

# Pregnancy and Low Back Pain

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## Incidence/Statistics:

- ❖ 50% of women have LBP during pregnancy <sup>2,6</sup>
- ❖ 10% of women with chronic LBP said that the LBP began during pregnancy <sup>6</sup>
- ❖ Most common between 4<sup>th</sup> and 7<sup>th</sup> months gestation <sup>4</sup>
- ❖ Biggest predictor is LBP during previous pregnancy <sup>6</sup>

## Pregnancy-related Causes: <sup>1,4</sup>

\* Note: severe back pain could be kidney infection or constant, dull backache may be preterm labor <sup>1</sup>

Postural changes: 2° change in center of gravity from growing uterus

- Uterus grows to ~ 1,000X its normal size, and breasts also enlarge due to increased amount of fat and number of milk glands

- increased lumbar lordosis/swayback posture- increased stress on facet joints, post. ligaments, and intervertebral disks; aggravated spondylolisthesis, degenerative facet joint disease, and lateral stenosis (weak abdominals also cause excessive lumbar lordosis)
- compensatory thoracic kyphosis
- rounded shoulders and forward head
- anterior pelvic tilt
- hyperextension of knees

### Stretch weakness

post. neck muscles  
middle and lower trapezius  
lower abdominals  
hip extensors  
pelvic floor

### Adaptive shortening

ant. shoulder muscles  
lumbar paraspinals  
hip flexors

Relaxin: increased joint laxity/hypermobility (may last up to 12 wks post-partum)  
-decreased arch of foot and increased pronation (return to pre-pregnancy structure may occur slowly or not at all)  
-SI joint dysfunction (may be aggravated by single leg weight-bearing)

## Treatment:

Exercise: (30 minutes, at least 3X/wk but prefer daily) <sup>1</sup>

### Benefits

- Look and feel better
- Relaxation and stress relief
- Reduces constipation, leg cramps, bloating and swelling

- Improves posture
- Promotes strength and stamina
- Improves sleeping
- Preparation for labor and delivery
- Post-partum fitness and return to pre-pregnancy figure

#### Appropriate forms of exercise <sup>1,4,5,6</sup>

- low impact, light to moderate exercise intensity
- walking, stationary cycling, swimming, water aerobics, light weight-lifting (no > 25 lbs.), and prenatal exercise class
- no new sports during pregnancy
- 5 minute warm up and 5-10 minute cool down with gentle stretching

Therapeutic Exercises: <sup>4,5</sup> (routine attached at end)

Chin tucks, scapular retraction at wall, post. pelvic tilt at wall, cat position, squats, controlled quadruped hip extension, Kegel exercises, side-lying SLR, seated piriformis stretch, quad stretch in side-lying or in standing with support, chest and ant. shoulder stretches, side stretch of trunk, mid-back stretch, and trunk rotation (except with diastasis recti)

#### Precautions/Contraindications with Exercise <sup>1,4,7</sup>

\* talk with doctor prior to beginning exercise program

- supine hypotension/inferior vena cava syndrome (SHS)  
avoid supine after 4<sup>th</sup> month gestation (occluded by uterus); left side-lying recumbent position preferred (maximum venous return and cardiac output)
- Diastasis recti- separation of linea alba > 2 cm above umbilicus and any separation below umbilicus  
testing (start in 2<sup>nd</sup> trimester): supine hook-lying with chin tuck and extended arms, pt. raises head and shoulders to clear scapulae; central bulge at umbilicus and 2 inches above and below umbilicus equals + test
- avoid Valsalva maneuver
- avoid hyperextension of lumbar spine with quadruped hip extension
- avoid deep knee bends
- avoid straight-leg toe touches
- avoid single leg weight-bearing with SI joint dysfunction
- avoid full sit-up, jack-knifing, and (B) SLR (especially with diastasis recti)
- avoid trunk rotation with diastasis recti
- due to altered balance, there is decreased stability and fall risk
- avoid excessive intensity: takes oxygen and blood flow away from the uterus; increased heart rate with pregnancy  
\* slow down if unable to talk during exercise
- avoid overheating (drink plenty of water before, during, and after exercise)
- wear supportive shoes appropriate for activity and wear supportive bra

- avoid aggressive stretching and bouncing at end range
- avoid jerky, bouncy, or high impact motion  
(no jumping, jarring motions, or quick direction changes)

#### Red Flags<sup>1</sup>

- Dizziness or faintness
- Increased shortness of breath
- Irregular or rapid heartbeat
- Chest pain
- Trouble walking
- Pain
- Vaginal bleeding
- Uterine contractions after resting
- Fluid leakage from vagina

#### Modalities:<sup>3,4</sup>

- Hot packs at upper and mid-back and extremities (avoid at low back and abdomen)
- avoid hot or very warm water
- Ice- no precautions
- Ultrasound away from uterus (avoid over abdomen, low back, pelvis, and hips)
- Estim contraindicated over pelvis, hips, abdomen, trunk, and low back
- caution with manual therapy and muscle energy techniques- joint laxity
- Massage<sup>7</sup> - avoid during the first trimester (may cause dizziness and worsen morning sickness)
  - avoid massage at the abdomen, and certain points at the foot and ankle may trigger contractions
  - do not use aromatherapy oils

Foot Orthotics: for arch support and treatment of increased pronation<sup>6</sup>

#### **Prevention:**<sup>1,2,4</sup>

- ✓ Proper body mechanics (ex. lifting) and joint protection
- ✓ Postural awareness and correction
- ✓ Maternity pants with supportive waistband or maternity support belt
- ✓ Frequent position changes (stand with one foot on stool during prolonged standing)
- ✓ Bed positioning with pillow between knees and under abdomen when in side-lying
- ✓ Sleep on firm mattress
- ✓ Sit in chair with back support or place pillow or towel roll behind lower back
- ✓ Wear footwear with good arch support (no high heels or flat shoes)

**Post-partum considerations:**<sup>4,6</sup>

C-section recovery:

- gentle TE can begin 24 hrs post-op, such as circulation exercises, pelvic floor exercises, and gentle abdominal exercises
- may resume exercises performed during pregnancy when pain subsides
- caution with heavy lifting 4-6 wks post-op

Breast-feeding/nursing:

- increased weight of lactating breasts
- nursing positions may cause stress on neck and upper back

Child care:

- transfers (ex. picking up baby)
- handling equipment (ex. carrying car seat and diaper bag)

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