
Physical therapy for pregnancy-related low back and pelvic pain: a systematic review

Stuge B, Hilde G, Vollestad N

CRD summary

This review found insufficient evidence on the effects of physical therapies for the prevention or treatment of back pain or pelvic pain related to pregnancy. The authors' conclusions are appropriate given the evidence presented in the review.

Authors' objectives

To assess the effectiveness of physical therapy for the prevention or treatment of low back pain and pelvic pain related to pregnancy.

Searching

MEDLINE (1966 to 2000), EMBASE (1980 to 2000), CINAHL (1982 to 2000), SPORT (1975 to 2000) and the Cochrane Controlled Trials Register (Issue 3, 2000) were searched; the search terms were reported. Additional studies were sought through reference lists of retrieved papers and by contacting investigators in the field.

Study selection

Study designs of evaluations included in the review

Randomised controlled trials (RCTs) and prospective non-randomised trials were eligible for inclusion. RCTs, quasi-randomised and non-randomised trials were included.

Specific interventions included in the review

Studies of physical therapies were eligible for inclusion. The interventions assessed in the included studies were exercise, individualised physical therapy, acupuncture, back care advice and massage. The duration of the interventions varied between 2 and 24 sessions. The timing of interventions during pregnancy varied between week 11 and 36.

Participants included in the review

Studies in women who were pregnant or within 1 year postpartum, with or without low back or pelvic pain, were eligible for inclusion. Studies that included women with obstetric complications, inflammatory joint diseases, rheumatoid arthritis fractures, or various severe pathologies related to the spine were excluded. All but one of the included studies were studies of women who were still pregnant. The presence of pain and pain location varied.

Outcomes assessed in the review

Studies that measured pain, functional status, sick leave, or more general outcomes such as generic health status, wellbeing, overall improvement or patient satisfaction, were eligible for inclusion. The outcomes assessed in the included studies were pain, backache, global improvement, mobility, functional status, functional limitations and sick leave. The instruments used to measure the outcomes varied between the studies, as did the timing of measurements during pregnancy and postpartum.

How were decisions on the relevance of primary studies made?

Two reviewers independently selected the studies for inclusion.

Assessment of study quality

Study quality was assessed on the basis of allocation concealment, cointervention, blinding of the outcome assessment, and intention-to-treat analysis or loss to follow-up. If all the criteria were met the study was considered to have a low risk of bias; a moderate to high risk of bias meant that one or more criteria were not met or were unclear. Studies with a low risk of bias were considered high quality, while those with a high risk of bias were considered low quality. Two reviewers independently assessed study quality using a standard form and resolved any disagreements by discussion.

Data extraction

The authors did not state how the data were extracted for the review, or how many reviewers performed the data

extraction. The outcomes data appear to have been extracted as reported in the included studies, including P-values.

Methods of synthesis

How were the studies combined?

A narrative summary was provided.

How were differences between studies investigated?

The narrative addressed the high-quality studies first, then the moderate- to low-quality studies. Tables were used to present summary study characteristics.

Results of the review

Nine studies (1,350 women) were included, comprising four RCTs (480 women), two quasi-randomised trials (433 women) and three non-randomised trials (437 women).

Three RCTs were considered as high quality and the other 6 studies as moderate quality.

The three high-quality RCTs assessed various exercise programmes. Two showed no significant difference in pain, while one showed less pain in the postpartum week but not during pregnancy. There was no difference in functional status based on one study, and no difference in global improvement or mobility also based on one study. One study reported sick leave and found that, compared with the control group, the exercise group (water gymnastics) had a significantly lower number of days' leave after week 33.

A quasi-randomised and a non-randomised trial showed significantly lower pain intensity and less sick leave with individualised physical therapy.

An RCT found no significant difference in pain during pregnancy between acupuncture and individualised physical therapy, but showed significantly better functional status in the acupuncture group.

A quasi-randomised study of massage assessed back pain but did not compare the effect of treatment with the control group.

In one non-randomised trial, women who did not receive ergonomic back care advice were significantly more likely to experience troublesome or severe backache than those who did.

One non-randomised trial found no significant difference in pain or functional limitations between attendees of exercise classes for pregnant women and a sedentary control group.

Authors' conclusions

There was no strong evidence on the effects of physical therapies for the prevention and treatment of back and pelvic pain related to pregnancy.

CRD commentary

The criteria for including studies in the review were stipulated. The definition of the intervention of interest was broad. A number of sources were searched for relevant studies, although the search strategy could not be described as comprehensive. The authors' stance regarding language and unpublished studies was unclear. Steps were taken to minimise bias in decisions about study relevance and quality, but not explicitly regarding data extraction.

The authors' decision not to pool the studies in a meta-analysis was justified. They did not undertake a detailed narrative synthesis, but the information they provided did support the conclusion that insufficient evidence was found.

Implications of the review for practice and research

Practice: The authors stated that physiotherapists have to use their own judgment pending further evidence.

Research: The authors stated that interventions based on established theoretical principles of lumbo-pelvic stability need to be evaluated. They suggested an RCT of combined mobilisation and stabilisation exercises. They recommended that

future trials be pragmatic and evaluate individual-based treatment programmes. Also, further studies were needed to identify subgroups who might benefit from specific treatments.

Bibliographic details

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