatments offered to women who might benefit from them)</p> <p>Overall: High risk</p> <p>Other information In the acupuncture group, none (0%) was deemed to suffer from 'pure' low-back pain whereas in the physiotherapy group there were 4/18 (22%).</p>

CI: Confidence interval; DRI: Disability rating index; IQR: Interquartile range; LBP: Low back pain; ODI: Oswestry disability index; PGP: Pelvic girdle pain; PP: pelvic pain; RCT: Randomised control trial; SD: Standard deviation; TAU: Treatment as usual; VAS: Visual analogue scale