

# Optimizing pain relief during pregnancy using manual therapy

Christopher Oswald DC Ceara C. Higgins DC Demetry Assimakopoulos DC

## Abstract

**Question** Many of my pregnant patients have muscle and joint aches, and are reluctant to use analgesics. What is known about chiropractic care during pregnancy?

**Answer** As pregnant women move into their second and third trimesters, their centres of mass shift anteriorly, causing an increase in lumbar lordosis, which causes low back and pelvic girdle pain. Increasing recent evidence attests to the effectiveness and safety of treating this pain using manual therapy. Massage therapy and chiropractic care, including spinal manipulation, are highly safe and effective evidence-based options for pregnant women suffering from mechanical low back and pelvic pain.

## Optimiser le soulagement de la douleur durant la grossesse à l'aide d'une thérapie manuelle

### Résumé

**Question** Bon nombre de mes patientes enceintes ont des douleurs musculaires et articulaires et hésitent à utiliser des analgésiques. Que sait-on du recours aux soins d'un chiropraticien durant la grossesse?

**Réponse** À mesure que la grossesse progresse aux deuxième et troisième trimestres, le centre de gravité des femmes enceintes bascule antérieurement, ce qui cause une augmentation de la lordose lombaire, d'où des douleurs au bas du dos et à la ceinture pelvienne. Des données probantes récentes de plus en plus nombreuses corroborent l'efficacité et la sûreté des traitements de ce genre de douleurs par thérapie manuelle. La massothérapie et les soins chiropratiques, y compris la manipulation vertébrale, sont des options hautement sécuritaires et efficaces pour les femmes enceintes qui ont des douleurs au bas du dos et à la ceinture pelvienne d'origine mécanique.

Musculoskeletal pain is extremely common among pregnant women, with approximately 20% of pregnant women experiencing pelvic girdle pain,<sup>1</sup> and 50% to 85% experiencing low back pain.<sup>2</sup>

Owing to fears of the potential effects of medications, many women are unsure of what to do about low back and pelvic pain during pregnancy. This uncertainty can often lead to increased feelings of stress, anxiety, and helplessness. Women might report to their physicians with symptoms of pain located in the groin, pubic symphysis, or sacroiliac joint. They often believe that their pain is a result of a problem with their placenta, uterus, or developing baby.<sup>3</sup> Common sacroiliac joint dysfunction can often cause substantial pelvic pain and can be relieved with a simple adjustment by a chiropractor in minutes. Chiropractors, as primary health care professionals, have the ability to identify and diagnose mechanical problems and to alleviate many cases of undue stress or anxiety. Chiropractic doctors are also trained to understand when symptoms are indicative of something more ominous and to refer

the patient to the appropriate professional if a nonmechanical issue is suspected.

### Manual therapy

Massage therapy and chiropractic care, including spinal manipulation, are highly safe and effective evidence-based options for pregnant women suffering from mechanical low back and pelvic pain. Very few adverse effects have been reported in the literature, and those that were identified did not affect the lumbar spine, pelvis, or, most important, the developing child. Simply knowing that a safe and effective treatment exists can reassure the patient.<sup>2,4</sup>

Often, these women are put at ease within minutes because their symptoms are explained to them, as are potential treatment options to manage or correct their pain without medication. Research during the past 15 years has shown that as pregnant women move into their second and third trimesters, their centres of mass shift anteriorly, causing an increase in lumbar lordosis. This in turn causes overactivity of the low back

and pelvic muscles, and hypermobility of the thoracic joints, typically at the T6 to T8 levels of the spine, lumbar spine, and pelvis. This, coupled with the expanding pelvis, leads to increased activity in the paraspinal musculature, as well as in the rectus femoris, external oblique, psoas major, and adductor longus muscles bilaterally.<sup>1,5</sup> This suggests that the root cause of much pelvic pain during pregnancy might be mechanical (stemming from the low back or sacral joints)<sup>1,5</sup> as opposed to hormonal. The specific muscles that need to be released to decrease mechanical pain can be easily identified by a licensed chiropractor experienced in treating pregnant patients.

Evidence shows that midthoracic pain at the end of the second trimester might be compensatory to the hyperlordosis described above.<sup>5</sup> Also, lower cervical pain or strain increases in frequency as the pregnant woman gains weight and loses the ability to use her core muscles to move herself from side to side at night. She overuses her head as a lever, causing C6 to C7 joint compression. Providing advice on appropriate pillows and stretches can dramatically reduce these issues.

The feet obviously take more strain in the longitudinal arch tissues; appropriate shoes, orthotic adjustments, or massage can help increase comfort.


The hypertonic muscles can be easily relaxed by a registered massage therapist who works with a chiropractor. Massage therapy has been shown to be effective in treating subacute and chronic low back pain in the general population, and has been recommended by the Ottawa Panel.<sup>6</sup> In patients with acute muscle pain or substantial spasm, acupuncture and spinal manipulation can also be used to relax soft tissues.<sup>7,8</sup>

### Additional options

Although approximately 92% of pregnant patients are advised by their physicians to exercise within safe limits, only about 40% actually do so.<sup>9</sup> Chiropractors can also prescribe exercise and stretches specific to their patients' needs and more frequently have multiple visits with patients than physicians do. In a 2008 survey of American midwives, 57.3% recommended complementary and alternative therapies, with chiropractic care being the third most popular choice.<sup>8</sup> Many chiropractors who treat pregnant patients work closely with midwives and doulas. A 2012 study compared standard obstetric care alone to standard obstetric care combined with chiropractic care including spinal manipulation, education, and exercise. The authors found that a multimodal approach resulted in greater decreases in pain and dysfunction both subjectively and objectively in pregnant patients with low back or pelvic pain. Patients in the multimodal care group also reported greater improvement in their quality of life, with the greatest improvements seen in their sleep patterns.<sup>9</sup>

Chiropractic patients often welcome the holistic perspective many chiropractors have toward the treatment of their pain. Components include, but are not limited to, advice on sleep hygiene, stress reduction, and how to become more physically active; exercise prescription; and nutritional recommendations. Addressing these components assists in the control or correction of their initial musculoskeletal complaint and has a positive effect on the patient's overall well-being. Incorporating this holistic approach, 87% of patients demonstrate a high level of satisfaction with their chiropractic experience.<sup>10</sup>

### Conclusion

Women experiencing musculoskeletal pain related to pregnancy can greatly benefit from manual therapies, including spinal manipulation, acupuncture, and massage therapy. Access to manual therapy can be facilitated by family physicians and obstetricians by making this information available to their patients. 

#### Competing interests

Drs Oswald, Higgins, and Assimakopoulos are practising chiropractors.

#### References

1. Aldabe D, Ribeiro DC, Milosavljevic S, Dawn Bussey M. Pregnancy-related pelvic girdle pain and its relationship with relaxin levels during pregnancy: a systematic review. *Eur Spine J* 2012;21(9):1769-76. Epub 2012 Feb 4.
2. Stuber KJ, Wynd S, Weis CA. Adverse events from spinal manipulation in the pregnant and postpartum periods: a critical review of the literature. *Chiropr Man Therap* 2012;20:8. DOI:10.1186/2045-709X-20-8.
3. Röst CC, Jacqueline J, Kaiser A, Verhagen AP, Koes BW. Pelvic pain during pregnancy: a descriptive study of signs and symptoms of 870 patients in primary care. *Spine (Phila Pa 1976)* 2004;29(22):2567-72.
4. Khorsan R, Hawk C, Lisi AJ, Kizhakkeveetil A. Manipulative therapy for pregnancy and related conditions: a systematic review. *Obstet Gynecol Surv* 2009;64(8):416-27.
5. Aldabe D, Milosavljevic S, Bussey MD. Is pregnancy related pelvic girdle pain associated with altered kinematic, kinetic and motor control of the pelvis? A systematic review. *Eur Spine J* 2012;21(9):1777-87. Epub 2012 Jun 21.
6. Brosseau L, Wells GA, Poitras S, Tugwell P, Casimiro L, Novikov M, et al. Ottawa Panel evidence-based clinical practice guidelines on therapeutic massage for low back pain. *J Bodyw Mov Ther* 2012;16(4):424-55. Epub 2012 Jun 23.
7. Furlan AD, van Tulder MW, Cherkin DC, Tsukayama H, Lao L, Koes BW, et al. Acupuncture and dry-needling for low back pain. *Cochrane Database Syst Rev* 2005;(1):CD001351. DOI:10.1002/14651858.CD001351.pub2.
8. Zerdecki L, Passmore S. Chiropractic evaluation and management of the pregnant patient: an update from recent literature. *Midwifery Today Int Midwife* 2008;(87):28-9, 67-8.
9. George JW, Skaggs CD, Thompson PA, Nelson DM, Gavard JA, Gross GA. A randomized controlled trial comparing a multimodal intervention and standard obstetrics care for low back and pelvic pain in pregnancy. *Am J Obstet Gynecol* 2013;208(4):295.e1-7. Epub 2012 Oct 23.
10. Coulter ID, Hurwitz EL, Adams AH, Genovese BJ, Hays R, Shekelle PG. Patients using chiropractors in North America: who are they, and why are they in chiropractic care? *Spine (Phila Pa 1976)* 2002;27(3):291-6.

---

**MOTHERISK** Motherisk questions are prepared by the Motherisk Team at the Hospital for Sick Children in Toronto, Ont. Drs Oswald, Higgins, and Assimakopoulos are chiropractors in Toronto, Ont.

Do you have questions about the effects of drugs, chemicals, radiation, or infections in women who are pregnant or breastfeeding? We invite you to submit them to the Motherisk Program by fax at 416 813-7562; they will be addressed in future Motherisk Updates. Published Motherisk Updates are available on the *Canadian Family Physician* website ([www.cfp.ca](http://www.cfp.ca)) and also on the Motherisk website ([www.motherisk.org](http://www.motherisk.org)).