

By Paula Shingler, BSc, MCSP

Lots of people are talking about their core stability. It is the latest trend and having it is fab, but what is it?

Core stability means you have strong “core” muscles, i.e. the deep abdominal muscles; sadly this does not mean having a well chiselled six-pack! A bit of anatomy is required as an explanation.

Basic anatomy lesson first

The abdominal or trunk muscles are made up of layers:

- The Rectus Abdominus (the six-pack) on the outside which helps support the abdominal contents,
- the Internal and External Obliques which are to the side of the Rectus Abdominus and assist in rotating and twisting, and the
- Transversus abdominus.

The Transversus Abdominus is the one we are most interested in as its strength is a big stabiliser for the pelvis, spine, ribs and it has an impact on the rest of the body. Its muscle fibres run across the body from each side, starting at the pelvis and lower ribs and meeting in the centre of the abdomen. When it contracts and relaxes it helps to keep the body erect. The significance of this is important to understand. In relation to the lower back, strong abdominal muscles provide support from in front of the spine, which, coupled with back muscles behind the spine, neatly sandwich it and prevent

abnormal movements/stress that can lead to disc problems or nerve impingements. This is not only in the lower back but can also all the way up the spine to the neck. The sandwiching effect helps us to maintain a good posture which can be reflected into the hips, knees and ankles ensuring that there is even pressure over all joints. Many lower limb problems can be attributed to poor posture and gait. Strengthening your core can immediately help clear up many of these problems.

Floppy core muscles cause real problems

Floppy core muscles mean the pelvis can tilt forward as there is no support to keep it in its usual position. This means the hamstrings, which attach to the pelvis, are stretched and can result in hamstring tension, knee pain, Achilles tendon problems and heel pain – i.e. problems all down the back of the leg which can be niggly issues that tend to come and go and are just plain irritating. Strengthening the core and realigning the pelvis will take this extra stretching away and hopefully, all the other problems will vanish.

How do you strengthen those floppies?

So how do you strengthen your core? Well, initially you need to be sure which muscle is the Transversus Abdominus (T.A.). It is very easy to think you are switching it on but often it is actually the Rectus Abdominus (R.A.). There are several ways to

test it out, try to push your belly button down through to your spine. For us mothers it is like doing those post-delivery pelvic floor exercises. For males, think of walking into freezing cold water and trying to pull those significant bits inside. Once you are sure you have the T.A. working you can build up the exercises by both standing balance and gym ball exercises; yoga and Pilates are also excellent. Of course a physio consultation to ensure you are getting the T.A. working effectively is always recommended! Some physio practices can even use ultrasound to show you how, and if, your TA is switching on

Take on the physical challenges of orienteering

So to re-cap - strong core muscles means strong T.A. This assists in supporting the spine, maintaining posture and limiting extra strain on the joints. All these are essential when trying to fight through the green (perhaps not always intended), running over rough ground, sprinting downhill or struggling up a steep slope. Improved posture and core stability can only improve your performance but there is no guarantee it will help with your navigation!

Paula Shingler is a Physiotherapist at The Clinic Physiotherapy at Macquarie University Hospital, Sydney and long time member of Big Foot Orienteers, keen fell runner and mother of 2