



Brain-Based Balance Training

Dr Emily Splichal, DPM, MS

Do you want this PowerPoint?



Dr Emily Splichal

Functional Podiatrist

Human Movement Specialist (MS)

Founder EBFA Global (www.ebfaglobal.com)

Creator of Barefoot Training Specialist[®] Certification

Author Barefoot Strong Book (www.barefootstrong.com)

Co-Founder & CEO Naboso (www.naboso.com)

@dremilydpm

@naboso_technology



Most simply stated, the subconscious control and coordination of our body in space is controlled by our perception of that body.

This is a neurosensory process.



The image is a digital composition with a strong red color scheme. In the upper left, a portion of the Earth is visible, showing clouds and landmasses. Below and to the right of the Earth is a grid of binary code (0s and 1s) that recedes into the distance, creating a sense of depth. Overlaid on this grid are several glowing, curved lines that resemble digital orbits or data paths. The background is dark, with some light rays emanating from the top right corner. The overall aesthetic is futuristic and technological.

The only constant in the world is gravity.

To control standing posture we
need to push up into gravity.

This weight on our shoulders is like
a “proprioceptive hug” to our skin
& fascia and creates
body awareness





Your Body Schema

A balance of exteroception + interoception

Exteroception & Body Schema

Weight

- Wrist weights
- Sensory Sticks

Tactile

- Naboso
- Vibration
- Dry brushing

Compression

- Apparel
- K-tape
- Athletic braces



A low-angle, close-up shot of a woman lying down with her head tilted back and eyes closed. Her arms are raised straight up, framing her face. The background is a dense, out-of-focus green foliage. The lighting is soft and natural, highlighting the contours of her face and arms.

Interoception & Body Schema

Breath, meditation & mindfulness

Heart Beat Tracking

Body perception is
needed for **balance**
& **body control**



How does **sensory input** shape
balance and stability?







The Visual System

Central and peripheral input system

Typically the dominant input system
in an unstable environment (SLS)

Most balance training exercises
simply re-enforce this increased
visual dependence





The Vestibular System

The vestibular system is one of the nervous system's most important tools in controlling posture and our relationship with gravity

Intimately connected to the oculomotor nuclei to create gaze stability while our head is moving.

The vestibular system informs the respiratory diaphragm
(**vestibulorespiratory reflexes**)





Proprioception

Muscle Spindles & Golgi Tendon Organs

Joint Position Sense

Join Centration

Kinesthetic Awareness

Velocity & Force

A pair of feet is shown from a top-down perspective, standing on a black mat with a fine, grid-like texture. The mat features the 'LABOSO MIND BODY' logo in white and red text at the bottom. The background is a light gray gradient.

Mechanoception

SAI - Merkel Disc.
(two point discrimination)

SAII - Ruffini Endings
(skin stretch)

FAI - Meisner Corpuscles
(low freq vibration)

FAII - Pacinian Corpuscles
(high freq vibration)

Interesting foot facts



Naboso as an SA1 mechanoceptive stimulation tool

Spatial acuity of Merkel Disc is 1mm

Texture height and durometer designed to stimulate dermal layer of foot

A close-up photograph of a person's feet standing on a dark grey, textured mat. The person is holding two bright yellow, cylindrical rollers with a bumpy texture under their feet. The mat has a grid-like pattern and the Naboso logo is visible on the rollers and at the bottom of the frame. The background shows a green lawn.

Multi-Sensory Processing

NABOSO® MADE IN USA

Multisensory integration refers to the process by which the nervous system integrates information from different perceiving processes



Research now demonstrates that neuronal sensory integration happens much earlier in the sensory processing pathway and is optimized or heightened with multi-sensory stimulation, or what we call **sensory stacking**





A close-up photograph of a person's feet standing on a dark grey, textured yoga mat. The person is wearing a bright red leg warmer or sock that covers the lower leg and ankle. The feet are positioned with the toes pointing slightly outwards. The background is blurred, showing a light-colored surface and a wooden chair leg.

Let's Get Connected!

A close-up photograph of a person's feet standing on a dark blue mat with a fine, grid-like texture. The feet are positioned in the upper half of the frame, with the toes pointing slightly outwards. The mat is part of a larger exercise equipment, as indicated by the brand name visible in the bottom right corner.

Step 1 – Set your base

NABOSO[®] MIND BODY



Finding a Plantigrade Foot

1. Foot Tripod
2. Toes Spread and Long
3. Neutral Arches
4. Toe Tension and Reverse Windlass





Step 2- Activate your base

NABOSO MADE IN USA

5 Point Activation





Step 3- Integrate your base

A close-up photograph of a person's lower legs and feet. They are standing on a dark grey mat with a raised diamond pattern. A blue, spiky massage ball is positioned between their ankles, resting on the arches of their feet. The text "Integrated Foot Strength" is overlaid in the center in a white, bold, sans-serif font.

Integrated Foot Strength



Deep Front Line

FHL, FDL, Posterior Tibialis



Adductors which insert on Ischiopubic Ramus



Continuous with Obturator Fascia to **Pelvic Floor**



Continues up the Psoas and QL to the **Diaphragm**



Balance Hacks or Sensory Stacks

Hack #1 - Visual Spotting

Hack #2 - Tactile Stimulation

Hack #3 - Fascial Tension

Hack #4 - Breath Rhythm



Challenge our base

Kinesis Board

Eye Stimulation

Vestibular Stimulation

Peripheral Vision Training

Dual Tasking



Do you want this PowerPoint?





@naboso_technology
@thefunctionalfootdoc



www.youtube.com/ebfafitness
www.youtube.com/naboso

Check us out online **Naboso.com**

Get Certified! www.ebfaglobal.com

