

## **Abdominal Training**

### **Foundation of Most Fitness Programs**

Abdominal training is a regular part of most fitness programs. This area attracts a lot of interest from both an aesthetic and functional vantage point. Everyone loves a flat and firm midsection. Yet we know that is secondary to the very important role good functioning abdominals play in quality movement and injury prevention - particularly of the lower back.

The abdominals are active at some level in all movements when the torso is upright. Whether we are sitting, standing or kneeling, the abdominals have a responsibility to deal with the gravitational forces acting on the body. They are also called upon in many other positions depending on how the body is positioned relative to gravity or some other force.

We have four layers of the abdominal wall. Their roles are all somewhat different and their contribution to stability and movement varies depending on the movement. Starting from the most superficial and working our way in, we have the:



- Rectus abdominus
- External oblique
- Internal oblique
- Transverse abdominus

To keep things simple, we can think of training our abdominals using three types of contractions:

- Isometric or static
- Concentric or shortening
- Eccentric or lengthening

### **Isometric Training:**

The abdominals are often trained for stability purposes using isometric contractions. An example of an isometric abdominal exercise would be the Plank. The abdominals are put under a position of stress (or load) and required to maintain that position. Isometric exercises are good exercises to teach stability in certain positions. But since our life involves movement, we must ultimately incorporate movement in our abdominal training.

## Concentric Training:

Concentric abdominal training is the type of training most people are familiar with. Any time the back raises up from the floor as the pelvis remains still qualifies as concentric. Crunches are a classic example of a concentric abdominal exercise. Although the most common form of abdominal exercises, concentric abdominal exercises do not train the abdominals through their full functional capacity.

## Eccentric Training:

Interestingly, we likely use our abdominals more eccentrically, especially when we are standing. Eccentric action of the abdominals occurs any time the lower rib cage is moving away from the front part of the pelvis. Eccentric contractions are sometimes referred to as "negative contractions" because they are resisting the force of gravity, versus shortening to overcome gravity as in the concentric crunch. Eccentric contractions of the abdominals are used to protect the lower back by limiting hyperextension. The abdominals can be worked eccentrically when standing, sitting or lying supine. An example of supine eccentric action of the abdominals occurs during straight leg lowering.

The abdominals are used to control how fast the pelvis rotates to lower the legs. An example of eccentric action of the abdominals when standing is when a dumbbell is held overhead and the weight moves behind the hip as if to lean slightly backwards.

The abdominals help us move and stabilize in three-dimensional space as they lengthen, shorten and sometimes hold things still. We must therefore challenge our abdominals in the way the body will use them. Get off the floor and perform some of your abdominal work while standing to prepare your abdominals for the real world.

## Dates for your diary

**May 25<sup>th</sup> – June 6<sup>th</sup> EFT Table**> Find all your friendly tickets, b-day cards and rain checks and bring them to class to exchange for Jazzercise goodies, leggings and tops. For EFT students only. See insert for locations and times.

### EFT Table Schedule

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25 <sup>th</sup> May Stonahaven am	26 <sup>th</sup> May Stonehaven pm	27 <sup>th</sup> May Albyn pm	28 <sup>th</sup> May Albyn pm	29 <sup>th</sup> May Craigiebuckler am	30 <sup>th</sup> May Mannofield Church
1 <sup>st</sup> June Albyn pm	2 <sup>nd</sup> June Albyn pm	3 <sup>rd</sup> June Stonehaven pm	4 <sup>th</sup> June Stonehaven pm	5 <sup>th</sup> June Stonehaven am	

**Personal Touch**> Starting on w/c Monday 25<sup>th</sup> May. For more information ask a Class Manager.

**Saturday classes in June**> Please notice that all Saturday classes during the month of June will be held at Ruthrieston West Church. Sorry for the inconvenience this might cause.