



PREGNANT PAUSE: LOW BACK PAIN

By Jessica Heath and Neal Goulet

Beach volleyball player Kerri Walsh Jennings was five months pregnant when she competed – and won a gold medal – at the 2012 Summer Olympics in London.

Another woman ran her second half-marathon when she was six weeks pregnant – and shaved 30 minutes off her time. And then there's the woman who twice competed in triathlons while pregnant, at 10 weeks and at seven months.

Of course, most women won't engage at these levels while pregnant. But their bodies will challenge them – and sometimes seemingly betray them – in many other ways as they prepare to give birth.

One mother of four compared her experience giving birth to that of a professional hockey player at playoff time.

“I too sacrificed and worked and 'trained' for nine long months to reach that final goal,” she wrote, adding: “Every pregnant woman is an athlete.”

BEDREST NOT THE SOLUTION

And as athletes, they are susceptible to injury. In fact, more than 60 percent of pregnant women endure low back pain (LBP), according to the American College of Obstetricians and Gynecologists.



Most pregnant women experience low back pain, but it is not something they have to suffer through passively.

These women are especially susceptible if they have had back pain previously or if they lead a sedentary lifestyle, aren't flexible, and have weak back and abdominal muscles.

LBP can disrupt a pregnant woman's daily routine and interfere with a good night's sleep. It can cause added stress and generally hang like a cloud over an otherwise joyful life event.

But remember, pregnant women are athletes. And athletes should be active, which is an important part of preventing or mitigating LBP during pregnancy.

What's more, there's a greater recognition that bedrest generally isn't the solution to LBP and could even make it worse. While LBP is common, no longer is it some-

thing that pregnant women must suffer through passively.

They can act, and physical therapy can help, both before and during pregnancy.

WHY LBP HAPPENS

Though LBP is common in pregnant women, it is important to discuss any onset of pain or unusual or worsening symptoms with your healthcare provider.

Pregnant women experience two primary types of pain: LBP is felt low around the spine and may radiate into the legs; posterior pelvic pain is felt in the buttocks and thighs. Approximately 1 percent of women experience true sciatica, the pinching of a nerve that causes numbness and tingling in the leg.

Pregnant women experience considerable hormonal changes. Pain and discomfort in the pelvis and lower back during the first trimester is mostly caused by the hormone relaxin, which is detectable by weeks seven to 10 and is produced throughout the pregnancy.

“This hormone relaxes the mother's muscles, joints and ligaments to make room for the growing baby,” according to the Society for Endocrinology.

These changes can cause less stability, leading to pain with walking, sitting or standing for long periods, rolling in bed, transfers (sit to stand, in



Scan for video about pregnancy exercise myths.

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and out of a car or bathtub), and lifting.

In a healthy, normal pregnancy, a woman will gain 25 to 35 pounds. The uterus becomes heavier. To compensate for this added weight in front of her body, a woman changes her posture to maintain balance. She even may bend backward, straining back muscles and leading to pain, soreness and stiffness.

When the abdominal muscles stretch, they weaken and are less able to help with body posture. This leaves the lower back to support the torso's increased weight.

TREATMENT

Low back and pelvic pain are common but not reasons to lie down. Studies show that education and exercise are important throughout pregnancy to decrease pain as well as to avoid additional complications such as hypertension and gestational diabetes.

A 2008 report, "Pregnancy and low back pain," published in Current Reviews in Musculoskeletal Medicine, noted:

"Studies comparing pregnant women enrolled in an exercise program designed to address core strength, flexibility, and muscular endurance, particularly abdominal strength, with those involved in no exercise program, demonstrated a decrease in postural changes and severity of pain in the exercise group."

An article in the Journal of Orthopaedic & Sports Physical Therapy reviewed 22 studies that measured the effect of physical therapy treatments on pregnant women. The authors found that exercises – often those focused on strengthening muscles around the spine and

pelvic floor – can reduce pain, improve function, and limit the need for sick leave for back and pelvic pain related to pregnancy.

Common sense should guide the type and intensity of exercise, experts say. Of course, blunt trauma activities such as taekwon do are a definite "do not," as are anything that would cause a woman to lose balance. It's more important to be mindful of how strenuous the exercise is than how long it is performed.

PHYSICAL THERAPY

Be sure to check with your healthcare provider before beginning a regular exercise program if you were not participating in one prior to your pregnancy. Stop exercising if you experience dizziness or shortness of breath.

A physical therapist can help develop a program that will include treatments for pain as well as maintaining an active lifestyle. Typical treatments consist of:

Posture and Body

Alignment: The shift in center of gravity forward increases the force of muscles required with everyday activities. Over time, this creates poor posture and alignment, resulting in tight muscles in the neck, shoulder and low back. A physical therapist will use exercise and manual therapy to work on flexibility and postural strength.

Muscle Strength: It is important to strengthen core muscles: the deep abdominals, pelvic floor and gluteals. These muscles will assist in supporting the added weight but also with delivery. These exercises should be started under the supervision of a physical therapist.

Endurance: Cardiovascular activity is important for overall health and pain relief. It reduces

the risk of complications such as hypertension, gestational diabetes and depression.

Brace: A physical therapist can assist you in knowing whether a brace or belt is necessary. These devices can add support to the pelvis to decrease pain during weight-bearing activities such as walking.

Physical therapy is not just for recovery. It can help pregnant women stay active despite the daily pain that many of them experience. ▀

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BETTER POSTURE

To help prevent back pain, be aware of how you stand, sit and move. The American College of Obstetricians and Gynecologists offers these tips:

- Wear shoes with good arch support. Flat shoes usually provide little support unless they have arch supports built in. High heels can further shift your balance forward and make you more likely to fall.
- Consider investing in a firm mattress, which may provide more support for your back.
- Do not bend over from the waist to pick things up; squat down, bend your knees, and keep your back straight.
- Sit in chairs with good back support, or use a small pillow behind the low part of your back. Special devices called lumbar supports are available at office- and medical-supply stores.
- Try to sleep on your side with one or two pillows between your legs or under your abdomen for support. ▀



CASE STUDY

PREGNANCY AND LOW BACK PAIN

By Tammie Mussari

PATIENT HISTORY

The patient was a 32-year-old female referred to physical therapy by her midwife for pelvic instability. At the time of referral, the patient was 29 weeks pregnant. Her pain began near the 25th week.

The patient worked as a full-time health and fitness coach. This included working out five to six days per week. She lived with her husband, who had multiple sclerosis, and her children, ages 5 and 2. She was responsible for all the household chores.

She experienced pain with walking and the physical aspects of caring for her children. Pain limited her ability to twist and roll in bed. Dressing and other weight-bearing tasks, especially standing on one leg, were painful.

She modified her performance as a fitness coach and her own workouts. She recently had stopped kickboxing-type workouts, normally performed for her job, and now was limited to weight training and yoga to minimize pain.

At the time of the evaluation, the patient complained of a sharp pain at the pubic bone that radiated to the ischial tuberosity bilaterally, primarily with “hip opening activities.” She rated her symptoms as 0-8 on a scale of 0 (no pain) to 10 (worst pain ever felt).

ASSESSMENT

The patient’s posture revealed increased lordosis and narrow base of support with



At discharge, she could self-manage her symptoms. As a health and fitness coach, she could lead a group activity, modifying as needed because of intensity, not because of pain.

knee extension, common with pregnancy and a shift in center of gravity.

Lumbar spine range of motion was pain free and full, as were right hip external and internal rotation. The patient also presented with excessive hamstring length of greater than 100 degrees (normal: 70).

The patient was tender to palpation along the pubic symphysis. She had positive pelvic joint instability tests. Strength testing caused pain with hip abduction and right hip external rotation; however, strength deficits were minimal at 4+/5. Functional testing revealed poor tolerance to single leg balance and deep squatting with reproduction of her symptoms.

The physical therapist hypothesized that she suffered from sacroiliac instability.

TREATMENT

Initial treatment consisted of hip strengthening and manual techniques to reduce muscle tone and tenderness. The physical therapist performed manual techniques to improve the alignment of the pelvic girdle. An SI Loc brace aided in stability of the pelvis as the baby’s size increased and the ligaments became laxer because of the changing hormone levels associated with pregnancy.

Initial visits focused on pain reduction and alignment. As the patient’s pain decreased and function improved, strengthening exercises were added, focusing on proper form and more awareness of body position and center of gravity. The therapist educated her on her new center of mass so that she could adjust as her size pro-

gressed through the pregnancy.

The patient learned techniques with lifting and balancing to prevent shearing, or overutilization, of her back with tending to her children and dressing.

SUMMARY

Upon discharge, the patient could self-manage her symptoms with a home exercise program. She reported pain levels 0/10 and described her pain as more of a discomfort. She was able to perform regular household activities and tend to her children. As a health and fitness coach, she could lead a group activity, modifying as needed because of intensity, not because of pain.

At the time of discharge, she had achieved full and pain-free strength and returned to all previous activities of daily living without symptoms. 📌

RESEARCH ABSTRACT

STABILIZING EXERCISES FOR TREATMENT OF PELVIC GIRDLE PAIN



In a post-pregnancy study, 75 percent of patients in the specific stabilization exercise group realized improvement in low back pain.

By Erica Cerutti

Approximately half of all women will experience lumbar or pelvic girdle pain (PGP) during pregnancy. Most often, the pain will disappear after delivery. However, a significant number of women continue to have pain that affects their ability to complete everyday activities and their quality of life.

Current treatment emphasizes exercises to improve stability of the sacroiliac joints. Also important is the role of abdominal muscles in stabilizing the lumbopelvic region.

The purpose of this study is to examine the effectiveness of

stabilization exercises in women with PGP after pregnancy in reducing pain and improving function and health-related quality of life one year after delivery.

METHODS

This study included 81 patients who were randomly stratified into a control group (CG) or a specific stabilizing exercise group (SSEG). Patients were stratified by pain location and divided by these criteria:

- Pure pubic symphysis pain
- Pain from all three pelvic joints (bilateral sacroiliac and pubic symphysis)
- Pain from unilateral or bilateral sacroiliac joints

The CG members received physical therapy consisting of ergonomics, massage, joint mobilization, manipulation, electrotherapy and hot packs. The patients received treatment every other week for 20 weeks.

The SSEG members received individualized programs based on examination that consisted of ergonomics and mobilization as needed, but with increased focus on exercise and stabilization. The participants exercised 30 to 60 minutes, three times per week for 20 weeks. The program progressed with load (difficulty), repetitions and weight throughout.

RESULTS

Seventy-five percent of SSEG members improved their Oswestry scores, which measure improvement in low back pain, compared with only 25 percent of CG members. This difference was seen during the intervention period as well as one year postpartum. Looking at pain using the visual analog scale, the same trend can be seen at one year postpartum as well as with health-related quality of life.

DISCUSSION

Lumbar and pelvic girdle pain can have lasting implications if not treated. It is important to address ergonomics and perform manual treatment as warranted by examination.

It is imperative to include individualized, specific stabilization exercises to improve pain, function and overall health for better outcomes lasting one year postpartum. Program progression is important for keeping patients motivated and compliant for the duration of treatment. ▀

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