

Build a better back with the Bender Method

- With Leslee Bender

Having strong postural muscles is critical to prevent back injuries and pain

- Our society today has increasing low back injuries and pain that is costing tax payers and health care billions of dollars!
- We live in flexion from our computer to our car to sitting at a table with unsupported spinal stabilization.
- People think that Pilates, yoga and other forms of core conditioning are going to help them???? How can it when they are in a group of thirty or more with little to no instruction than how they should get into a position they have never been in before!

Leslee Bender



- Leslee Bender is the founder and creator of the Bender Method™ of Training
- With over 25 years of international fitness experience, Leslee has presented throughout the world, providing unique and progressive methods in all forms of fitness training

Journal of Applied Research

- Utilizing the Bender Ball™ will generate 4 times the work in an abdominal crunch per second of exercise
- The degree from flexion to extension was increased from 50 to 90 degrees which can not be accomplished with standard floor crunches or with a Swiss Ball due to its larger diameter and size, thereby giving the Bender Ball a significant advantage in working the muscles harder and at a better range of motion
- www.jrnlappliedresearch.com



Bender Ball™



- Core
- Personal Training
- Mind Body
- Body Conditioning
- Aqua
- Pre / Post Natal

Movement Principles

- Mind body connection:
the mind moves the body
- Good focus generates greater results
- Utilize the breath to enhance the movement
- Quality versus quantity of movement
- Build a solid foundation through slow and controlled movement
- Full range of motion in a pain free zone
- Practice makes perfect

Today's society



Today's posture



The way we sit



Postural problems created by poor bio-mechanics

- Kyphosis caused by tight Pectoralis, SCM, sub occipitals, Lattisimus dorsi, upper trapezius
- Stretched and weak, rhomboids, serratus anterior, erector spinea
- Lordosis caused by tight shortened and weak, Psosas, Quads, erecor spinea quadratus lumborum
- Stretched and weak, abdominals hamstrings gluteaus maximus

Today's postural issues



Average participant



Local and global core muscles

- Local deepest of the core and most important for stabilization. It is these muscles that fire reflexively and pre cognitively to support and protect your body. These include the multifidus, TA and 1/3 of the psosas
- Global are the muscles that fire after the local core muscles and stabilize the body for motion Rectus, gluteaus muscles and erector spinea
- Large Skelatal muscles are the muscles that fire to create motion such as the Pectoralis

Today's postural issues

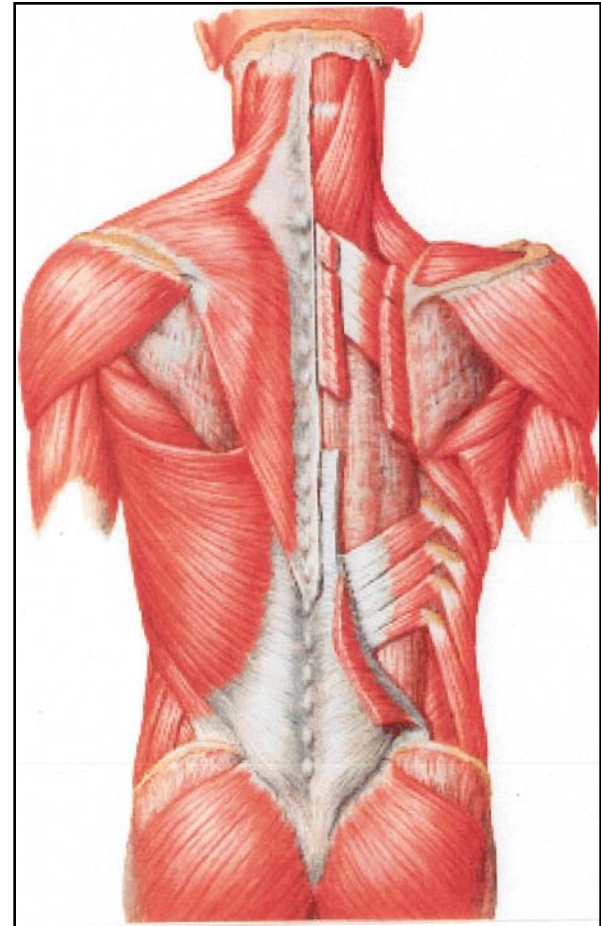
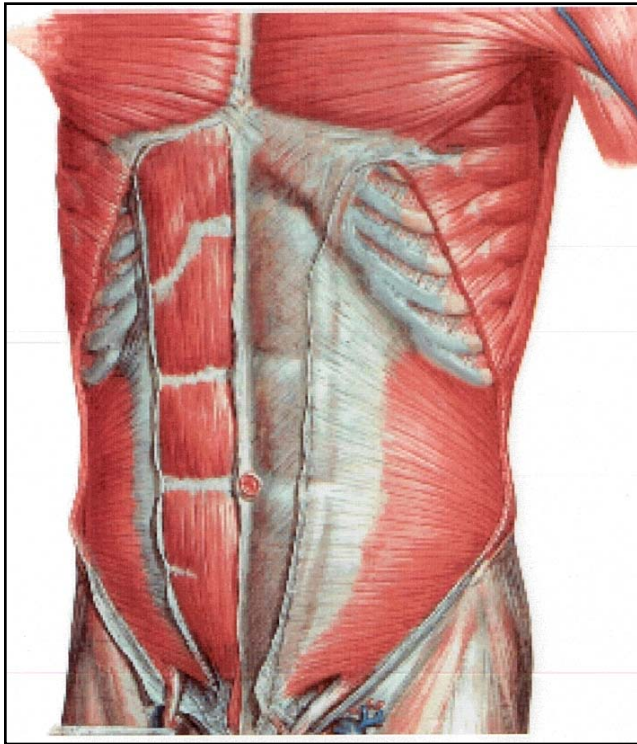


Core firing pattern in healthy people

- Low force 15% contraction local core fires to protect the spine
- Below 30% global core fires to prepare for motion
- Above 30% large skeletal muscles fire to create movement
- **NOTE!!!** When people injure themselves the firing pattern of these muscles change so instead of firing in the correct order they fire a the same tie leading to injury instability and pain

Core (cont'd)

Anterior and Posterior Views of Core Muscles



INJURY!!!!!!

- Core firing pattern in people with issues
- Below 20% large muscles contract at the same time as the core and this inhibits the core from contracting correctly to protect the spine and move efficiently
- Without stability or stabilization first the body is open for injury Often people who are struggling to control their core are doing so because the muscles are firing incorrectly and abnormally, impeding their program.

Examples of poor core conditioning leading to back injury

- Straight legged sit-up or in Pilates roll-up with unsupported spinal flexion. The core never has a chance to fire due to the psoas takes over and inhibits the other muscles from doing their work.
- Double leg drops “super dangerous” the core cannot do the work it needs to when the psoas completely takes over and sacrifices the back
- Other examples are lifting to heavy of weight when never stabilizing first Especially in large ‘core’ conditioning classes where the trainer never leaves the podium!!!!
Scary!!

Exercises specific to changing postural problems

How and what we teach

- Neutral from standing to seated to supine
- Neutral sitting on a stability ball
- Why neutral? When the spine is in neutral alignment all the postural muscles can work correctly. And, you can work towards corrective posture.
- Adding breath can activate awareness and functionality to spinal stabilization

Become a critical thinking instructor 'observe'

- What do you see in your class?
- How do they move. Can they even find neutral or even breathe?
- Step 1. Balance
- Step 2. Awareness
- Step 3. Is there any discomfort anywhere?
- Step 4. what needs stretching what needs strengthening?

Exercises to improve Kyphosis

- Strengthen the rhomboids
- Stretch the pectoralis
- Strengthen the low back erector spinae
- Stretch the anterior deltoids and internal rotators of the humerus
- Utilize foam rollers and stability ball

Exercises to improve lordosis

- Strengthen the abdominal area with the Bender ball
- Side planks with the Bender ball
- Stretch the hamstrings and strengthen the glutes
- Stretch the quads and psoas

For more information

- Stuart Mc Gill Low Back Disorders 2007
- Journal of Applied Research 2007 Core Training with a mini Stability ball
- www.thepilatescoach.com