

UNLOCKING THE POWER OF BREATHING ON CORE STRENGTH & MOBILITY

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CONFLICT OF INTEREST DISCLOSURE

I have no financial disclosures or conflicts of interest with the materials presented today.

OBJECTIVES

- ★ Describe the benefits of nasal breathing
- ★ Describe the mechanics of breathing on core strength & mobility
- ★ Identify aberrant breathing patterns
- ★ Demonstrate breathing exercises for preparation
- ★ Demonstrate breathing exercises for core strength
- ★ Demonstrate breathing exercises for mobility
- ★ Be able to design a comprehensive plan using breathing in rehabilitation and prevention of injuries

HOW DO YOU BREATHE?

To complete the survey, go to (link in chat)
<https://forms.gle/65zZprvRRnsLPw2C9>

- Nasal or Mouth?
- Shallow or Deep?
- Do you snore at night?
- How is your sleep quality?
- How is your core strength?



CAN YOU BREATHE THROUGH YOUR NOSE?

- How well do you breathe through your nose?
 - ◆ “Perfect”
 - ◆ “I’m always stuffy”
 - ◆ “I can’t because I broke it, deviated septum, etc”
- Buteyko Nose Unblocking Technique
- Use it, or lose it!



NASAL VS MOUTH BREATHING

NASAL BREATHING

Parasympathetic driven

Cleans, heats, & moistens air for easy absorption, ↓ BP, ease digestion, trigger hormones, ↓ ED, ↓ insomnia, ↓ exertion during exercise, ↑ nitric oxide production



MOUTH BREATHING

Sympathetic driven

Dark eye circles, slack jaw, narrower face, ↑ BP, poor digestion, ↑ depression, ↑ headaches, periodontal disease, ↑ size of adenoids

MOUTH BREATHING IN CHILDREN

When mouth doesn't grow wide enough, the roof rises up instead of out creating a V-shaped palate

Impedes normal growth of nasal cavity

When nasal cavity gets congested → air flow decreases → bacteria flourish → infection → congestion ... cycle goes on!

QUICK NOTE ON ASTHMA

Often asthma attacks display as short, shallow chest breaths & a DESIRE to use inhaler

Repeated “puffs” after MD prescribed usage won’t “magically” make it better

Try this: encourage them to pause an inhale and elongate the exhale



QUICK NOTE ON SLEEP

Mouth breathing → snoring → sleep apnea

- Dry mouth, decrease sleep quality (less REM), wake up fatigued, dry cough

Solution = tape the mouth shut 🤨



CO₂ TOLERANCE TEST

Purpose

- Quick way to understand your stress levels
- Tool for rest/recovery
- Decreased CO₂ tolerance = Increased state anxiety
- Improves with practice

How To Do It

1. Take 3 full, normal, nasal breaths
2. Start a timer when you begin to exhale & stop when you have released all of your air
3. Exhale through nose AS SLOWLY AS POSSIBLE

CO₂ TOLERANCE TEST -- TRIAL 1

1:19

How Long Did You Take?

80 sec - rare

60-80 sec - great

40-60 sec - good

30-40 sec - normal

20-30 sec - ok

< 20 sec - poor

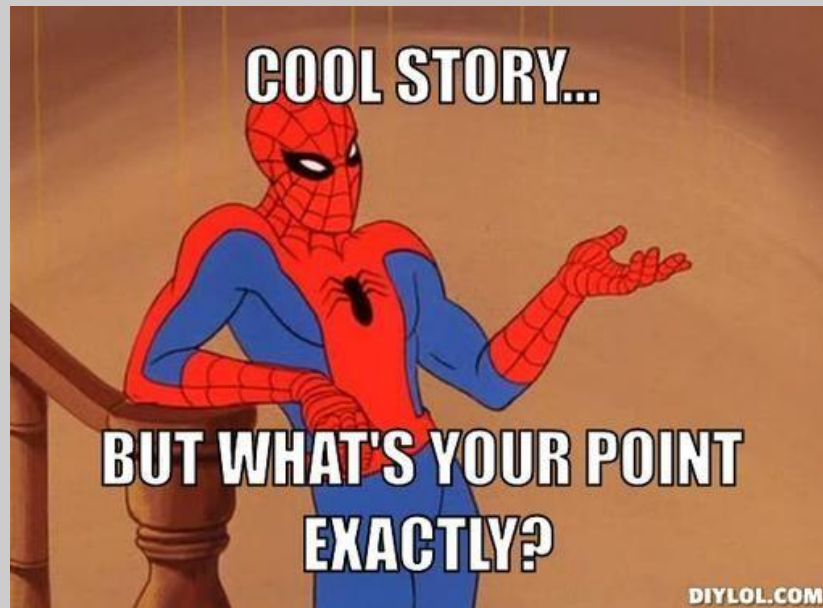
WHAT DOES BREATHING HAVE TO DO WITH CORE STABILITY?

Core Muscles:

- Transverse Abdominis
- Internal & External Obliques
- Rectus Abdominis
- Multifidus & Erector Spinae

What about the “top & bottom”?

- Diaphragm
- Pelvic Floor

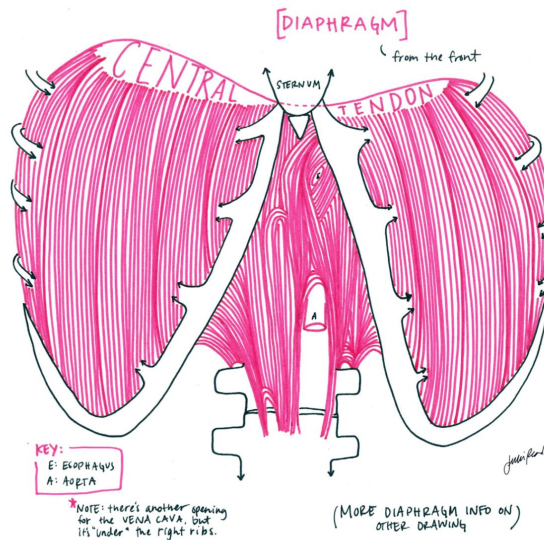


BREATHING ANATOMY IS CORE ANATOMY

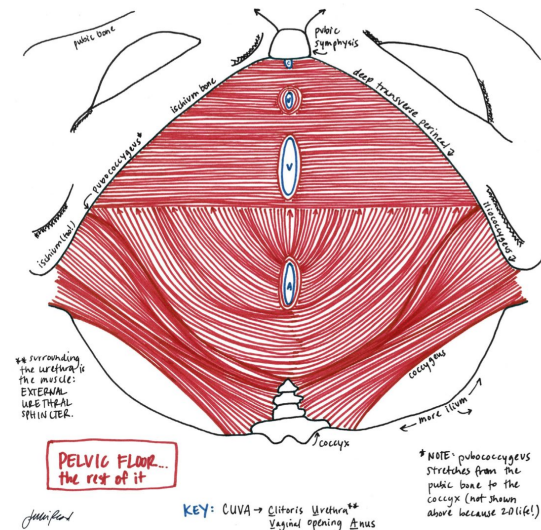
ALL AROUND
THE CORE.

Photo credit: Muscles to
the Masses by Julie Read 10

ALL AROUND THE CORE
Diaphragm - from the front



ALL AROUND THE CORE
Pelvic Floor - The Rest of It



CAN ANALOGY

WHAT MAKES A GOOD STRENGTH ATHLETE?

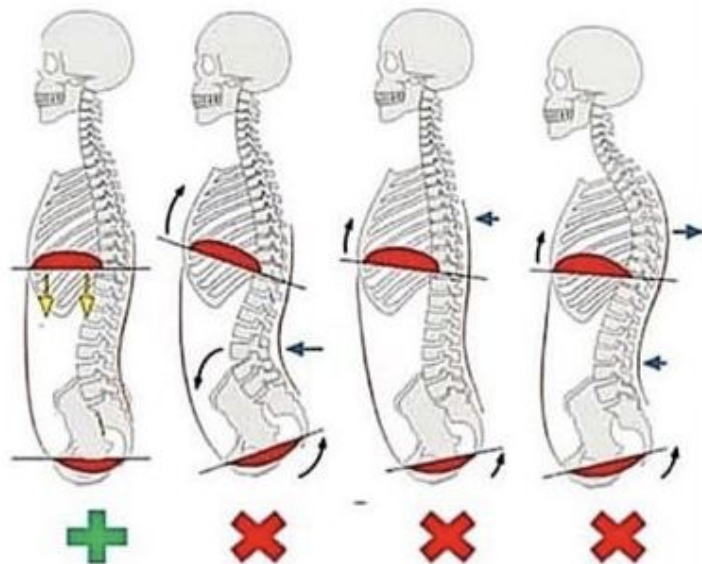
Energy Transfer

Muscle length tension relationship is vitally important for producing force and transferring it

Bracing and spinal mechanics will set the foundation for optimal production and transfer

Spinal positional losses under dynamic load are the key contributor to injury and reduced force output

Optimal energy transfer requires good movement



fabuki

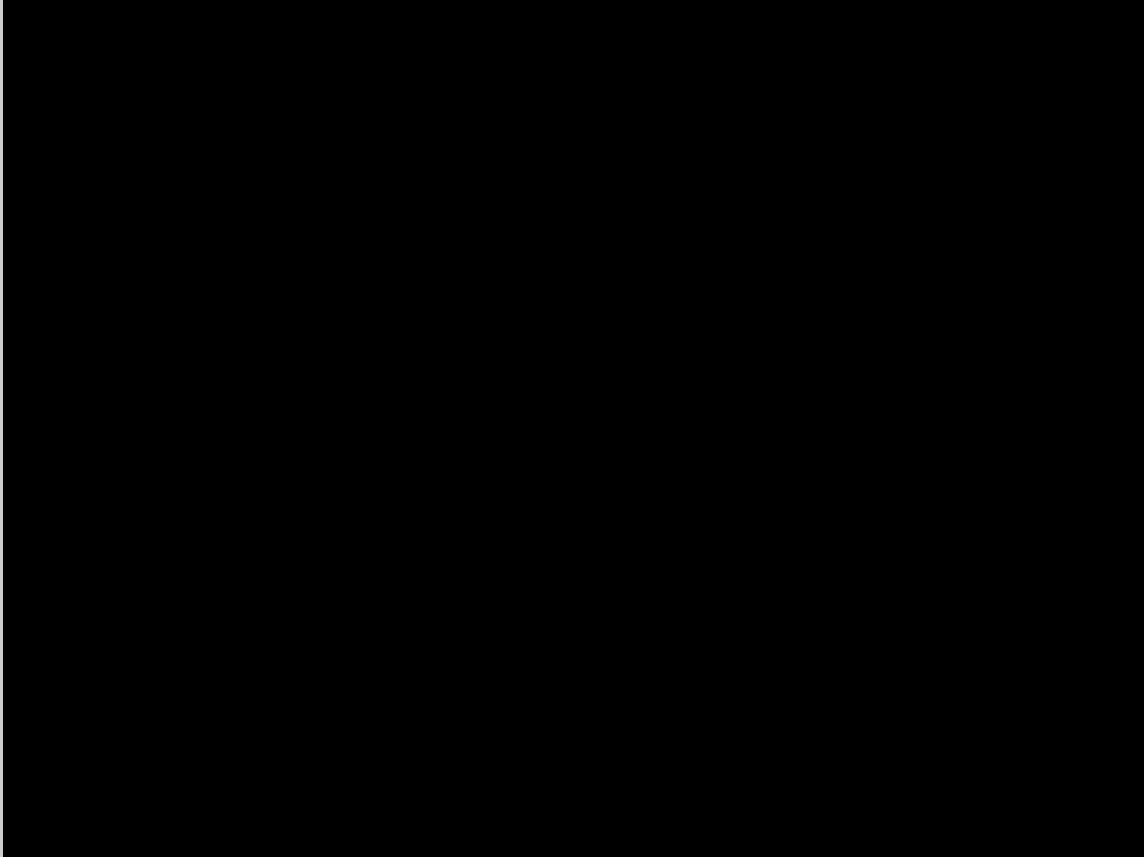
BASIC BREATHING EXERCISES

- ★ Hook-lying Supine Breathing
- ★ Crocodile Breathing

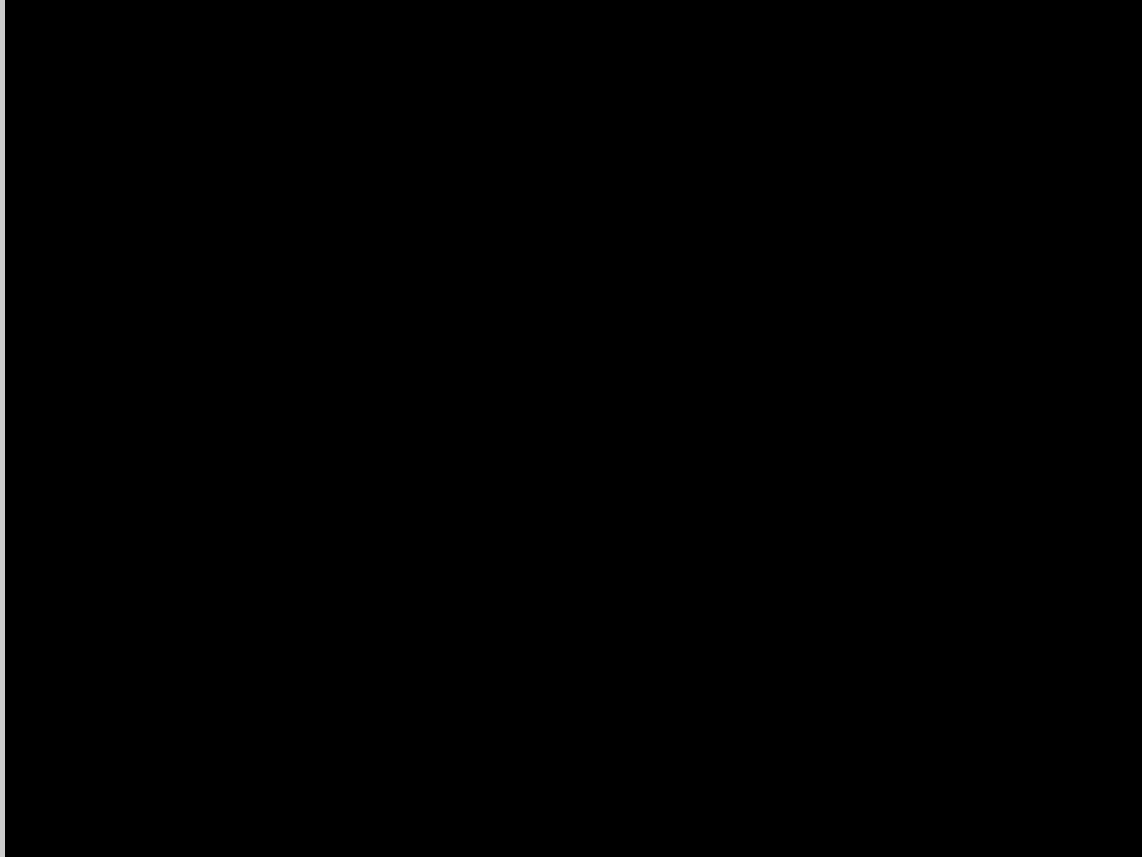
Uses

1. Prepare for exercise or practice
2. Down regulation of nervous system
3. “Break up” day (i.e., turn off school brain, turn on sport brain)

HOOK LYING BREATHING



CROCODILE BREATHING



USING BREATHING FOR MOBILITY

- ★ Desk Lat Stretch with Breathing
- ★ Child's Pose Breathing
- ★ All 4's Belly Lift
- ★ TRX Deep Squat Breathing

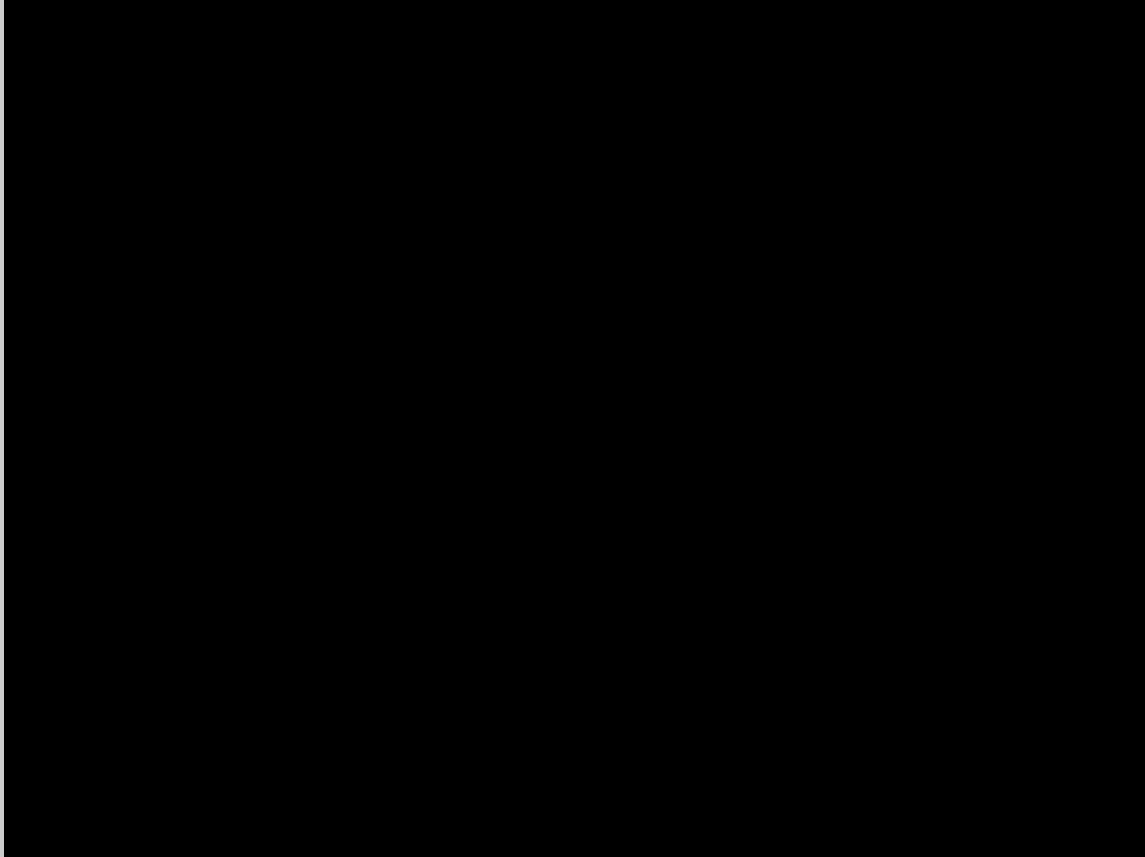
Uses

1. Down regulation of nervous system
2. Preparation for exercise or practice
3. Improve mobility of lats/thoracic spine

DESK LAT STRETCH



CHILD'S POSE BREATHING



ALL 4'S BELLY LIFT



TRX DEEP SQUAT LAT STRETCH



CORE STRENGTH & STABILITY EXERCISES THAT AREN'T PLANKS

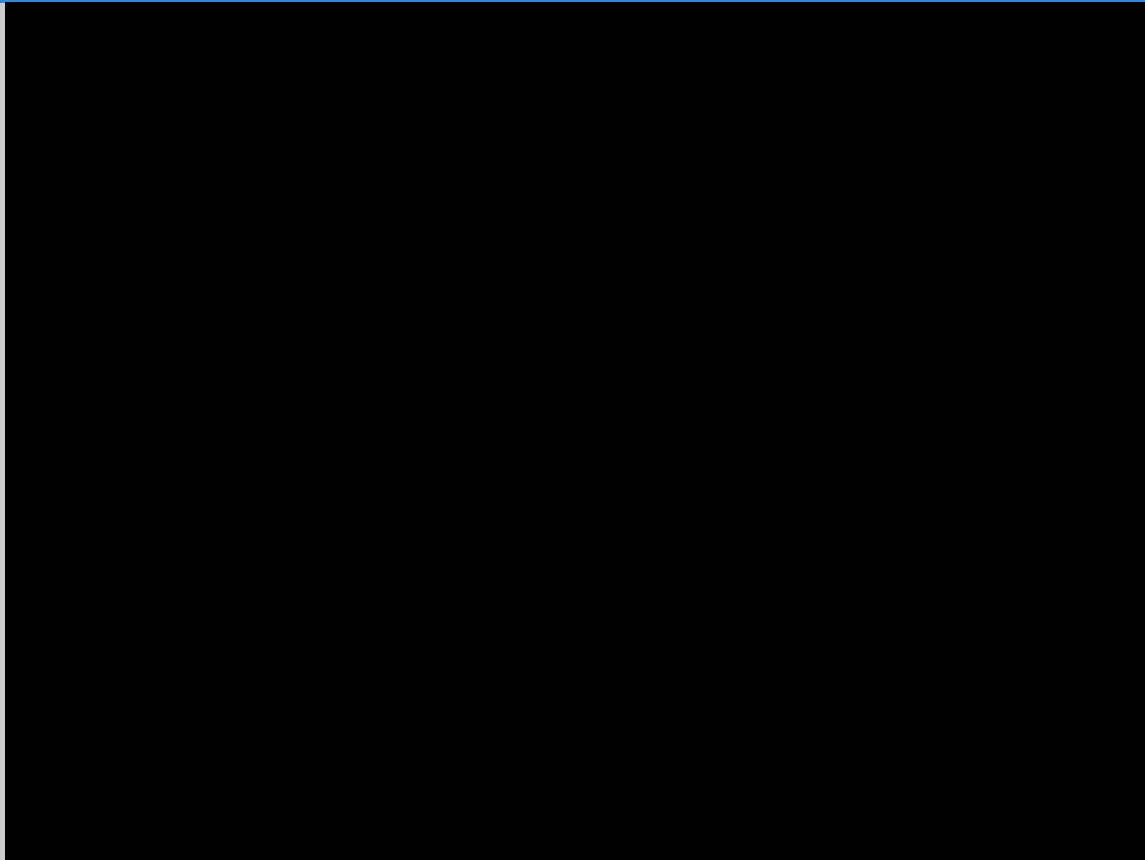
Uses

- ★ Dead/Dying Bug Variations
- ★ Anti-Rotation Presses

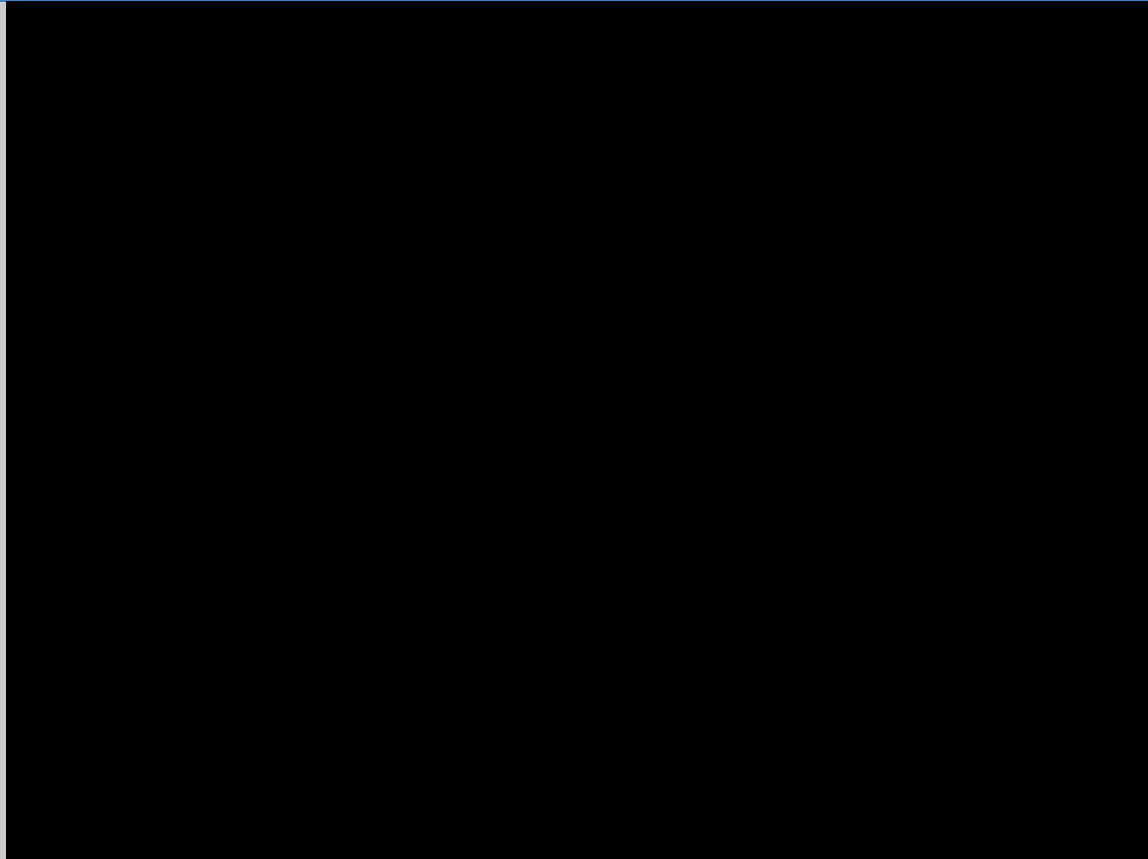
1. Learn proper core alignment
2. Learn to associate or disassociate movements
3. Improve core strength
4. Improve breath coordination during exercise



"STANDARD" DEAD BUG

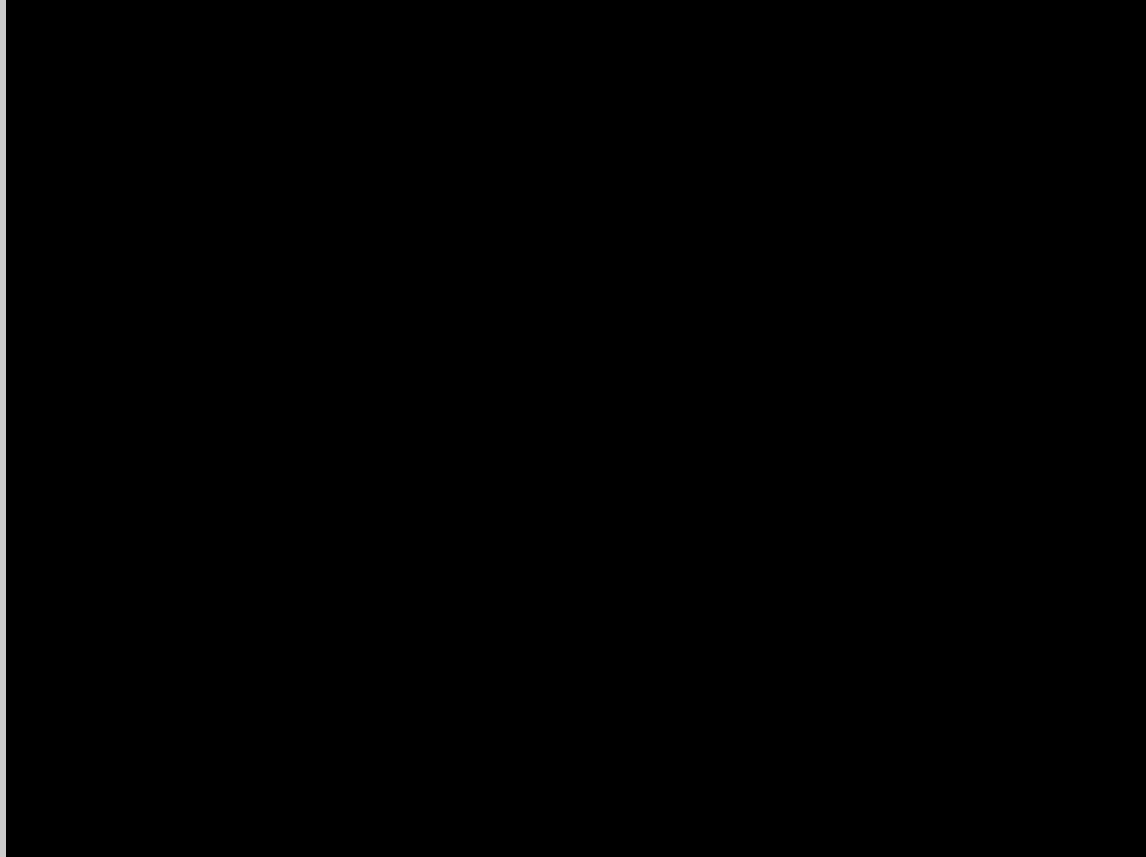


WALL PRESS DEAD BUG

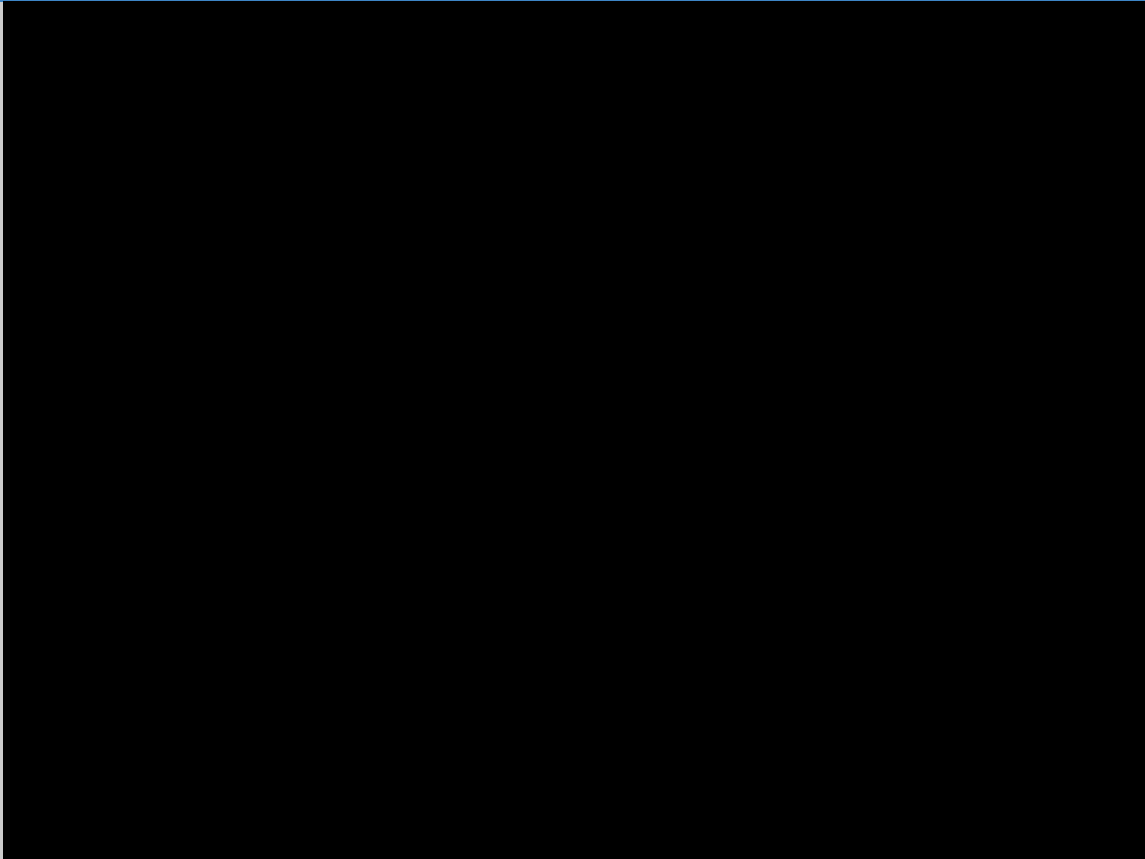


DB/KB PULL OVER DEAD BUG

ISOMETRIC HIP FLEXION DEAD BUG



PALLOF PRESS



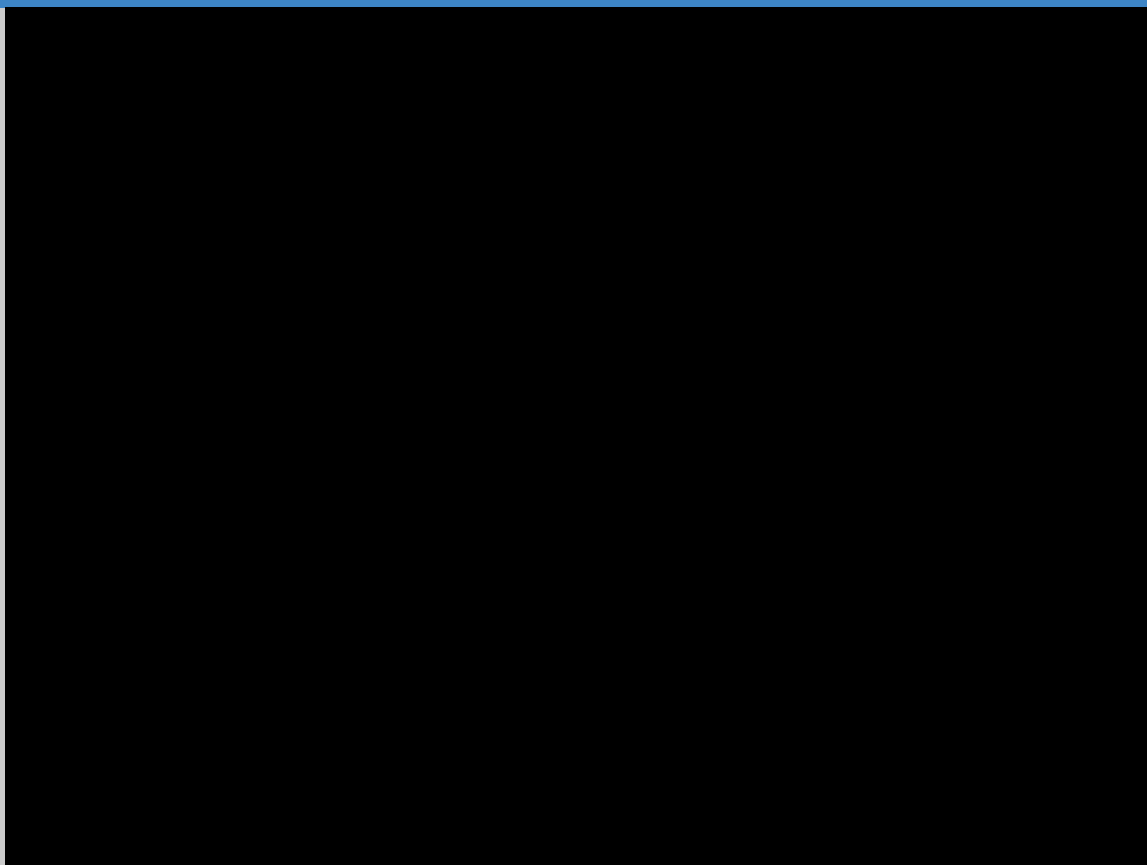
TALL KNEELING HORIZONTAL ABDUCTION WITH BAND PRESS



WIDE STANCE ANTI-ROTATION CHOP



PROPER PLANKS



CO2 TOLERANCE TEST - TRIAL 2

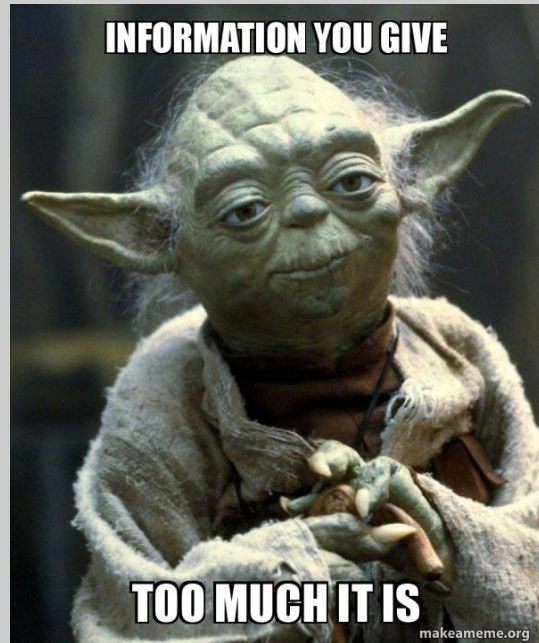
1. Take 3 full, normal, nasal breaths
2. Start a timer when you begin to exhale & stop when you have released all of your air
3. Exhale through nose AS SLOWLY AS POSSIBLE



1:19

PUTTING IT ALL TOGETHER

- Test it out on yourself
- Make breathing part of your assessment
 - ◆ Are they a chest breather?
 - ◆ Can they expand their thorax 3D?
 - ◆ Can they PPT?
- Where to add breathing exercises?
 - ◆ Team warm ups
 - ◆ Enhance/Replace current stretching techniques
 - ◆ Pre-hab
 - ◆ Rehab
 - ◆ Strength training warm ups/filler exercises



RESOURCES

Breath by James Nestor (May 2020)

Buteyko Breathing Association

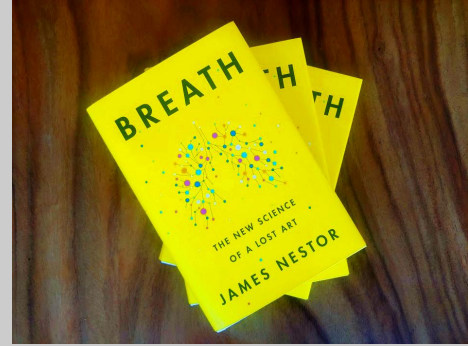
Postural Restoration Institute

Art of Breath Course by Sh//FT (online)

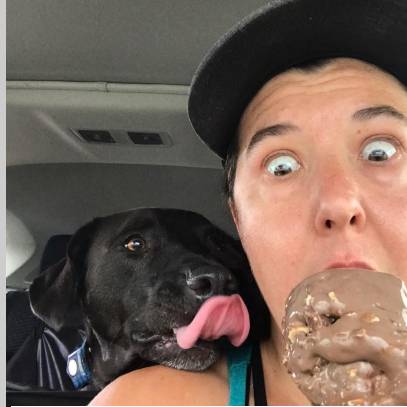
Original Strength Pressing Reset Course

Dr. Shanté Cofield (IG) & Dr. Belisa Vranich (IG)

Podcasts with James Nestor, Brian Mackenzie



THANK YOU



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IG: onedaybettertraining

<http://onedaybettertraining.com>
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QUESTIONS?

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Nose Unblocking Technique Video: <https://youtu.be/tgmKlwUqhkg>

All 4's Belly Lift: <https://youtu.be/AjPh9lu6LVY>

TRX Deep Squat Lat Stretch: <https://youtu.be/LENyTY-MKy4>

Wide Stance Anti-Rotation Chop: <https://youtu.be/IA98wNciRDE>

Exercise Library: <https://drive.google.com/drive/folders/1MQkwmMaD6Wyyul9XOhLXBqPr9djlaoDa?usp=sharing>