

Interventions for preventing and treating pelvic and back pain in pregnancy.

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Abstract

Background

More than two-thirds of pregnant women experience low-back pain (LBP) and almost one-fifth experience pelvic pain. Pain increases with advancing pregnancy and interferes with work, daily activities and sleep.

Objectives

To assess the effects of interventions for preventing and treating pelvic and back pain in pregnancy.

Search methods

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (18 July 2012), identified related studies and reviews from the Cochrane Back Review Group search strategy to July 2012, and checked reference lists from identified reviews and studies.

Selection criteria

Randomised controlled trials (RCTs) of any treatment to prevent or reduce the incidence or severity of pelvic or back pain in pregnancy.

Data collection and analysis

Two review authors independently assessed risk of bias and extracted data. Quality of the evidence for outcomes was assessed using the five criteria outlined by the GRADE Working Group.

Main results

We included 26 randomised trials examining 4093 pregnant women in this updated review. Eleven trials examined LBP (N = 1312), four examined pelvic pain (N = 661), and 11 trials examined lumbo-pelvic (LBP and pelvic) pain (N = 2120). Diagnoses ranged from self-reported symptoms to the results of specific tests. All interventions were added to usual prenatal care and unless noted, were compared to usual prenatal care.

For LBP, there was low-quality evidence that in general, the addition of exercise significantly reduced pain (standardised mean difference (SMD) -0.80; 95% confidence interval (CI) -1.07 to -0.53; six RCTs, N = 543), and disability (SMD -0.56; 95% CI -0.89 to -0.23; two RCTs, N = 146); and water-based exercise significantly reduced LBP-related sick leave (risk ratio (RR) 0.40; 95% CI 0.17 to 0.92; one RCT, N = 241). Low-quality evidence from single trials suggested no significant difference in pain or function between two types of pelvic support belt, between osteopathic manipulation (OMT) and usual care or sham ultrasound (sham US). Very low-quality evidence suggested that a specially-designed pillow may relieve night pain better than a regular pillow.

For pelvic pain, there was moderate-quality evidence that acupuncture significantly reduced evening pain better than exercise; both were better than usual care. Low-quality evidence from single trials suggested that adding a rigid belt to exercise improved average pain but not function; acupuncture was significantly better than sham acupuncture for improving evening pain and function, but not average pain; and evening pain relief was the same following either deep or superficial acupuncture.

For lumbo-pelvic pain, there was moderate-quality evidence that an eight- to 20-week exercise program reduced the risk of women reporting lumbo-pelvic pain (RR 0.85; 95% CI 0.73 to 1.00; four RCTs, N = 1344); but a 16- to 20-week training program was no more successful than usual care at preventing pelvic pain (one RCT, N = 257). Low-quality evidence suggested that exercise significantly reduced lumbo-pelvic-related sick leave (RR 0.76; 95% CI 0.62 to 0.94, two RCTs, N = 1062), and improved function. Low-quality evidence from single trials suggested that OMT significantly reduced pain and improved function; either a multi-modal intervention that included manual therapy, exercise and education (MOM) or usual care significantly reduced disability, but only MOM improved pain and physical function; acupuncture improved pain and function more than usual care or physiotherapy; pain and function improved more when acupuncture was started at 26- rather than 20- weeks' gestation; and auricular (ear) acupuncture significantly improved these outcomes more than sham acupuncture.

When reported, adverse events were minor and transient.

Authors' conclusions

Moderate-quality evidence suggested that acupuncture or exercise, tailored to the stage of pregnancy, significantly reduced evening pelvic pain or lumbo-pelvic pain more than usual care alone, acupuncture was significantly more effective than exercise for reducing evening pelvic pain, and a 16- to 20-week training program was no more successful than usual prenatal care at preventing pelvic or LBP. Low-quality evidence suggested that exercise significantly reduced pain and disability from LBP.

There was low-quality evidence from single trials for other outcomes because of high risk of bias and sparse data; clinical heterogeneity precluded pooling. Publication bias and selective reporting cannot be ruled out.

Physiotherapy, OMT, acupuncture, a multi-modal intervention, or the addition of a rigid pelvic belt to exercise seemed to relieve pelvic or back pain more than usual care alone. Acupuncture was more effective than physiotherapy at relieving evening lumbo-pelvic pain and disability and improving pain and function when it was started at 26- rather than 20-weeks' gestation, although the effects were small.

There was no significant difference in LBP and function for different support belts, exercise, neuro emotional technique or spinal manipulation (SMT), or in evening pelvic pain between deep and superficial acupuncture.

Very low-quality evidence suggested a specially-designed pillow may reduce night-time LBP.

Further research is very likely to have an important impact on our confidence in the estimates of effect and is likely to change the estimates. Future research would benefit from the introduction of an agreed classification system that can be used to categorise women according to presenting symptoms.

Plain language summary

Interventions for preventing and treating pelvic and back pain in pregnancy

Many women experience low-back (LBP) or pelvic pain during pregnancy. Pain usually increases as pregnancy advances, interfering with work, daily activities, and sleep.

We included 26 randomised trials (RCTs) involving 4093 women. Eleven examined LBP (1312 women); four examined pelvic pain (661 women); 11 examined both conditions together (lumbo-pelvic pain) (2120 women). Unless noted, interventions were added and compared to usual prenatal care.

Moderate-quality evidence showed that acupuncture or exercise, tailored to the stage of pregnancy, significantly reduced evening pelvic or lumbo-pelvic pain. Acupuncture was significantly more effective than exercise for reducing evening pelvic pain. A 16- to 20-week training program was no more successful than usual care in preventing pelvic or LBP. Low-quality evidence suggested that exercise reduced pain and disability from LBP. Reported adverse effects were minor and transient. Further research is likely to change the estimates of effect of these interventions. An agreed classification system for categorising women is overdue.

LBP: there was low-quality evidence that exercise significantly reduced pain (six RCTs) and disability (two RCTs). From single trials; exercise in water significantly reduced LBP-related sick leave; pain and physical function were similar when wearing pelvic support belts or having osteo-manipulative therapy (OMT) compared with usual care or sham ultrasound. Very low-quality evidence suggested that a specially-designed pillow may relieve night pain better than a regular pillow.

Pelvic pain: there was moderate-quality evidence that acupuncture reduced evening pain better than exercise; both were better than usual care (one RCT). From single trials: exercise plus a rigid belt improved average pain but not function; acupuncture was better than sham acupuncture for evening pain and function, but not average pain. There was no difference in evening pain after either deep or superficial acupuncture.

Lumbo-pelvic pain: there was moderate-quality evidence that an eight- to 20-week exercise program reduced the risk of lumbo-pelvic pain; but a 16- to 20-week training program was no better than usual care for preventing pain (four RCTs). From single trials: exercise significantly reduced lumbo-pelvic-related sick leave and improved function; OMT significantly improved pain and function; a combination of manual therapy, exercise and education improved pain and function; acupuncture improved these outcomes more than usual care or physiotherapy; pain and function improved more when acupuncture was started at 26- rather than 20-weeks' gestation. Ear acupuncture significantly improved these outcomes more than sham acupuncture.