

Sports Therapy

- Acute and Chronic Injury Rehabilitation
- Overuse Injury Treatment
- Retraining for Return to Sport
- Taping and Bracing
- Pre-season Screening

Spinal Therapy

- Joint Mobilization and Manipulation
- Exercise Prescription
- Postural Assessment
- Back and Neck Care

GUNN IMS - Intra-Muscular Stimulation

Pilates Based Core Stability Training

ICBC Treatment of Injury Post MVA

Active Rehabilitation Programs

WCB Treatment for Work Related Injury

Worksite Evaluation, Ergonomic Assessment & Wellness Program Development

Functional Capacity Assessment and Medical Legal Reporting

Women's Health

- Post Mastectomy
- Urinary Incontinence Training
- Pre and Post Natal Care
- Osteoporosis

Injury Prevention Education

Seniors Programs

- Fall Prevention
- Fitness
- Post Surgical

Respiratory Care

Arthritis Treatment and Management

Neurology



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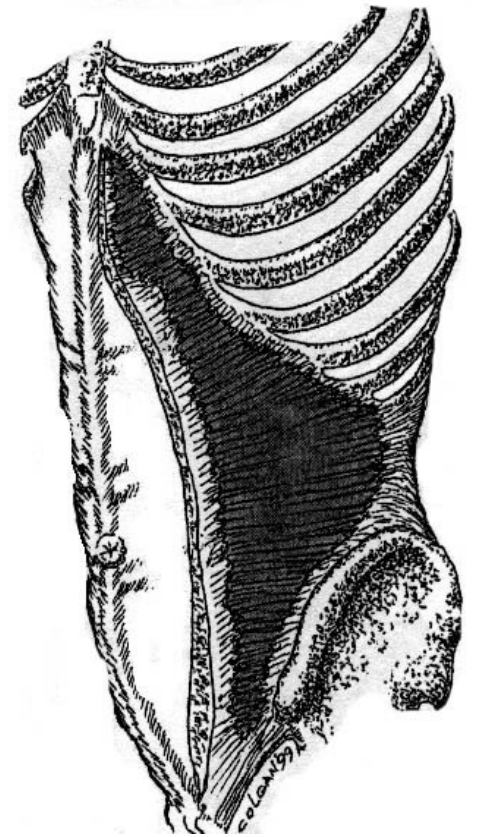
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CORE STABILITY

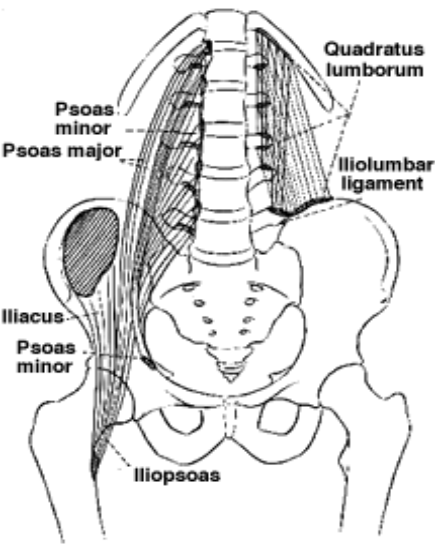


CORE STABILITY

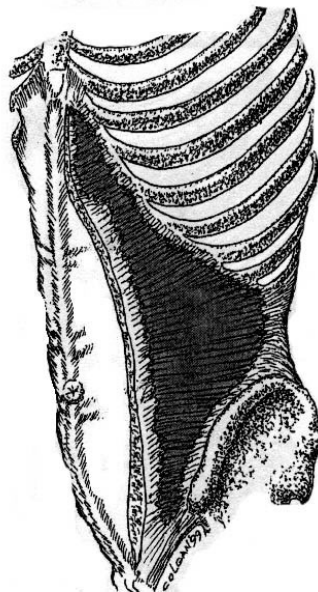
Injury prevention comes from proper preparation prior to activity.

That preparation should include balanced power and flexibility in the limbs coupled with a well controlled trunk. Stabilizing the trunk and pelvis to provide a solid grounding for power from the limbs *core stability*.

WHERE AND WHAT IS THE CORE?



The Core is the name given to the muscles of the pelvis and low back which control vertebral alignment during motion. They are *the pelvic floor, deep abdominal*



wall (transversus abdominis) and deep back muscles (multifidus).

The Pelvic Floor muscles form a muscular hammock slung underneath the pelvic opening. The transversus abdominis wraps around the trunk like a corset. The multifidii are deep back muscles,

which connect consecutive vertebrae together.

When activated correctly this group of muscles literally hugs the vertebral column which supports the spinal joints and discs to help prevent injury

CORE WEAKNESS

Core Weakness leads to early fatigue. The legs are then relatively stronger than the waist and there is less than the required protective “hugging” of the spine. Effective, *safe* linkage and power transfer between the limbs and the trunk is lost.

With the progressive overload it is usually the back that gives way, leading to injury of the small spinal joints and discs. Sometimes the limbs will be the sites of injury as they compensate for the spine.

HOW IS THE CORE TRAINED?

Training these muscles needs to be done at a *moderate level of effort* so that proper isolation of the inner unit can be achieved. Starting with too much effort tends to bring in the outer abdominal wall (outer unit) too quickly so *don't try too hard when learning this isolation*.

While there is nothing wrong with strong outer abdominal muscles, they cannot produce the desired steadying effect on the low back. The pelvic floor is the most easily found trigger for the rest of the core muscles. It is found as a tightening of the bladder or a pulling up of the sphincter muscles, as in when trying to avoid passing wind. Women are often familiar with this as a “Kiegel” exercise. Kiegel exercises are taught as a general pelvic floor strengthener, especially for before and after childbirth.

Here's how to start. Take a breath in. As you release the breath, gently pull up and in with the front passage muscles. Men can think of a lifting of the testes to get the frontal muscles. Hold 3 seconds and repeat 3 times. Now do 3 pumping lifts of a second each. Repeat this whole sequence 3 times. Now repeat the exercise but focus the contraction gently firming around the back passage as though avoiding breaking wind. With a few weeks of daily practice you will be able to gently hold for at least a minute.

Use this “up and in” initiation to firm and protect the core an instant before doing any exercise or activity.

This is the first stage of exercises for your core. Talk to your physiotherapist about progression of these exercises.

Points to remember for effective exercise of the inner unit:

- Develop the holding *up and in* ability and be sure to keep breathing.
- Focus on isolation with *moderate* effort. Try to keep the shoulders and neck soft.
- Keep the hold steady throughout the exercise.

CORE STABILITY TRAINING

Burrard Physiotherapy Associates offers specific training for more advanced core stabilization. Your therapist will assess your physical condition first to make sure that this form of training is most appropriate. To avoid injury, it is often safest to have a few sessions with your physiotherapist before embarking on any group Pilates or core strengthening classes.