

## WHAT TO DO WHEN YOU'RE EXPECTING

# Prenatal Exercise

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### THREE STEPS TO A HEALTHY CORE

1. **REDUCE INFLAMMATION AND PAIN** - Swelling is a natural response to protect tissues from harm, however chronic inflammation can compress blood vessels, nerves and muscles. Inflammation in the gut from the Standard American Diet (SAD) inhibits muscle function through the *viscerosomatic reflex*. Imagine tightening your abdominal muscles or fitting into tight pants when you are bloated or in pain. Constipation and voiding dysfunctions contributes further to abnormal muscle patterns. The pelvic floor muscles are designed to relax during urination (peeing) and defecation (pooping), but do the opposite when there is pelvic floor dysfunction. You will learn from our expertise how to reduce inflammation and abnormal muscle tension by getting to the *source* of the problem.

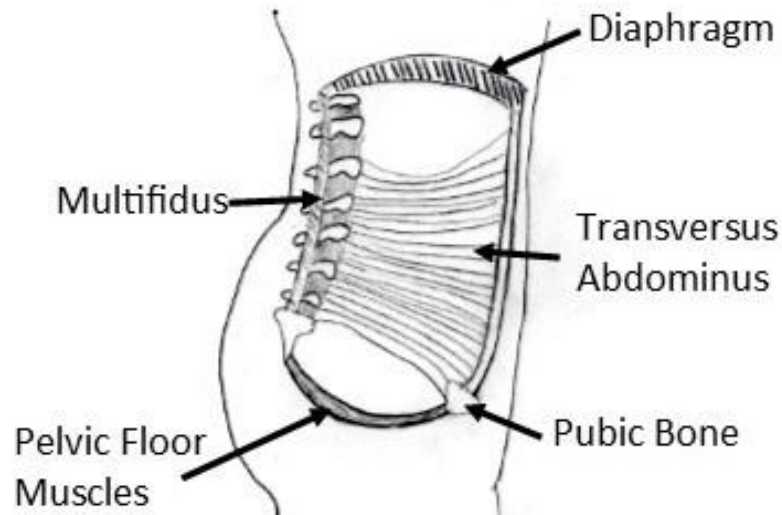
2. **RESTORE MOBILITY** - Tightness in the hips or upper back (thoracic spine) can challenge the deep core muscles. In order for the lumbar spine (lower spine) to be stabilized by the core, the segments above and below it must be mobile. In many individuals with CORE issues, the opposite occurs. The hips and upper back are tight and the lumbopelvic region is weak. This can contribute to a vicious cycle of pain and dysfunction within the pelvis. In addition, the deep hip rotator muscles attach to the pelvic floor like the ends of a hammock and can affect muscle tension and joint alignment. Imagine pulling a hammock from one side (hip tension on one side) or from both sides to make it taut. You can learn to use this to your advantage by both releasing tension in the pelvic floor and activating the pelvic floor muscles through hip rotation.

*Adhesions* are also a factor when it comes to CORE muscle dysfunction, affecting the mobility of muscles, nerves, organs and blood vessels. Adhesions occur when the brain holds the connective tissue tight in order to protect what lies under the surface such as organs. Adhesions can occur after surgery, injury or trauma. Muscles function optimally when you learn how to *lengthen before you strengthen*. In other words, mobility needs to be restored before the core can function properly. You will learn from our experience how to restore normal connective tissue tension in order to improve movement.

3. **RETRAIN CORE FUNCTION** - The deep core is a team of four muscles that work together, or synergistically. You will be instructed in many ways to engage the deep core muscles using your breath. You will learn how to lengthen muscles on the INHALE so your core muscles can contract on the EXHALE. You will learn yoga and Pilates principles to encourage tight muscles to relax and weak muscles to contract. In addition to the deep core muscles, you will be instructed in exercises to strengthen your legs and buttocks muscles, including your gluteus maximus, the largest muscle in your body. You will learn how to downtrain "helper" muscles including the tongue, the strongest muscle in your body, in order to get the correct

muscles working for you. At Healthy Core, we give you the tools you need to restore core function, even if it has been several years since you had a baby, surgery or injury.

## GET TO THE CORE OF THE PROBLEM!



The pelvis comprises of the hip bones, sacrum/ tailbone and 35 muscles which are intricately connected to support the bony skeleton and internal organs. Pregnancy hormones influence joint stability as a result of ligamentous laxity, especially in the pelvic girdle. Having multiple pregnancies further puts the pelvis at risk of instability. The problem is not that the joints move, it is that they get stuck and often remain stuck. In addition, there is no comfortable position to unweight the pelvic girdle, other than being immersed in water up to your head. Relief does not come from lying down and often worsens when you remain in one position. As a result, the emphasis of exercise before, during and after pregnancy should be on pelvic girdle stability to keep the joints from moving and getting stuck out of position.

Lumbopelvic pain is defined as pelvic girdle pain and occurs in 24-90% of women while they are pregnant (Van Benten et al, 2014). How do you know if you have pelvic girdle pain? Unlike pain generated from the spine or muscles, pelvic girdle pain is SHARP and

TRANSIENT and frequently occurs with transitional activities, such as rolling in bed, getting out of a chair, walking, stair climbing or standing on one leg.

According to researchers, criteria for pelvic girdle pain includes:

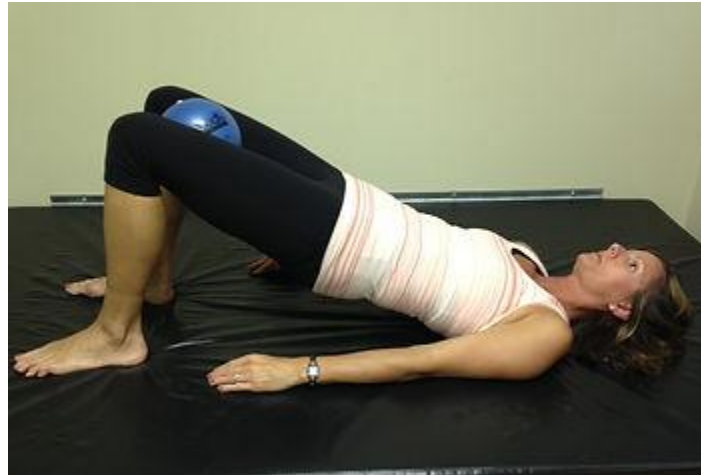
- pain between the hip bones and the gluteal fold
- pain with weight-bearing and lingering pain in the pelvic girdle
- diminished ability to stand, walk or sit
- positive clinical diagnostic tests that reproduce pain
- no nerve root symptoms (negative straight leg raise test)

Pelvic girdle pain can interfere with productivity and lost days and time off for pain and dysfunction. The good news is that there is moderate evidence for the positive effect of exercise on pain, disability and sick leave for the treatment of pelvic girdle pain during pregnancy and patient education is a helpful intervention (Van Benton 2014). The problem is, there is a limited number of professionals that can provide evidence-based and effective exercise instruction for pelvic girdle pain in pregnancy.

So what exercises are most beneficial? Fortunately, we are experts in the field of physical therapy known as pelvic health. Our clinic was opened with the goal of restoring function to the core of the body, especially for women during and after pregnancy. Based on personal and professional experience, the most important muscles groups to work are the glutes, quads, hip rotators and the transverse abdominis (most important and deepest of the four abdominal muscles). It is even more beneficial to work these muscle groups simultaneously or synergistically. These are my TOP THREE recommended exercises as you prepare or begin your pregnancy:

### BRIDGE WITH BALL SQUEEZE

Lie on your back with knees bent and arms at your sides. While EXHALING, squeeze a ball or pillow between your legs and raise your hips off the floor, pressing your arms and feet into the floor (to engage the lats, quads, inner thighs and glutes simultaneously). Avoid bulging or doming the abdominal wall. Repeat 10 times.



### SQUAT WITH BALL SQUEEZE

Place a physioball behind your low back and place a ball between your knees. INHALE and squat until your thighs are parallel to the floor. EXHALE as you draw in your lower abdomen, gently squeeze the ball and return to a standing position. Keep your knees behind your toes to avoid pain at the kneecap. Repeat 10 times.



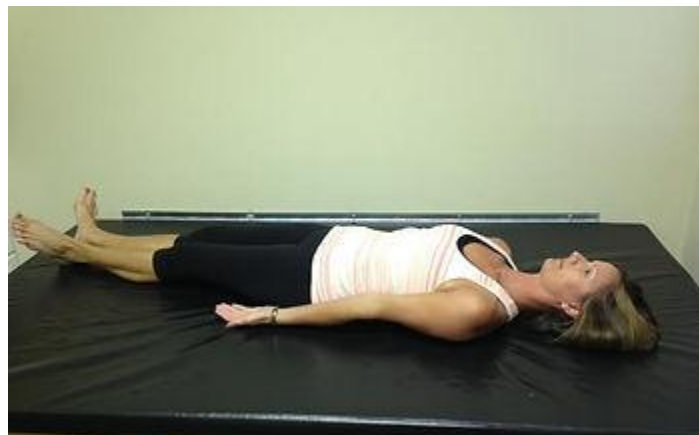
## CORE ACTIVATION WITH BALL SQUEEZE

Sit upright in a chair or on a ball with your hips and knees bent to 90 degrees with a small ball between your knees. Hold onto a sturdy object for balance, if needed. EXHALE and draw in the lower abdominal muscles while gently squeezing the ball. Repeat 10 times.



## PILATES POSTURE OF POWER (Bonus Exercise/ Pose)

Lie on your back with heels pressed together, shoulder blades towards your back pockets and chin level while you squeeze your buttocks together and tighten your thighs. Hold for 30 - 60 seconds while breathing slowly in through the nose and out through the mouth. This can also be done in a standing position.



Talk to your doctor or health care provider about physical therapy. A referral is not needed in the state of Ohio (and most states) to see a physical therapist. However you will want to know any precautions and get clearance from your healthcare provider before beginning an exercise routine in pregnancy. If you are not currently pregnant and thinking of becoming pregnant soon, why not prepare your pelvis for the "extreme sport" it is about to go through for the next 12 months.

\*Disclaimer: the exercises are general and not meant to replace Individual medical advice.

#### References:

Van Benton et al, 2014. Recommendations for physical therapists on the treatment of lumbopelvic girdle pain during pregnancy: a systematic review. JOSPT. 44 (7), 464-473.

Pregnancy and low back pain: physical therapy can reduce back and pelvic pain during and after pregnancy. JOSPT 2014. 44 (7), 474.