



# The Anatomy of the Uterus and its Biomechanical influence on the Sacrum and Pelvis: A Clinical Huddle.

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## Introduction

**G**onstead Chiropractic is synonymous with level foundation. As Chiropractors that utilize this technique, we aim to focus on creating as much stability in the pelvis and sacral region for each individual's unique anatomy. Every patient benefits from this approach to care, especially the pregnant patient. Ideally the female patient would be under established chiropractic care prior to conception. This would allow us as the doctors to have full spine radiographs to use during their care through pregnancy.

Fortunately, if the patient initiates care when already pregnant, we have the insightful and reproduceable tools of the rest of the system. As the woman's pregnancy advances there will be identifiable changes in the sacral/pelvic region in particular when checking for subluxation. This can be due to the changes in the woman's center of gravity as her abdomen becomes larger, changes in the hormones promoting more relaxation of the ligaments and pull from the uterus attachments.

As we approach care to create the most optimal positioning of the pelvis for baby's exit, let us be reminded of uterine anatomy during pregnancy and

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how that can influence positioning and alignment.

## Anatomy

The uterus contains three layers:

- ▶ *Endometrium*: the inner lining that is shed during menstruation
- ▶ *Myometrium*: the middle layer of muscle that expands to make room for baby's development and contracts to push baby out during labor
- ▶ *Serosa*: the smooth outer layer with the function to make the uterus move freely within the pelvis

The ligaments of the uterus are essential to 'anchor' the uterus in a secure location. But this location is fluid, especially as the fetus continues to develop and grow making it more critical why the pelvis should be adaptable. Let's review the important ligaments and the corresponding pelvic/sacral attachments:

- ▶ *Broad Ligaments*: The broad ligament contains three mesenteries which are extensions of the peritoneum in the abdominal cavity. The mesometrium is the largest and most inferior mesentery which extends from the pelvic floor to the body of the uterus.
- ▶ *Round Ligaments*: This ligament travels from the horns of the uterus (by where the fallopian tubes enter) and extends deep into the inguinal canal ending at the mons pubis. This can often become a deep pelvic pain on pregnant moms when there is tension on these ligaments. This is used as a point of contact when checking for tension of the ligaments aka Webster's.
- ▶ *Cardinal Ligaments*: aka the transverse ligaments. These are important to support the uterine angle. These run from the outer edge of the cervix to the lateral pelvic wall by the ischial spine.
- ▶ *Pubocervical Ligaments*: Extend from the cervix to the posterior pubic symphysis.
- ▶ *Uterosacral ligaments*: From the posterior superior aspect of the cervix to the anterior middle portion of the sacrum. Weakness of this ligament contributes to pelvic organ prolapse.

## Application

The adaptability and proper biomechanics of the pelvis are key in allowing the uterus to have reduced constraint and provide an optimal opening for the pelvic outlet. Women under chiropractic care prior to pregnancy are already at an advantage for improving the function of their nervous system as well as improved mechanics of their foundation. As baby develops, the ligaments must stretch for this growth. This does not always happen uniformly, primarily due to subluxation.

One can speculate how spinal misalignments might influence these imbalances of the ligaments. For example, a woman with an increased sacral base angle (above  $45^{\circ}$ ) will as a result have more tension on the transverse and uterosacral ligaments. A rotation in the sacrum or within the pelvis (EX or IN) can create a tightening of the broad ligaments, sometimes bilaterally, but usually more pronounced on one side. As the pelvis shifts, the lumbar spine will alter for this change and there is the potential for more indicators of subluxation to occur in the upper lumbar.

With these changes the care plan for these patients must be dynamic. It is not wise to assume that a woman who does well with every 2 weeks for a care schedule will sustain that through pregnancy. The opportunity to evaluate them for subluxation, especially closer to anticipated

delivery date is critical. Discussing these care changes between the chiropractor and the mom is typically not challenging. The woman knows how much their body is changing better than anyone else and will value closer spinal checks to make their delivery process as smooth as can be.

Once baby is delivered, updated full spine radiographs are essential as soon as possible. Often, an area that was subluxated toward the end of pregnancy will change and a different segment will need adjustments. The radiographs are key to guide the chiropractor in this direction, as well as an effective teaching opportunity as mom adjusts to some of the changes of her body post-pregnancy. This will be especially influenced if intervention such as c-section was needed during the delivery process.

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#### Mission of Dr Sedar's Clinical Practice:

To offer the absolute best in Chiropractic Care;  
To perpetuate the Gonstead System of Chiropractic  
thru education;  
To assist man, woman, and child in receiving an  
opportunity for optimal health, if they choose to  
pursue it;  
To encourage a natural way of living, a life of  
proactive vocation and action, and a life driven not  
out of fear, but purpose and direction;  
Thru chiropractic lifestyle, nutrition, education, love,  
and laughter;  
This is our mission: One adjustment at a time!

