



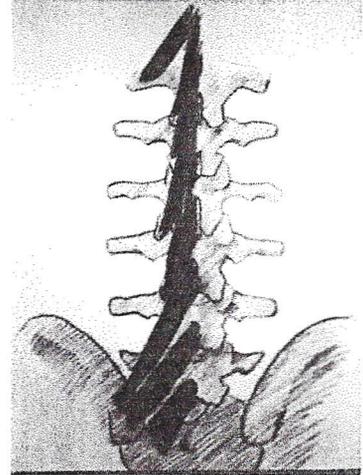
OLYMPIC PHYSICAL THERAPY

Peak Performance. Cutting Edge Techniques.

Multifidus Training

LOCATION: The multifidi (plural for multifidus) are small muscles that attach segmentally (vertebrae to vertebrae) on the back of the spine, from the transverse process laterally toward the spinous process medially on each side of the spine. Each muscle spans 2-4 segments, and the lower muscles attach to the tailbone and pelvis.

PURPOSE: To stabilize the lumbar spine segments, and control the motion between each segment with normal daily activities. These muscles are crucial for stabilizing and decompressing your spinal segments, and are the most neglected muscles in traditional spinal rehabilitation. That is one reason why the incidence of recurrent low back pain is so high; people are spending too much time on the larger, powerful surface muscles of the trunk and the deeper, smaller stabilizers aren't being trained properly.



TECHNIQUE: Concentration is key. Start in a lying down position. Gently contract your deep multifidus muscles by slowly and subtly tensioning your lower back muscles. (See cues below for help). The contraction should start very slowly, and come from deep inside your lower spine, and be *subtle*. (On a scale of 0-10, with 10 being strongest, your contraction should be about a 2). Your back or pelvis should NOT move. Hold the contraction for at least 10 seconds or longer. You will often not feel the muscle contract very much, but you can sense when it relaxes. Visualize deep inside your spine.

You should be able to contract this isometrically in any position (lying, standing, sitting, etc). But start with lying down on your stomach or your back, so it's easier to feel the gentleness.

Helpful Cues:

- Gently contract as if you are trying to pull your tailbone upwards into your lower spine
- Gently contract as if you are trying to start to arch your back (sticking your butt out), but don't move
- Tactile Cues:** put your fingers just to the side of the bones of your spine, just above your tailbone. Contract as above, and feel a gentle swelling/tightening under your fingers. You should feel a gentle softening under your fingers when you relax the contraction.
- Utilize your pelvic floor to help if you are having difficulty- (gently contracting as if you are stopping the flow of urine, or for men, gently lifting the scrotum)
- Amplify or assist the contraction on your stomach: start to gently lift your whole leg into the air, but don't let it move off the ground (very gentle!)

Progression: Increase the hold time, contracting while brushing your teeth or while talking on the phone, while sitting at a stoplight, or when doing normal tasks (picking up a bag of trash, opening a heavy door, while working out.) If you are doing cardio or weights in the gym, you should make sure this muscle is turned on and engaged before every repetition and during each exercise.