







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
 - Biochemical
 - Bio-mechanical
 - Psychophysiological



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Breathing Mechanics

- Most dysfunctional pattern that you never think about
- Functional vs Dysfunctional is a spectrum of context
 - 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
 - Proper breathing facilitates rib cage and pelvis position
 - Diaphragm and pelvic floor work in opposition for bracing
 - Proximal stability dictates distal mobility
 - Domsing the diaphragm study on hamstring/hip mobility



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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*



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Optimal Breathing Mechanics

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

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Assessment (Observational & Hands-On)

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

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Mechanical Teaching Tools

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

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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 45-10sec per pattern
 - Lateral expansion of ribs (hands around ribs 6-9)
 - o Pattern & Tempo-Zone upshift
 - Balanced Breathing-NasalOnly (slow)
 - Power Breathing-Nose/Mouth (moderate)
 - Fire Breathing-Mouth/Mouth (fast)



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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!



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