



**STEF HANSON**  
PERSONAL TRAINING

*I'm about to get stuck into my fourth triathlon season. I enjoy the sprint and Olympic distance events, but I'm keen to jump up to Half-Ironman, and one day maybe Ironman. However, I struggle with slight back pain with the longer distance training. My physio said that for my body to cope over longer distances I will definitely need to improve my core stability with respect to all three disciplines to help prevent injury and to become more efficient. Nicole*

Hey Nicole,

Half Ironman huh? I love it! That's greatness! It's a big jump from the Olympic distance, particularly in the saddle and the pounding of the pavement. So if you are finding that your back is struggling with the increased volumes, then assessing your core strength and stability is a good place start.

What exactly is the core? We hear celebrities such as Madonna and John Cleese swear by Pilates and Yoga as brilliant forms of core stability and strengthening techniques. Hugh Grant even commented; "now I have muscles of steel and could easily deal with giving birth". Ok, so giving birth is a little different to a triathlon, or is it? They both produce blood, sweat and tears and at the end you've undertaken an amazing adventure, with wonderful results. Not that I'm comparing the miracle of life to a race, but I did have a conversation with a friend of mine who is due to give birth the same day that I'm racing the Gold Coast Half. She suggested that the pain inflicted from a half ironman was insane, to which I replied, are you kidding? At this point in my life, give me 113 kilometers of swimming, cycling and running over trying to squeeze a bowling ball through a key hole... did I just lose the men that were reading this article?

So the term, 'core' has been out there for a while. There are many muscles that make up the core and they all have extremely large names like, Multifidus, Transverse Adominis and Quadratus Lumborum. To avoid sounding like a walking talking science book, I'm going to talk about the core as a group of muscles involving the deep abdominal and lower back muscles that combine to provide the foundation of the body and all of its movements. Just like a foundation is laid to provide strength for the rest of a house, your core provides strength and stability for the rest of your body.

Think of the core as a girdle cuddling your trunk. To help engage these muscles, imagine trying to do the fly up on a tight pair of jeans, by drawing in between the pelvic bones, but avoid trying to suck your stomach in. The contraction of the core muscles is a small movement, if you are finding it hard to talk or there is a hollowing out under the rib cage at this point, then you're essentially cheating by trying to switch on your obliques, rectus abdominus (your six pack) or perhaps your hip flexors. It's a hard concept to grasp at first. It took me a while when I first started doing Pilates, but once you've located those muscles, the strength gains will in turn maximize performance and help prevent injuries. Without this solid base, a complex chain of events can occur, leading to injuries (not just in the back) and poor performance.

With respect to the extra distance required for a half ironman, prevention of injury, and an enhanced performance, lets take a look at each discipline.

Swim - The extra distance required for the swim leg of the half is only 400 meters. I suggest that the 400 meters won't affect your back in a negative way as swimming is often given to people as a great rehabilitation technique for back injuries. There is little pressure on the back because of the non weight bearing nature of the activity. It can also help improve core strength as a functional exercise, IF, the right muscles of the core are recruited. When you've managed to switch on your core, your body will stay in that streamlined position whereby your body rotates around an imaginary pole. The more streamlined your position is, the more efficient you are gliding through the water, and therefore, the faster you get to transition area, and set yourself up for a lightening bike leg.

Bike – The position on the bike places a lot of pressure on the back, especially when you're in the saddle for 90 kilometers. With the increased distance you'll be covering during training and racing, you'll obviously be in this aggressive position for longer periods of time which can potentially cause muscle imbalances (at the moment, I'm assuming you don't have a disc injury, but ignoring these points can potentially lead one). A strong core will reduce the possibility of back pain and muscle imbalances, plus increase performance, by providing stability and support for the leg muscles that are generating large amounts of force through the pedals. If your core is weak, your back will start to arch, placing more stress on the spine and hips as a poor posture is created. Additionally, your legs will become less efficient in transferring energy through to the pedals, as most of that energy will be transferred into the torso which is trying to absorb the force generated by the legs. A viscous cycle isn't it? (No pun intended).

Run – We all know that running can place a lot of stress on your body. Every time your foot hits the ground shock waves vibrate up your legs and into your spine. So, doubling the distance to a 21.1 kilometer run obviously doubles the amount of stress you are putting your back under. Running requires a lot of stabilization through the ankle, knee and hip joints. By strengthening your core, you are enabling your body to control your movements (stabilize), and transfer energy to the working muscle groups, in this case, hamstrings, glutes, calves etc. A weak core will prompt excessive movements at each joint, but also between the upper and lower body, which can lead to both injuries, and an inefficient running technique. A poor running technique over 21.1 kilometers can cost you a lot of time, and lets face it, we love what we do, we love being out there, but we are all itching to hit that finish line.

With all of that in mind, I recommend you chat to your trainer about a work out that promotes core stabilization. It's important to perform exercises that are functional, and have you doing similar movements that replicate those of swimming, riding and running. There is a variety of equipment that most gyms will have that will help you achieve a stronger core. Don't be afraid to look a bit different to the crew with the bulging biceps, sucking on a protein shake and pumping iron in the corner. Triathletes ARE different, but I think that's another reason why we love it, isn't it?