

Training Lumbosacral Multifidus by Diane Lee

Diane Lee
& ASSOCIATES
PHYSIOTHERAPY

Recruitment Training for the Deep Fibers of Lumbosacral Multifidus (dMF)

You cannot strengthen a muscle your brain cannot activate. These exercises help you 'find the muscle' and activate it properly.

Lie on your back or side with your spine in a neutral posture, (gentle curve in your low back).

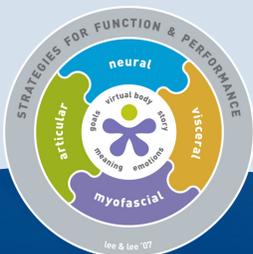
Try the following connect cues to produce a deep contraction of multifidus isolated from the long back extensors.

- For the part of multifidus that supports the SIJ - imagine a line that connects your left and right SIJ and think about connecting, or drawing together, along this line.
- Imagine a line connecting your groin (or back of your pubic bone) to the part of multifidus in your low back you are trying to train (wake up). Connect along this line and then gently think about suspending (lifting) the lumbar vertebra 1 mm above the one below.

Breathe in and on the breath out contract the deep multifidus with the best connect cue (have your therapist help you determine which is your best connect cue).

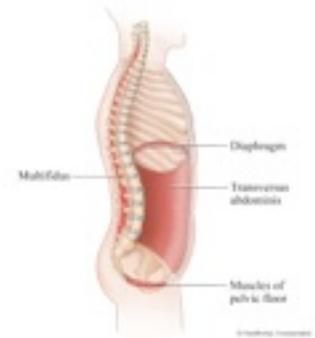
No movement of your hips, pelvis or spine should occur as you gently activate the dMF. If you compare how heavy your leg is to lift with and without this dMF contraction you should find that it is lighter with the proper contraction.

Hold the contraction for 3- 5 seconds and then release and breathe throughout this exercise. Repeat the contraction and hold for 3 sets of 10 repetitions 3 – 4 times per day for 4 weeks.



Strength Training for Lumbosacral Multifidus

Once you can activate the dMF, practice recruiting it in many different positions such as sitting, standing, squatting, lifting etc. Once you can easily recruit dMF you can progress to the following exercises. Each progression begins with a proper co-activation of all muscles of the deep system (deep abdominals, multifidus and your pelvic floor) and this co-contraction should be held throughout the movement. Remember to **MOVE WITH YOUR BREATH** - Exert with exhalation, breathe in to rest or hold.



In side lying

1. Maintaining your connection to TrA, keep your ankles together and lift your top knee (only as high as you can control without breath holding), focus on turning your inner thigh outwards. Return your knee.
2. Maintaining your connection to TrA, keep your ankles together, lift your top knee and then lift your ankle. Return your ankle and then your knee.

Lying on your back with your knees and hips flexed:

1. Slowly let your right knee move to the right, keep your low back and pelvis level. Return to the center and repeat with the left.
2. Lift the right foot off the floor keeping the knee bent. Don't hold your breath and don't bulge your lower abdomen. Return the foot to the floor and repeat with the left foot. There should be no clicking in your low back.
3. Lift the right foot off the floor and then straighten the leg only as far as you can control your core with a proper strategy. Slowly bend the knee and return the foot to the floor. Repeat with the left leg.
4. Lift the right foot off the floor and then the left foot off the floor. Alternate leg extensions, exert with exhalation, breathe in to rest or hold.

With all these exercises maintain the leg lift for 10 seconds, build to 3 sets of 10 repetitions before moving on.

Incorporate dMF Activation into other Activities

The final step is to remember to use this muscle (dMF) during regular activities. Each time you get out of the chair, lift, bend or reach, the deep muscle system should be working with and for you. The goal is to help the brain remember to use the deep system (dMF, TrA and your pelvic floor) and the more you use it, the less you will be likely to lose it.

Engage Experience Empower