

The Functional Movement Screening and the  
importance of the core.

# MOVEMENT SCREENING

There are several methods of assessing movement available to the Coach, but whatever method is employed it must be functional, accurate and consistent. One such method that is available to Coaches is “The Functional Movement Screen” as developed by Gray Cook.

“Don’t confuse form with function. Weight training with muscle isolation is popular in bodybuilding because bodybuilding is about form. Muscle size and symmetry are the goals. But most sports are about movement. Speed, quickness, agility, power, control, coordination and stamina are the keys to success. The goal of training is not to change how the body looks, but to improve how the body moves”. (Cook et al 2003).

Sit normally on a chair and then stand up without using your arms or by means of momentum.

Can you do it?



Approximately how many repetitions does it take for the body to learn a movement



Approximately how many repetitions does it take for the body to relearn a movement



## Movement and Movement patterns

The Strength and Conditioning Coach is essentially a “Movement Specialist”.

There is movement in all sports and it is efficiency of movement that ultimately wins medals! As a sports person your chief concern should be performing movement with the strictest of discipline anything less will dictate that you are performing in an inefficient way where the consequences could range from an individual poor performance to eventual injury. It is also important to remember that it takes around 500 repetitions for the body to learn a movement, if however this movement is learnt incorrectly, it takes around 5000 repetitions to unlearn the movement and learn it correctly.

*To be ignorant of motion is to be ignorant of nature*

Aristotle

1

- Poor flexibility

2

- Lack of muscular control

3

- Increased risk of injury

Posture and Core control should therefore be seen as one of the single most important factors of an athletes training. The Core transfers generated power from one area of the body to the other and therefore if you cannot control it, you cannot harness it.

As Vern Gambetta 2007 states:

*“Rooted in the feet, powered by the core, reflected by the arms, manifested in the hands.”*

To put it quite simply, if you cannot control your core, you are leaking power and your performance will suffer as a result. As a coach, I would never ask someone to perform complicated lifting exercises until they can stabilise and move their body efficiently. To do anything other would be to compromise the athlete’s future ability in the same way as “painting over rust.” All performance must be built on a foundation of efficient and strong movement.

## TASK 1

Perform the movement screen on an athlete within your group

This assessment protocol assesses the basic movement patterns that humans use as the basis for all movement.

The movements that are assessed through a strict testing protocol are:

- The Overhead Squat
  - Step
  - Lunge
- Shoulder Mobility/Wall Angel
  - Leg Raise
- Push up for trunk control
  - Rotational stability



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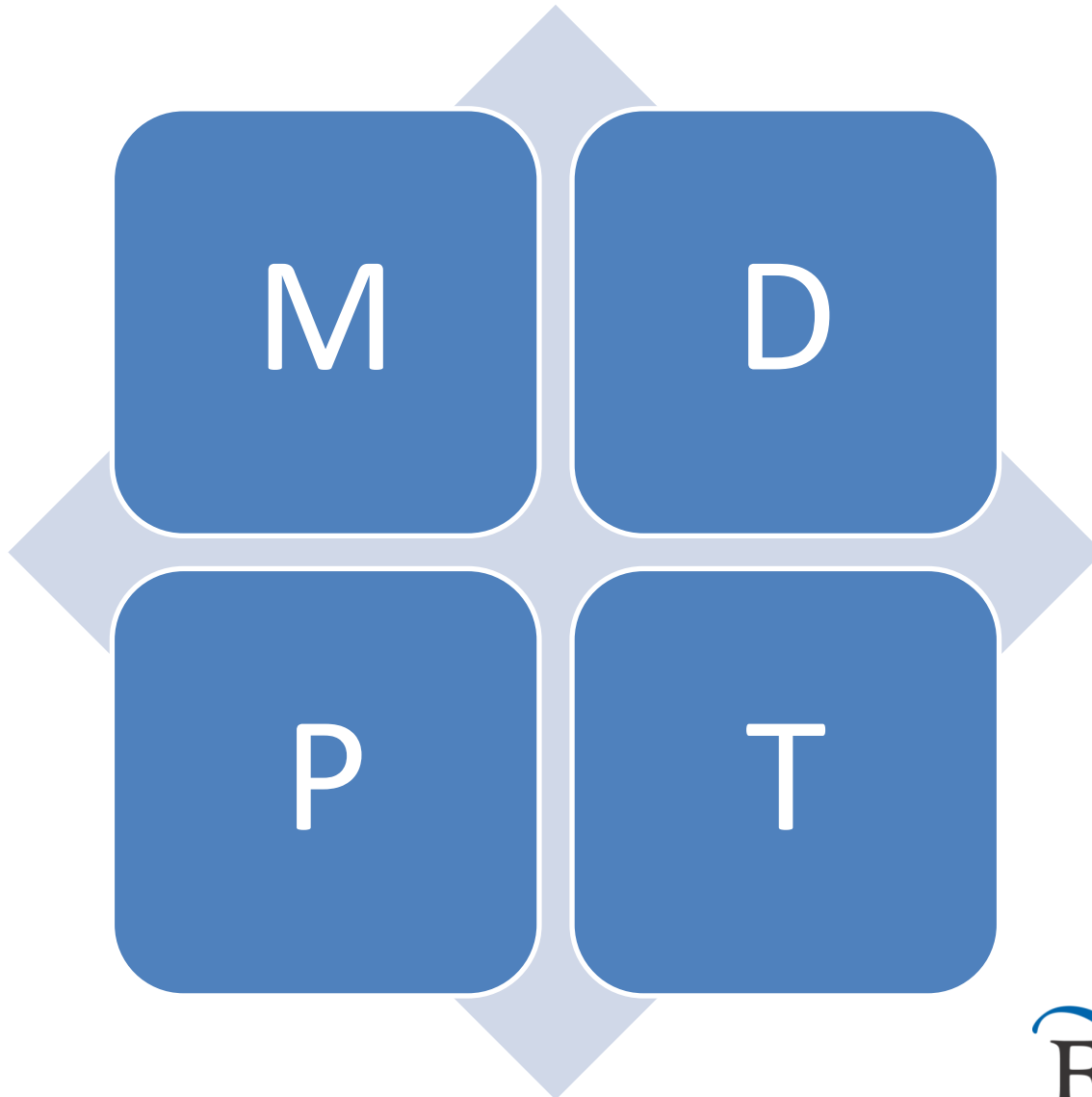


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## Inner and Outer Unit Quiz

Name the following Inner Unit muscles by using their first letter as a clue





## Inner and Outer Unit

Although the Core is an integrated system of muscles and structures, we look at it in terms of the Inner and Outer Units. The inner unit consists primarily of four muscles which are:

Diaphragm \* Transversus Abdominis \* Multifidus \* Pelvic floor

The prime role of the inner unit is to stabilise the spine, rib cage and pelvic girdle and provide a stable base for movement to occur. A good analogy is to view the inner unit as the foundations of a house as it provides the base for everything to be built upon.

The outer unit muscles are those that drive movement from the base of stability that the inner unit creates. If we consider the analogy of a bicycle, the inner unit would be a rigid frame and the outer unit could be considered as the pedals, gears and wheels. If the frame lost its integrity, movement would not occur or at least be very difficult!

MUSCLE	POSITION	FUNCTION
Rectus Abdominis	Between the Base of the Sternum and the Pubis	Trunk Flexion (Sitting up, the six pack muscles)
Internal Obliques	Between the front of the Pelvic bone and the lower ribs	Trunk stability and lateral flexion
External Obliques	Diagonally between the lower ribs top of the pelvic bone./ligaments	Trunk stability, rotation and assists with lateral flexion
Transverse Abdominis (Corset muscle or internal weight belt)	Horizontally from the Pelvic bones and Spinal muscles to the sheath covering the Rectus muscle	Trunk stability/ Draws stomach in
Diaphragm	A flat muscle like a drum head separating the chest and abdominal cavities	Initiates breathing by creating a vacuum
Pelvic floor	Between the tailbone and pubic bone	Has a controlling effect during urination
Quadratus Lumborum	Between the lowest rib vertebrae and top of the Pelvis	Performs Lateral flexion and helps to stabilise during lateral movements.
Multifidus	Connects between the spinous processes between the Cervical (Upper) and Lumbar (Lower) Spine	Assists with stability of the spine along with extension and lateral flexion
Psoas	Between the Lumbar spine and top of the Femur (Upper Leg)	Flexion of the hips (Lifting the leg)
Spinal erectors	Between the Sacrum and iliac crest and the vertebrae and ribs	Extends the spine (Ensures an upright position when standing)