

## Health

# Core stability and back pain



**Josef Pace**

Over the past 10 years, there has been a significant increase in awareness of the importance of core stability in dealing with back pain.

While core stability is an important concept in the rehabilitation of back pain, correct core training at the right level needs to be emphasised. The word core refers to that part of the body between the diaphragm and the pelvic floor together with the intervening lower thoracic spine, lumbar spine, pelvis and all the attached muscles relating to this region. This article will focus on the importance of core retraining for people with back pain.

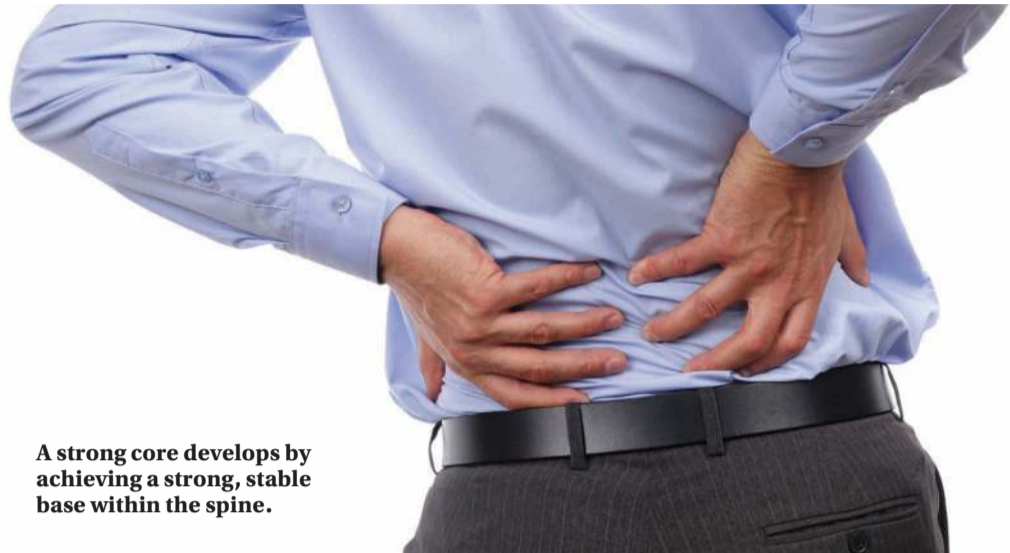
A strong core develops by achieving a strong, stable base within the spine after re-educating correct spinal motion and recruiting the adequate muscles to provide both global and local spinal stability.

Understanding the concept of the importance of a stable, strong spine is easily explained by taking the analogy of a tower crane. Tower cranes have a mass of concrete at the base to function properly and safely. Similarly, our spine needs a stable, strong base provided by our muscles for adequate stable support. Just as a well-maintained crane functions optimally, a healthy spine in the correct posture functions efficiently, allowing the neuromusculoskeletal system to work properly.

The neuromusculoskeletal system consists of nerves, muscles, bones and fascia, all working together to provide movement.

All these systems are considered when designing a core training exercise programme. Another very important factor to consider is right timing between muscle action and movement. If muscles act after movement has occurred, they will not manage to stabilise the spine during motion.

Back pain sufferers should be assessed by suitably qualified healthcare professionals, such as physiotherapists, who can establish the level and extent of core retraining that can be performed.



**A strong core develops by achieving a strong, stable base within the spine.**

Physiotherapists often encounter patients who are afraid to engage in core training exercise programmes. Such patients usually would have experienced increased pain with similar exercise in the past, which may have focused more on global core strengthening rather than specific core retraining. Core retraining exercise focuses on the timing and amplitude of the contraction of the inner muscle 'cylinder' to provide

control to the joints of the back and focuses on engaging the appropriate muscles at the correct level, depending on the client's need.

This will then be followed by re-training movement patterns and muscle imbalance to move towards return to work or sport as appropriate. Inappropriate core exercises may result in increased pain and, worst of all, may put individuals off exercise, which has been proven to be the ideal treatment for mechanical back pain as evidence shows from the latest research.

At times, people are not sure if they are correctly engaging the core. Core recruitment must be mastered and understood to achieve the benefits of overall core training. In situations where core recruitment is difficult to achieve, diagnostic ultrasound may be used as a biofeedback method.

Diagnostic ultrasound will show the different layers of muscles within the abdomen and will allow the person to see the muscles, facilitating contraction of the specific muscle action that is essential for correct core control. In difficult cases, this method often bridges the gap and allows the individual to proceed with the programme.

Pilates has become a recognised household term. It is known as a

method of exercise targeting the core that may be delivered by people who have some understanding of exercise and training.

More often than not, back pain sufferers will benefit from pilates. Sometimes it may be contraindicated in view of specific problems and at times not all exercises may be appropriate. For this reason, it is highly advisable for people with a history of back pain to seek instructors in possession of a sound medical knowledge coupled with sufficient training in pilates capable of modifying traditional exercises, rendering them safe and effective for the individual.

Locally, there are now physiotherapists who have studied at post-graduate level in this field, as well as instructors who have furthered their knowledge in pilates, so it is relevant for one to ask for credentials when seeking such services.

It is recommended that no back pain sufferer should join an exercise class without having been thoroughly examined and prepared by a physiotherapist or other suitable healthcare professional to identify which exercises should be done to achieve the desired outcome.

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## Medical treatment or basic care for the terminally ill?

Mark Vassallo, who recently obtained an MA in Bioethics from the University of Malta, examines in his dissertation ethical issues in end-of-life care in geriatrics.

The dissertation, entitled 'Artificial nutrition and hydration in end-of-life geriatric care: medical treatment or basic care?', was supervised by Faculty of Theology dean Emmanuel Agius. It dealt with the use of ANH in end-of-life care in geriatrics. With the increasing life expectancy and increasing co-morbidities with advancing age, the dilemma of whether naso-gastric feeding or even intravenous fluids should be considered as a medical treatment or basic care is bound to arise.

In the past decades, there have been a number of court cases dealing with such issues but mainly pertaining to young patients in a persistent vegetative state such as Tony Bland, Eluana Englaro and Terry Schiavo.

These cases mainly dealt with the issue of whether tube feeding should be stopped or not. In the case of the elderly, the issue is whether tube feeding and other modes of ANH, in end-of-life situations, should be considered as basic care, like bathing, change of position and keeping the patient warm and comfortable, or medical treatment thus one has to take into consideration the pros and cons of such treatment.

Vassallo has been a consultant geriatrician for the past eight years. He graduated as a medical doctor in 1990 and carried out his training in geriatrics in Malta. In 2011, he was accepted as a Fellow of the Royal College of Physicians of Edinburgh.

Vassallo's three-year part-time course was sponsored by the Malta Government Scholarship Scheme (MGSS).