

Dear Patient

# Lumbar Spine Stabilisation

## The Benefits of Exercise and Real Time Ultrasound

Low Back Pain which is recurring or chronic in nature may be the result of poor or incomplete spinal healing following injury. Often, ongoing symptoms are not directly associated with the initial tissue damage, instead caused by the resulting muscle weakness and continual overload caused by poor posture. In many cases, strengthening exercises may help to reduce pain and restore normal function.

### ABDOMINAL MUSCLES

The abdominals consist of four layers of muscle, the most important being the deepest layer called the Transversus Abdominus. Its fibres run horizontally, wrapping around the trunk like a corset and, being closest to the spine, exert significant influence over the lumbar vertebrae.

The other abdominal muscles, including the Rectus Abdominus or 'sixpack' muscle, are much less effective in providing support to the spine. If Rectus becomes overactive, it may actually negate the stabilising influence of Transversus Abdominus. Exercises like sit-ups may be more of a hindrance than a help to sufferers of low back pain. It is therefore important to re-program the deeper abdominals so that they are able to work without the help of the more superficial muscles.



*Real Time Ultrasound assists in the retraining of the deep abdominal muscles.*



*An individualised Pilates Programme prescribed by your physiotherapist may provide long-term relief to sufferers of low back pain.*



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### REAL TIME ULTRASOUND

The deep abdominal muscles are difficult to activate in isolation. And because chronic pain may cause wasting and weakness in muscles like Transversus Abdominus, retraining may be even more difficult in those who have experienced a low back injury.

Fortunately, technology allows Physiotherapists to facilitate specific retraining of the deep abdominals. Real Time Ultrasound is a non-invasive technique which permits both therapist and patient to view these stabilising muscles working on a screen. Allowing immediate, accurate feedback on correct muscular contraction and relaxation permits retraining to take place much more quickly and effectively.

Real Time Ultrasound is usually conducted on three or four occasions and, at each session, the therapist will provide further feedback on whether stabilisation is occurring correctly. Often, these sessions are used in conjunction with a home exercise programme, Manual Therapy, Hydrotherapy, and Pilates.

### PILATES - WHAT IS IT ?

Pilates (pil-ah-tees) is a unique exercise method that focuses on flexibility, strengthening and postural correction.

In simple terms it is a cross between yoga and weight training that utilises the principles of control, centring, breathing and precision to isolate fine movements and build functional control.

Introduction to pilates begins with basic breathing and floor exercises which may be progressed to include the use of fit balls and reformer work (spring resistance exercises). Pilates is a predominantly anaerobic form of exercise, and is ideal for sufferers of low back pain, injured athletes and those seeking toning and improved flexibility.

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