



The Core

Core stability is one of the most talked about subjects by fitness professional's world wide. Core stability training is fundamental for their body to function effectively. The core muscle is crucial for movement and also for stabilizing the body. There are four main muscles involved in stabilization. The transverse abdominus, the lower abdominals, the lumbar multifidus (muscle in the lower back) and the internal oblique's (deep inside the stomach and to the side). All these stabilizer muscles are located deep within the body and their function is to not only stabilize the joint but to also fine tune any movement of the body. Other muscles that are associated with core stability are known as 'mobilisers' and these are the rectus abdominus (six pack) & the external oblique's. These muscles are nearer the surface of the body and are fast powerful muscles that produce large movements.

These muscles are important for correct posture when standing, walking, running etc. the transverse abdominus muscles contract before any other major muscles in the body and are constantly contracting no matter what the direction of movement. Whereas other muscles can switch on and off until required movement. Therefore if the transverse abdominals are not functioning properly it can lead to postural problems such as lower back pain, shoulder pain, knee pain and similar problems.

So how do we switch on these important muscles to prevent all these injuries? Firstly we need to get the spine into the correct position. To achieve this the spinal column should form an S with a small arch in the lower back. Now take a deep breath in but when you do this your stomach should come out. Hold your breath for a moment and suck your belly button in towards your spine, hold it there & then breathe out slowly. You now have your transverse abdominals working. Another way is to place your index finger one inch above the belly button, your second finger into your belly button, and your third finger one inch below your belly button. Now try to move your stomach away from you're third finger only. You may need to practice to master this, but practice makes perfect!

Exercises:

Lower Trunk Flexion:

To strengthen the muscles used for stabilizing to make movement more efficient.

- Lie on your back with knees bent and arms by sides.
- Tighten your stomach muscles and press the small of your back against the floor letting your bottom rise.
- Hold this position for approx 5secs and repeat.

Lower Trunk extension:

To strengthen the muscles used for stabilizing:

- Lie on your back with knees bent
- Lift your pelvis and lower back slowly vertebrae by vertebrae off the floor.
- Hold for ten seconds and lower to the floor by reversing the movement.



Lower Trunk Rotation:

To strengthen the muscles used for stabilization to make movement more efficient:

- Lie on your back with arms in a T position and knees bent towards ceiling
- Slowly roll both legs, with knees held together, from side to side. Don't let them touch the ground and make sure that the movement is controlled.

Lower Trunk Flexion:

To strengthen the stabilising muscles:

- Lie on your back with your hands supporting the pelvis (place hands just below small of the back)
- Make a cycling movement with one leg approx ten times and then repeat with other leg
- Then lie on your back in same position and make cycling movements with both legs for approx one min in a controlled manner.