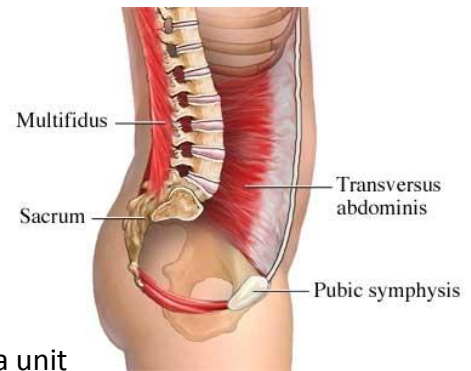


How Can Core Muscles Help My Back Pain?

Consider the human anatomy for a moment. You have your ribcage which provides bony support for the upper back and you have your pelvis which provides bony support for the very lowest part of your back. In between there is only the vertebra and discs of your spine holding you up. That is why the low back (lumbar spine) is the most mobile, and unfortunately, the most vulnerable part of your spine.

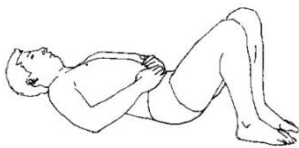


The body's way of compensating for this lack of support is through a unit of muscles called your core. These muscles are different from those you may train in "core" classes in the gym, they are deeper and function to stabilise rather than move your spine.

Transversus Abdominus (TA)	This muscle attaches from one side of your spine, ribs to pelvis, all the way around and into the other side of your spine, like a corset.
Multifidus	This small muscle runs from one section of the spine to the next right near the midline. It's like the strings that tie the corset together and is a very important spine stabiliser.
Pelvic Floor	This group of muscles runs across the base of your pelvis from one side of the pelvis to the other. Through it, runs the urethra, anus and vagina in women. It is important for continence, child birth, sexual function and is also an important spine stabiliser.
Diaphragm	Many people don't realise that the diaphragm or breathing muscle which attaches along the lower ribs is actually a spine stabiliser as well. This forms the roof of the cylinder which is your core.

These muscles are not like other muscles in the body. They are harder to feel and have better endurance. They work *gently* together to create a little bit of pressure within their cylinder. It is this pressure that acts like a cushion inside your abdomen to absorb some of the weight of your upper body and take some of this weight off your spine.

ACTIVATING TRANSVERSUS ABDOMINUS (TA)



Lie on your back with your knees bent. Feel firmly (this muscle is deep) with two fingers just in and down from the bone at the front of your hip. Engage TA by **gently** drawing the point in between your navel and your pubic bone towards your spine. The activation is very subtle and totally internal. You should feel a very slight tightness underneath your fingers as though gladwrap is being drawn tight over a bowl. You should NOT feel the muscles under your fingers bulging out. Ensure you maintain normal breathing. Try to hold for 3 breaths then relax and repeat.

ACTIVATING MULTIFIDUS

Stand up tall and feel with your thumbs the bone in the centre of your spine just above your pelvis. Move your thumbs 1-2cm either side of this bone. Do not arch your back or bend your hips as you bring your weight forward into your toes (imagine peering over a cliff). You should feel a slight swelling of the muscles under your thumbs as you do this. Now try to keep the muscle switched on as you bring your body weight back into your heels. There should be no movement of your spine.

