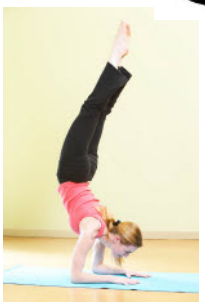


Core Stability

A guide to building core strength for health and performance

Developing a strong core

Core strength and conditioning has become a popular type of training offered by health clubs and personal trainers over recent years.

From a sporting perspective, the core muscles play a vital role in the effective use of muscles required to perform a particular activity. A well conditioned core is not confined to a well sculpted six pack and includes a whole host of muscles around the trunk, hips and shoulders.

The core muscles stabilise the spine, pelvis and shoulder and provide a base for activities and movements to take place.

To be effective, a core stability programme needs to target all the muscles involved.

What are the core muscles?
This is open to debate and there are many different opinions as which muscle can be classed as one.

Generally, the muscles of the core run the length of the trunk and torso; when they contract, they stabilise the spine, pelvis and shoulder girdle.

- Rectus abdominus. Located along the front of the abdomen, it is the most well known and possibly over-trained muscle involved in core conditioning.

- Multifidus. Located under the erector spinae along the vertebral column, these muscles extend and rotate the spine.

- External obliques. Located on the side and front of the abdomen.

- Internal obliques. Located under the external obliques, running in the opposite direction.

- Transverse abdominis (TVA). Located under the obliques, it is the deepest of the abdominal muscles and wraps around the spine for protection and stability.

- Erector spinae. A group of three muscles running along the lower back to the neck.

- Hip flexors. These include the iliopsoas, rectus femoris, tensor fascia latae - located in front of the pelvis and upper thigh.

- Gluteus medius and minimus. Located at the side of the hip.

- Gluteus maximus, hamstring group and piriformis. Located at the back of the hip and upper thigh.

- Hip adductors. Located in the medial thigh.

Core Conditioning and Back Pain

Weak and imbalanced core muscles may lead to problems with the back. An overdeveloped set of abdominals may flex the spine away from a neutral position and lead to injury. The natural lumbar curve designed to withstand a heavy load may be compromised with certain types of abdominal training.

Athletes and general clients should be encouraged to develop a balanced group of core muscles within their programme.

Core Conditioning and Athletic Performance

The muscles of the trunk and torso stabilise the spine from the pelvis to the neck and shoulder. They allow the transfer of powerful movements of the arms and legs required for dynamic athletic movements.

Prior to any powerful, rapid muscle contraction and movement in the limbs, the spine must provide a solid and stable platform.

Training the core muscles to provide this solid and stable platform will allow functional fitness to be developed which will enhance sporting performance. For this to take place, core strengthening exercises are very effective when the torso works as a solid unit and both front and back muscles contract at the same time. Multi-joint movements can then be performed and stabilisation of the spine is monitored.

Strengthening the Core Muscles

There are numerous exercises that will strengthen the core. This is a good thing as non repetitive and varied exercises may help with exercise adherence and condition the core in as many ways as possible.

Specific classes which aim to target the core can be found at most gyms and leisure centres. In addition, classes such as yoga and Pilates are also popular methods based around both physical and psychological well-being. Pilates for example, is based around the study of various disciplines and has a strong emphasis upon the core with concentration and breathing techniques.

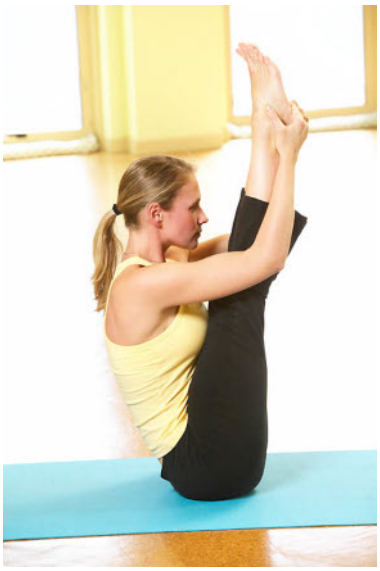
Traditional strength conditioning methods are also a good way to increase core strength. The use of body weight exercises such as press ups, squats and lunges all work the core muscles to a varying degree. A cross over from yoga and Pilates sees exercises such as the plank, the back bridge and hip lifts all part of a well rounded core programme.

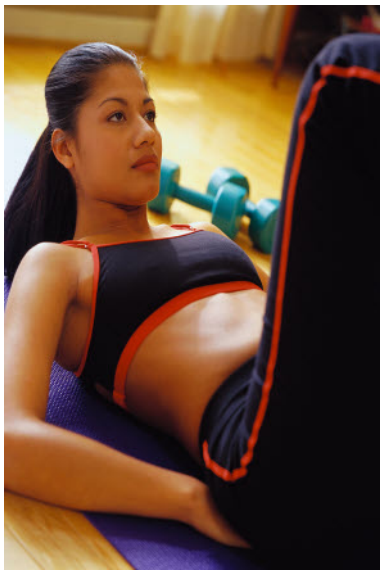
The addition of external resistance in the form of barbells, dumbbells, medicine balls and resistance bags all challenge the core when undertaking multi-joint, multi-directional movements.

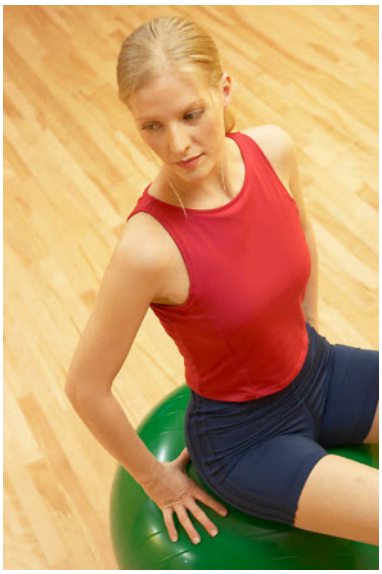
In addition to the commonly found equipment seen in most gyms, Kettleballs and round stones are also used to provide external resistance whilst undertaking various body movements.

One of the most popular pieces of equipment to assist in core development is the fitness ball. This allows a multitude of core stability exercises to be performed using body weight and the addition of resistance such as dumbbells.

Balance boards and wobble boards can also be used for core strengthening alongside their more traditional use of rehabilitation.







About eliteperformance

eliteperformance are based on the Wirral in the North West. They provide sports conditioning, personal training and sports therapy to a wide range of clients. Visit www.eliteperformance.biz