

# Pregnancy, Physical Therapy and the Lower Back

Kern & Associates Physical Therapy, Inc.

The creation of a new life can be a wonderful and exciting experience. There are a number of things that need to be done in order to prepare for this life-changing event, such as building a nursery, buying clothes, toys and much more. Many people forget to acknowledge the things that can be done to help reduce and compensate for the biomechanical and physiologic changes that occur during pregnancy. Preparing for the increased stress on several muscles and joints throughout the body is imperative to decrease the effect on the lower back and pelvic girdle region.

Up to 50% of women report back pain at some stage during pregnancy and in one-third the severity of the pain is such that it interferes with daily life. In some cases the lower back pain resolves shortly after delivery. For others it continues and can become a chronic problem. With all of the heavy lifting that is required once the baby arrives, a lot of stress is put on the lower back (i.e. diaper bag, car seat, etc.). It would be in the best interest of the moth-

er to be the most prepared for those ventures so that back pain during pregnancy does not become aggravated with activities afterwards.

Q: What causes low back pain during pregnancy?

A: Many factors contribute to back pain during pregnancy:

1. **Relaxin** is a hormone that is secreted in response to pregnancy that facilitates the birth process by causing laxity in the ligaments allowing the pelvis to expand for the growth of the fetus. Relaxin is released at its height in the first trimester causing the joints (specifically the sacroiliac and lumbar facet joints) to become hypermobile putting a strain on the ligaments.
2. **Lumbar lordosis**, or increased curvature of the spine, puts direct pressure on the joints in the lumbar spine and the nerves exiting the spine. This can cause lower back pain and possibly radiating pain into the legs. The increased lordosis is caused by a women's center of gravity shifting forward in response to the growing fetus.
3. **Previous history of low back pain** pre-



Editor: *Felicia Colón-Barnes, PT, DPT, CSCS* Associate Editor: *Rebecca Kern, PT, DPT, OCS*  
Production Editor: *Steven Magnone*

Kern & Associates Physical Therapy ♦ 2901 Wilshire Blvd, Suite 440 ♦ Santa Monica, CA 90403  
(310) 315-9711 ♦ [www.kernpt.com](http://www.kernpt.com)

disposes women to back pain pre and post partum.

4. **Herniated disc** in the lumbar spine can be present because of the increase stress. This disc that is located between connecting vertebrae can push out and pinch on the surrounding nerves causing low back pain as well as pain radiating into the legs. If you begin having saddle numbness, urinary retention, severe back pain, leg weakness, and pain in both legs, check with your doctor immediately because you may have a herniated disc that is causing nerve compression which may lead to permanent neurologic damage.

Q: Is aerobic exercise beneficial during pregnancy?

A: Available evidence supports aerobic exercise during pregnancy both for the mother and her developing baby. The following are some of the benefits of exercise:

- Prevents gestational diabetes
- Decreases postural changes, thus less back pain
- May facilitate labor
- Prevents accumulation of excess body fat
- Promotes psychological well-being
- Boosts immune system function
- Delivers blood and oxygen to the heart and brain more efficiently
- Aids in quicker postpartum recovery
- Increases the cardiovascular capacity of the baby

Exercise should be light to moderate, where the heart rate increases no greater than 150 beats/minute. Make sure to warm-up and cool-down 5-10 minutes before and after exercise. Select safe, non-ballistic exercise movements and avoid thermal or hyperbaric environmental stress during exercise. Exercising while lying on your back should also be avoided in the second and third trimester. Stop your work out and call your doctor if you have any of the following symptoms when exercising:

- Dizziness or faintness
- Increased shortness of breath
- Irregular or rapid heartbeat
- Chest pain
- Trouble walking
- Pain
- Vaginal bleeding or fluid leakage
- Uterine contractions that continue after rest

Q: What exercises should be done during pregnancy to help

avoid low back pain?

A: Strengthening your core muscles is extremely important! These deep trunk muscles play a key role in stabilizing the spine, particularly with dynamic activities. The transverse abdominis, a lower abdominal muscle, is imperative for achieving core stability. See the exercise in figure 1.

Another group of muscles that are important to strengthen are the gluteal muscles which support the hips and in turn support the back. Gluteus maximus is targeted with the exercise in figure 2 and gluteus medius is targeted with the exercise in figure 3.

Pelvic floor muscles are the last group which support the reproductive organs and help to maintain continence. Strengthening these muscles prior to labor will lessen the likelihood of tearing during delivery as well as decreasing the chances of urinary incontinence or leakage after birth. To strengthen these muscles perform a Kegel exercise, where you gently squeeze “up and in” around the rectum and urethra. Perform Kegels lying in bed, standing, and in sitting.

It is also important to note that recent research suggests that exercise performed during pregnancy should be done under the supervision of a physical therapist to ensure optimal results.

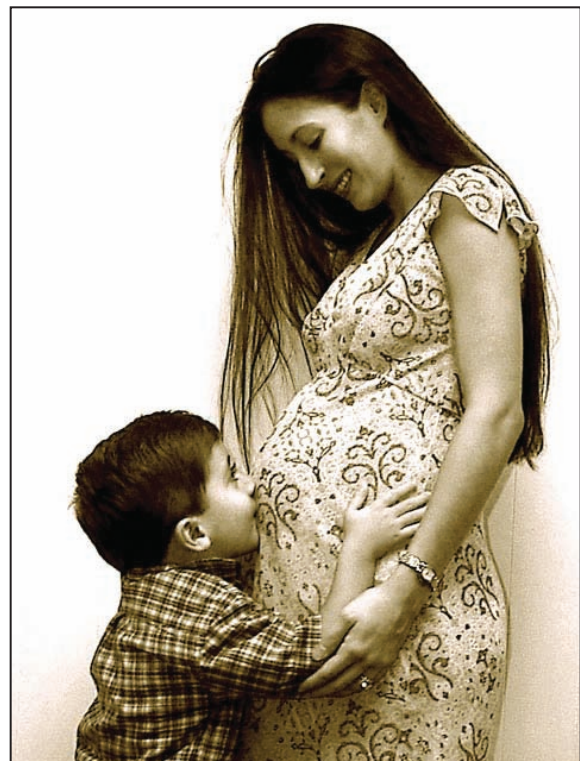




Figure 1: Tighten your lower abdominals and slowly alternate extending each leg while keeping your lower back in a neutral and stable position.

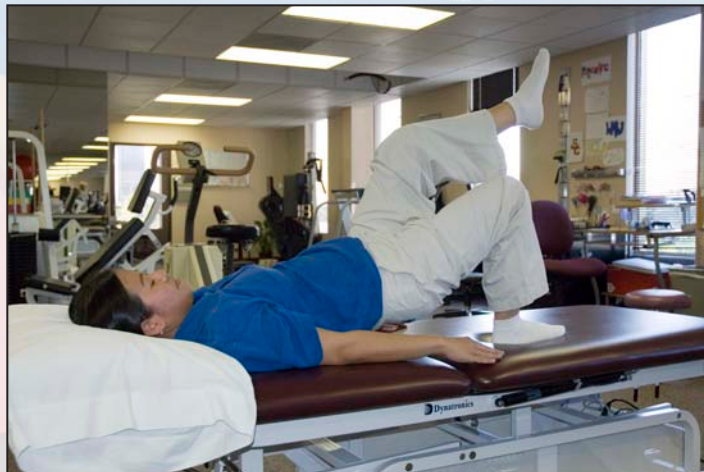


Figure 2: Contract your gluteal muscles and lift your buttock up while stabilizing on one leg.



Figure 3: Using a ther-a-band around the ankles, slightly bend knees, keep the trunk upright, and step to the side.



Kern & Associates Physical Therapy,

2901 Wilshire Blvd, Suite 440

Santa Monica, CA 90403

(310) 315-9711

[www.kernpt.com](http://www.kernpt.com)

## Felicia Colón-Barnes, PT, DPT, CSCS



**Felicia Colón-Barnes, PT, DPT, CSCS**, a Doctor of Physical Therapy, is an Orthopedic and Women's Health Physical Therapist. In recent years, the emphasis of the health sciences on fitness and wellness has brought to women's attention a need to pay closer attention to their bodies during recreation, work, and throughout life. Felicia has specialized training which will benefit women with a variety of medical conditions. She uses every facet of her physical therapy education to evaluate and treat female clients, promoting and enhancing health through the life span. All treatments are individually designed after thorough evaluation.

Education:

- ❖ University of Southern California, Doctor of Physical Therapy
- ❖ Xavier University of Louisiana, Bachelor of Science

Associations:

- ❖ American Physical Therapy Association
- ❖ Women's Health and Orthopedic Sections
- ❖ National Strength and Conditioning Association
- ❖ Certified Strength and Conditioning Specialist

**Kern & Associates Physical Therapy** is pleased to announce that Felicia is available by appointment to teach the following:

- ❖ Regaining Confidence - Classes for Pelvic Floor Disorders.
- ❖ Sports Injury Prevention - By appointment for your organization or school.

Classes are small for specialized individual attention. Please call for availability at (310) 315-9711.