

Core training and its relevance for sport

Part 3

In parts 1 and 2 of this of this series we looked at the importance of the core and how it allows us to generate speed and force in our sport as well as ensuring that the integrity of the spine and various elements of the body are not compromised through dysfunctional movement.

Prior to starting work with an athlete, I always conduct a movement based screening to assess the current level of functional movement ability of the athlete. I see this as a vital tool, as it will help you to decide what exercises would be most appropriate for the athlete. It also creates a base from where subsequent work can begin. Once again I would like to draw upon the analogy of building a house. Everything needs to be built on a basis of strong foundations otherwise no matter how wonderful your house looks it will be a weak structure and will eventually fall down! Every house is also built from the foundations up, you would not start work on the bedrooms until the ground floor has been finished.

With this analogy in mind I often ask myself why many coaches give their athlete advanced complicated movements like the Olympic lifts until they can stabilise their body without the addition of weight. No matter what your sport, building from a stable base one step at a time is vital not only in order to develop a well rounded athlete, but also to promote longevity within the sport itself.

Whilst there are numerous core exercises out there, it is important to perform them with attention to detail and more importantly with an understanding of what you should be tasking your body to achieve. Some people like to do exercise for the sake the exercise itself which is of course fine, however, as an athlete, there must be a PLAN, PURPOSE and PROGRESSION.

Whilst there are numerous learning resources available today, it is always beneficial to seek help and guidance from a suitably qualified professional to make sure that you are performing exercises correctly, as quality of movement is vital to creating that stable base that we have discussed.

I expect that nearly everybody reading this article will have heard of Pilates. Joseph Pilates was born in Germany in 1880 and suffered many illnesses throughout his childhood. In an effort to build his stamina he engaged in many forms of physical activity and he had a particular fondness for Martial arts and boxing. He was teaching boxing in England at the breakout of the First World War and as a German national he was interned for the duration of the war. During this period he started to develop the foundations of the exercise program that we know as Pilates today. He believed that health and wellbeing can be maintained by following some simple guidelines. At the heart of his guidelines he indentified a need for creating balance within life through the cultivation of breathing, relaxation, movement, posture, alignment and muscular stamina. As a Strength and Conditioning coach, I use the Joseph Pilates principals on a daily basis to enhance the performance of the people that I work with.

In the first article of this series we looked at posture and through developing current posture, we allow our limbs to work through an optimal range of movement. This in turn allows us to generate more force when performing sport and prevent “power leaks”. One of the most useful things we can do for ourselves is to start to become aware of our body, and adopt good posture at all times. The following drill is can also be very useful to help to create and awareness of core control.

Basic core activation drill.

1. Adopt a supine position with your feet at hip with apart and drawn up to a comfortable distance from your bottom.
2. Roll your hips forward creating a large curvature in the Lumbar spine as in fig1.



Fig 1

3. Next roll your hips backwards which will flatten your spine against the floor as in fig 2.



Fig 2

4. Now we need to find a position somewhere between these two. This should be a position that you feel comfortable with. Fig 3.



Fig 3

5. Once you have found this position, gently draw your naval towards your spine. This will activate your TVA muscle that we looked at in the second article of

this series. The TVA acts in a similar way to a corset and will stabilise your lumbar spine.

6. Once you have done this ensure that you continue to breathe normally and resist any temptation to hold your breath.
7. Now with your TVA contracted, try to lift your foot away from the floor a few centimetres. You should be mindful of your lower back which should be stable throughout. Make sure that the arch in your back does not get any bigger or smaller.
8. Hold this for a few seconds then repeat on the other side.
9. If you find that your back moves away from the floor, keep your toes in contact with the floor throughout and just lift the heel.

This is a very low intensity drill, but the purpose is to start to make the athlete aware of the core and how to control it. There are numerous progressions leading on from this exercise, but they all start with this Core set up as the primary movement. Once again attention to detail is key, and if you have a training partner, you might wish to ask them to slide their fingertips in the gap between your lumbar spine and the floor and monitor the control of the exercise.

We sometimes use a Pressure Biofeedback monitor to help us with this. A PBM looks very similar to a blood pressure cuff and the cushion of air can be inflated under the lumbar spine. When the athlete performs the exercise, any movement is indicated via the pressure dial.

Once the athlete gains a good level of control, progressions from this exercise can easily be applied to standing exercises. For example someone who practises Karate or Kickboxing can greatly improve the power in their kicks by ensuring that when a kick is chambered and then delivered to the target, the core is engaged to allow the maximum amount of generated power to be delivered.

To conclude, anyone who engages in sport can greatly improve both their potential and longevity within the sport itself by spending a little time laying the foundations of quality movement.

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