

Back Pain in Pregnancy: Etiology and Treatment Strategies

By:

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Statistics

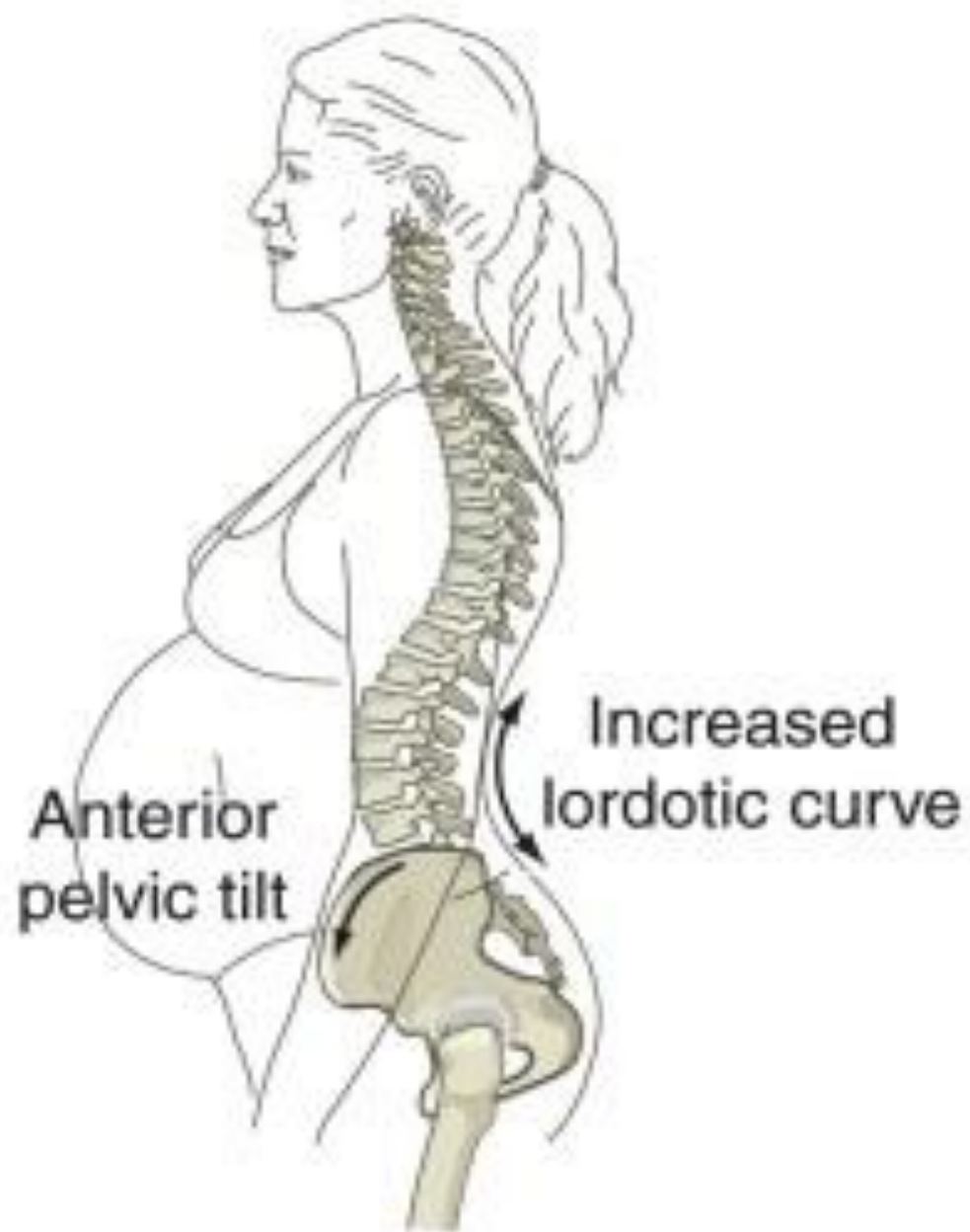
- Low back pain occurs in 1/3 to 2/3 of pregnant women
- Previous back pain before pregnancy doubles the risk
- ~85% of pregnant women will have low back/pelvic pain if they had pain with their previous pregnancy. 2/3 of these patients require sick leave during pregnancy.
- Higher maternal age increases risk of LBP

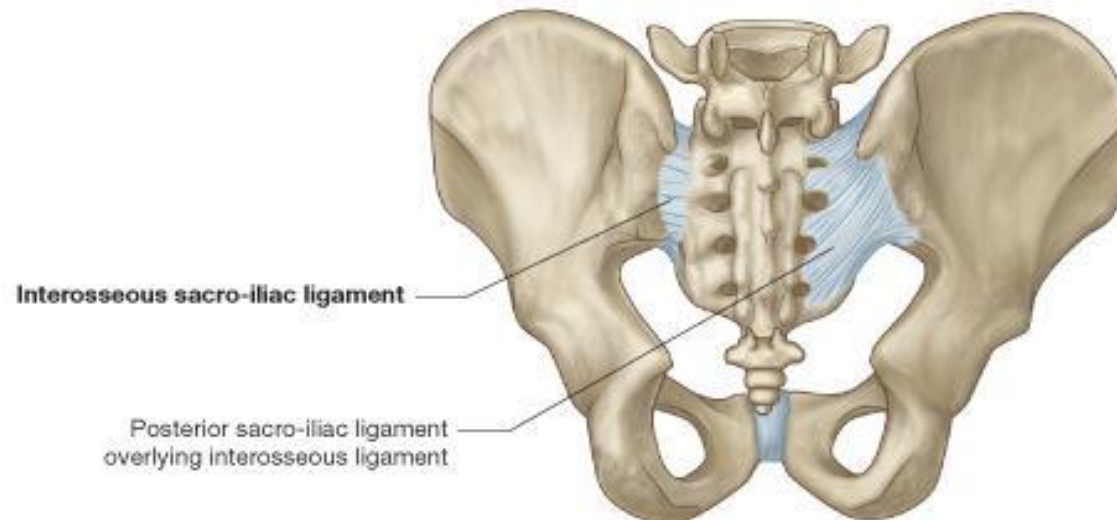
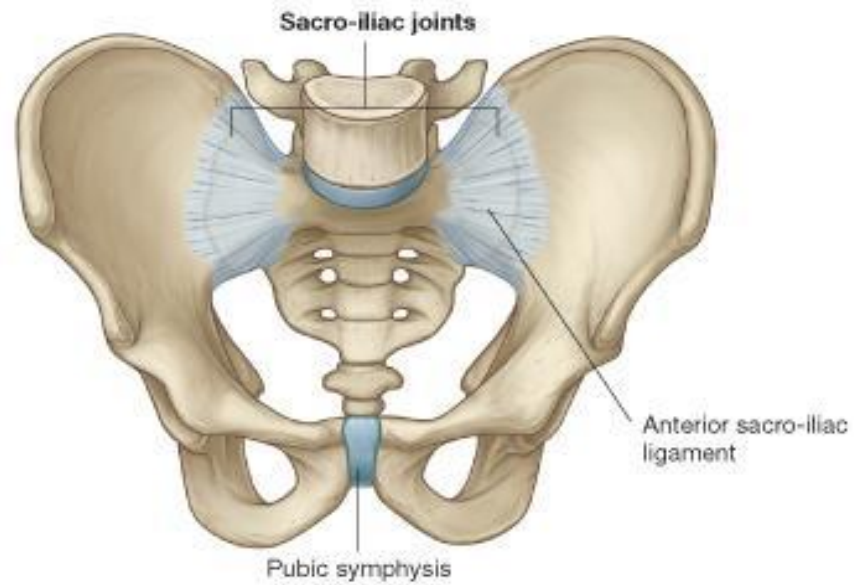
Causes of Back Pain in Pregnancy

- Combination of biomechanical factors that yield abnormal loading on muscles and joints and behavioral factors related to inadequate patient coping strategies
- Increased ligament laxity is caused by increase in hormones estrogen and relaxin. One study showed women most incapacitated with low back pain had the highest amounts of relaxin.
- Herniated discs are rare-1 in 10,000

Mechanical Changes in Pregnancy

Hyperlordosis occurs as the gravid uterus induces accentuation of the anterior pelvic tilt. The sacroiliac joints resist this rotation. As pregnancy progresses, both forward rotation and hyperlordosis continue as the sacroiliac ligaments become lax. This contributes to increasing mechanical strain on the low back, sacroiliac joints and pelvis.





Sacro-iliac joints and associated ligaments.

History of Low Back Pain in Pregnancy

- Low back pain or posterior pelvic pain aggravated by activity, relieved by sitting or lying down
- Most often in third trimester
- Occasionally into posterior thighs but usually not distal to knees
- Usually persistent but not severe

Physical Exam

- Standard neuromuscular exam including ROM, DTR`s, leg strength and sensation
- Assess leg length standing and supine
- Check standing and seated flexion tests
- Assess pelvis and sacrum prone if early enough in the pregnancy

Seated Flexion Test





Anterior Innominate

ASIS
inferior

PSIS superior



Posterior
Innominate

ASIS
Superior

PSIS
Inferior



Pelvic Rotation



Imaging of Pregnant Patients

- Imaging should be done after the first trimester only if symptoms very severe or unusual
- Although no recognized biological effects of MRI`s on the developing fetus have been reported, long term effects have not been conclusively evaluated. MRI should be done only if cauda equina symptoms or substantial loss of lower extremity strength

Treatment of Back Pain in Pregnant Patients

- PT – Aquatic therapy
- Tylenol for pain
- NSAID`s can cause premature closure of the ductus arteriosus in the fetus
- Other class B drugs in pregnancy include cyclobenzaprine, oxycodone and prednisone
- Care should be coordinated with the obstetrician

Other Treatments

- Lidocaine patches
- One study used acupuncture which reduced pain in 72% of pregnant women
- Therapeutic US is contraindicated in any area that may reach the fetus
- Electric stimulation should not be used on low back or abdomen although TEN`s has been used during labor and delivery

Epidurals/Surgery

- Epidurals have been done without fluoroscopic guidance
- Surgery has been done for progressive neurologic deficit or cauda equina syndrome

Recent Trials

- Chiropractic joint mobilization, home stabilization exercises, education and reassurance 24-33 weeks gestation. Significant reduction of pain vs. control
- Osteopathic manipulation during prenatal period: reduced probability of meconium-stained amniotic fluid and preterm delivery

Osteopathic Manipulation

- Avoid HVLA to low back or pelvis
- Use gentle techniques like strain/counterstrain, Still or muscle energy

Myofascial Release to Sacrum



Muscle Energy to Anterior Pelvis



Anterior Pelvis Exercise



Muscle Energy to Posterior Pelvis



Posterior Pelvis Exercise



Still to Anterior Pelvis







Still to Posterior Pelvis







Muscle Energy for Separated Pubic Symphysis



Thank You!

