

## **“Core Contractions” – Preventing Low Back Pain**

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The lumbar spine is surrounded by many different muscles. Some are designed for motion while other deep ones are designed for stability. Learning how to contract the deeper muscles independent of the more superficial muscles is called a “core contraction”. These deeper muscles consist of the pelvic floor muscles, the transverse abdominis and the multifidus muscles.

Studies have shown that patients able to perform co-contraction of these muscle groups report fewer reoccurrences of lower back pain. They also showed that contraction of the transverse abdominis was delayed in patients with low back pain.

Here are a few steps you can take to strengthen your core:

**Step 1** of “core contraction” is to tighten your pelvic floor, otherwise known as a kegel. These are the muscles you use to cut off the flow of urine or hold in bad gas. Be careful not to hold your breath, squeeze your buttocks or legs together, or tilt your pelvis backwards.

**Step 2** is to tighten your transverse abdominis while maintaining a pelvic floor contraction. “Draw” in your belly as if you were zipping up your pants. Be careful not to tilt your pelvis backwards. Some feel this contraction is obtained more easily while on your hands and knees.

**Step 3** is tightening of the multifidus (back) muscles, while holding the other two contractions. Place your thumbs on either side of the spine and “swell” your back muscles into your thumbs. Be careful not to arch your back, tilt your pelvis backward or hold your breath.

Once a “core” contraction is able to be held for 10 seconds and repeated several times, you may be ready for the next phase. This involves movement of the arms and legs in different positions while maintaining a core contraction.

You must keep in mind that there should be no pain during these movements and contractions. A **WPTI** physical therapist can train you to do these exercises correctly.