

Functional Core Training

The all important 'core' is constantly referred to in all the health and fitness magazines and websites, but what is it? The core is made up of your abdominal muscles (transversus abdominus, internal and external oblique and rectus abdominus), pelvic floor, diaphragm and multifidus (deep spinal muscle). So you are probably thinking that the main exercises are going to be plank, side plank, Swiss ball crunches, sit-ups and similar floor based abdominal exercises? If we look at the biomechanics of the abdominal muscles and their attachments to the pelvis and thorax, there seems to be something missing from the aforementioned traditional exercises.

Our bodies are designed to move 3 dimensional in general daily and sporting activities. This means that our bodies move forwards and back which is sagittal plane, side to side movement which is frontal plane and rotation from side to side which is transverse plane.

The attachments of the abdominal muscles, means that they act as the link between the upper and lower body. They are required to actively decelerate movement in all 3 planes, and then accelerate out of that position causing twisting, bending, lengthening and shortening commonly at the same time in different planes. Like any muscle in the body the most efficient way to develop force, speed or power is by lengthening a muscle (loading) then shortening (exploding) e.g. you never jump upwards with your legs straight! You always bend the knees to lengthen the muscles then explode up.

During most of our sporting or daily activities our shoulders are moving in the opposite direction to the pelvis, therefore creating a lengthening in the transverse plane i.e. throwing, running, swinging and punching.

So how do I train my core? Work on exercises that lengthen and shorten your abdominals in all 3 planes of movement, therefore moving the pelvis and thorax in an upright position with your feet on the ground. This is the most effective way to functional train your abdominal muscles and improve your core strength.

References

- www.grayinstitute.com