



2019 NSCA PERSONAL TRAINERS VIRTUAL CONFERENCE

OCTOBER 7 – 11

#NSCAPT19

Breathe Well to Move Well

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Conflict of Interest Statement

**I have no actual or potential conflict of interest
in relation to this presentation.**

Breathing Well to Move Well

Introduction to Breathing

- Influences every system and cell in the body
- Closely associated to emotional & psychological state
- Multi-dimensional approach
 - o Biochemical
 - o Bio-mechanical
 - o Psychophysiological

Breathing Well to Move Well

Breathing Mechanics

- Most dysfunctional pattern that you never think about
- Functional vs Dysfunctional is a spectrum of context
 - o Functional = breathing that is efficient and appropriate for the current state of metabolic demands
- 14,000-40,000 reps (breaths) every day
- Closely tied to movement mechanics- If you don't own your breathing you don't own your movement
- Spinal stabilization
 - o Proper breathing facilitates rib cage and pelvis position
 - o Diaphragm and pelvic floor work in opposition for bracing
 - o Proximal stability dictates distal mobility
 - o Doming the diaphragm study on hamstring/hip mobility

Breathing Well to Move Well

What Went Wrong?

- Sedentary classrooms, workplace, cars...lifestyles
- Suck it in!
- Trauma- physical or psychological
- Long term effects are slow so we rarely see the residual effects as breathing related

“Until we make the unconscious conscious, it will direct our lives and we will call it fate” ~ Carl Jung

Breathing Well to Move Well

Optimal Breathing Mechanics

- Primary breathing muscle: Diaphragm
 - o Horizontal vs vertical breathing
- Nose is primary pathway- metabolic demand will dictate most efficient pathway
- Breath wave

Breathing Well to Move Well

Assessment (Observational & Hands-On)

- Should be performed at rest and during activity (everything is an assessment)
- Pathway, Breath wave
- Visual & Hands-on
 - o Naval-lumbaro
 - o Lateral ribs-anterior ribs
 - o Sternum-thoracic
 - o Upper chest-upper back
 - o Shoulders, face & neck
- Increase intensity
 - o Change pattern (nose vs mouth)
 - o Increase tidal volume (take full breaths)
 - o Increase respiratory rate

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Mechanical Teaching Tools

- Horizontal vs Vertical breathing
 - o High/Low technique practice (supine or seated)- using external tactile feedback
- Belly breathing vs 360 expansion
 - o Superman breathing practice (supine or seated)
 - o Progress to standing, positional, or activity
 - o Posterior expansion- seated flexion positions (inhibit spinal extensors)

Breathing Well to Move Well

Pre-Workout Breathing

- Goals
 - o Reset breathing pattern
 - o Activate diaphragm & warm up pulmonary system
 - o Increase sympathetic nervous system activity
 - o Practice/reinforce respiratory techniques to be used in session
 - o Set the foundation for activities to follow
- Pre-Workout Breathing Techniques
 - o Diaphragm Reset
 - Rub sternum and rib line
 - Doming diaphragm technique 2-4 breaths
 - o Superman Breathing x5-10bc per pattern
 - Lateral expansion of ribs (hands around ribs 6-9)
 - o Pattern & Tempo-Zone upshift
 - Balanced Breathing-Nasal Only (slow)
 - Power Breathing-Nose/Mouth (moderate)
 - Fire Breathing-Mouth/Mouth (fast)

Breathing Well to Move Well

Pre-Workout Breathing

- Hierarchy of Competence
 - o Unconscious incompetence → Conscious incompetence
 - o Conscious competence → Unconscious competence

“If you don’t control your breathing, your breathing will control you”

Thank you!