

CORE never crunch again!
With Leslee Bender
2020 IDEA Personal Trainer of the Year
PMA, ACSM, NASM, FAFS Gray Institute

Thank-you for choosing this dynamic program that will change the way to train and treat your own body for a lifetime of functional pain free movement and a stronger core! Most modalities of fitness only focus on the muscles and how strong and aesthetic they are without considering the connective tissue. However recently fascia has become a very popular topic! Why? People are in pain and moving inefficiently! The more people only train with hard core mentality the closer they will get to an injury guaranteed.

Understanding the role of the core and what it does is essential for training effectively.

Misunderstandings of core training

- Crunches give you a 6 pack
- You can decrease fat on the abdominals by doing crunches
- The only way to train the core is supine

Scientific Research on core training

Stuart McGill Low Back Disorders 2007

Subject max effort EMG activation in a sit up or crunch showed that the Iliopsoas was approximately 39% while the Transverse was less than 11%

Dr Petoskey study showed at Loma Linda University 2006

Utilizing a small ball increased the core activation 406% while protecting the spine and. The load to the Rectus was considerably higher due to it being an eccentric load against gravity eg: lengthening

Anatomy Trains Thomas Meyers

Gray Institute Applied Functional Science

As trainers we have the ability to harm or help our clients. By pushing them too hard (no pain no gain) or lack of understanding why we are doing an exercise we create harm. Many text book programs only teach you how to do an exercise without proper analysis of who it is appropriate for...

Gravity has an influence on us each and, every time we move to lengthen the tissue and without it we would not have the ability to load to explode. Every living creature depends on movement and is driven forward towards a task.

Our Goal is to understand what our clients need based on the sciences....(Gray Institute)

1. Physical sciences Force Space and time
2. Biological sciences Biomechanics Neurology Physiology
3. Behavioral sciences Body mind spirit

When we have a strategic plan, we can then create the techniques for conscious exercises for a sub conscious result!

Bones move, joints feel, and muscles react!!!!

Defining the Core

- **Local or deep** protect the spine and are responsible for protecting internal organs and respiration
Muscles; TA, Multifidus, internal obliques, diaphragm, pelvic floor
- **Superficial** move the extremities in the torso above and below the hips
Muscles RA, External obliques, erector spinae gluteus group, trapezius, rhomboids, latissimus dorsi, adductors, hip

Breath and neutral

- The breath is essential to activate the deep core and stabilize the spine while increasing flexibility and mobility
Inhale and exhale on the exertion.
- Neutral spine position of an individual's spine where every joint is held in an optimum position by the connective tissue allowing equal distribution of symmetrical tension throughout the entire body providing equal distribution of force.

So what is this dynamic tissue called fascia

- Fascia has more efferent as muscles have more afferent
 - Fascia provides stability, elasticity with deceleration and muscles provide mobility and acceleration.
 - Fascia surrounds every muscle which transmits force and fascia transmits energy!

Postural issues and defining them

- **Lordosis**
 - is more common in women than men.
 - This is typically caused by high heels, pronated feet and tight calves, weak gluteus and abdominals, tight hip flexors all of which can be somewhat rectified with corrective training. This is an anterior carriage to the pelvis and this postural issue can experience back pain and injuries and if not addressed will become worsened over time.
 - **Exercises to avoid**
 - Supine leg kicks or crunches
 - Glute tightening (tucking the pelvis)
 - Calf raises
- **Kyphosis or upper cross**
 - is seen more than ever due to so much time over a computer and or phone.
 - This is seen as a forward head lean, internally rotated shoulders and more of a flat back, tight hamstrings and gluteus and over trained pecs.
 - More common in men than women. If not addressed both upper back and neck pain can lead to issues over time.
 - **Exercises to avoid**
 - Crunches
 - Over training the chest
- **Sagittal**
 - is anterior or posterior of the body and is influenced by gravity
- **Frontal**
 - is either right lateral or left lateral of the body or abduction or adduction and is influenced by gravity
- **Transverse**
 - is rotational where gravity has not influence

Positions that we train in all three planes of motion that ultimately affect the core

- Standing vertical affected by gravity
- Prone affected by gravity
- Sitting affected by gravity
- Side lying affected by gravity
- Supine primarily when utilizing and unstable surface

Standing vertical

1. Sagittal lunges Bender Ball/Gliding

- a. Reach below the knee
- b. Reach shoulder height
- c. Reach over the head
- d. Reach and rotate below the knee
- e. Reach and rotate same side
- f. Reach and rotate opposite side
- g. Reach over head laterally flex same side
- h. Squat with ball in between the thighs
- i. Squat with one foot on the ball

F lunges

- a. Reach below the knee
- b. Reach shoulder height
- c. Reach over head
- d. Reach and rotate same side
- e. Reach and rotate opposite side
- f. Reach over head laterally flex same side
- g. Skater with gliding
- h. Skater with ball under a foot

2. T lunges (incorporating all three planes)

- a. Reach below the knee
- b. Reach shoulder height
- c. Reach over head
- d. Curtsey with gliding

3. Gliding/ ball prone

- a. Plank to pike
- b. Plank to shoulder stabilization
- c. Twisted plank
- d. Hands on disc pull plank
- e. Spine extension

4. Bender Ball/Gliding seated/side lying

- a. Spine extension
- b. Spine extension with rotation
- c. Side lying

5. Supine /ball

- a. Toe taps with wall under tailbone
- b. Hip circumduction

Thank you so much leslee@bendertraining.com

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