



Catch Your Breath: Long- COVID Solutions

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Welcome!

Christine Campbell, Registered Physiotherapist

- Private Practice Owner
- BradCliff Breathing Methods
- Virtual & In-person appointments
- Teaching



Overview of Today's Session

- What is 'normal/ideal' breathing
- What is dysfunctional breathing
- How does COVID relate to dysfunctional breathing
- How can improper breathing impact us?
- What we can do about dysfunctional breathing
- Questions



Common History & Symptoms

- “I can’t get a full breath in”
- “I feel even more short of breath when I try and deep breathe”
- “My breathing just stops, I can’t get the air deeper into my lungs”
- “Air hunger”





What is Normal Breathing

“Low, Slow, Flow”

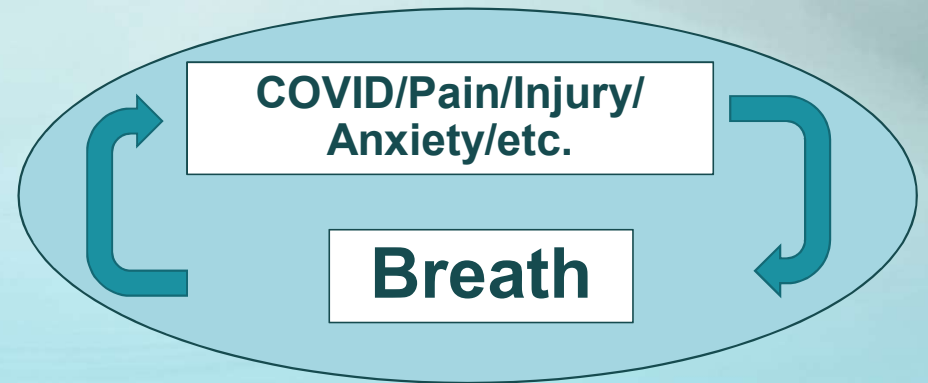
10-14 breaths/min

In & out through nose

Smooth inhale and exhale

Why Is The Breath Important?

- Can impact everything
 - Stability
 - The Nervous System
 - Digestion
 - Anxiety
 - Emotions
 - Muscle tension
 - Biochemically
- Crucial function from birth to death



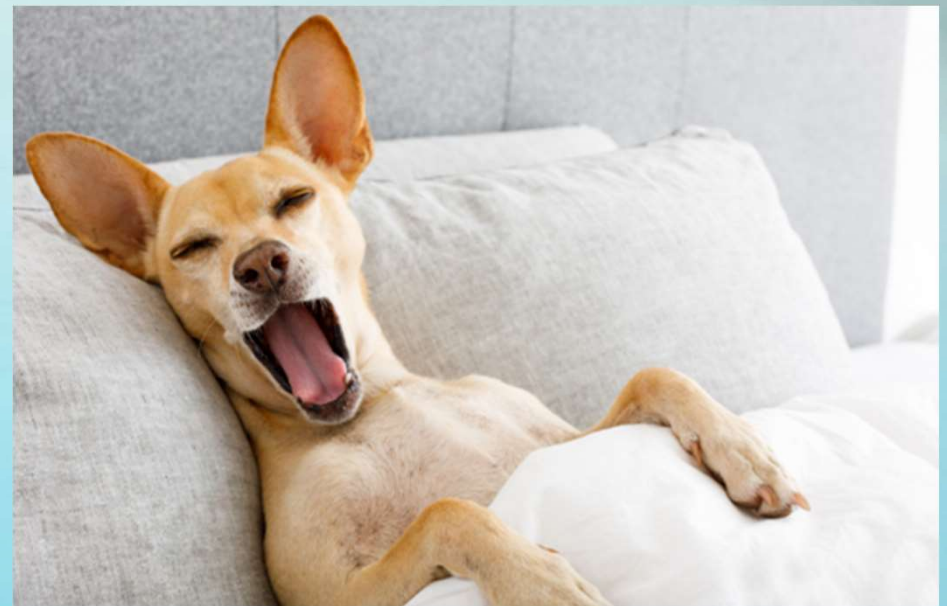
What is Dysfunctional Breathing

- Impacts 60-80% of adults
- Unknown % in Long-COVID
- Breathing Pattern Dysfunction:
 - Breath holding
 - Apical breathing
 - Mouth breathing
 - Hyperventilation (over-breathing) syndrome



Symptoms of Dysfunctional Breathing

- Shortness of breath
- Excessive yawning or sighing
- Headaches, neck and shoulder tightness/pain
- Digestive upset, reflux
- Chronic cough, throat clearing
- Vocal changes
- Fatigue
- Incontinence
- Panic attacks, anxiety, phobias
- Loss of stability/balance



How Breath Impacts our Mechanics



Three aspects of breath:

1. Physiological
2. Psychological
3. Biochemical

Physiological Impacts of BPD

- Overuse of secondary breathing muscles
- Decreased rib expansion & thoracic spine movement
- Decreased stability
 - Trunk canister



Psychological Impacts



- Over-breathing impacts amygdala = increased sympathetic system = fight, flight, freeze
- Breathing well = increased thickness of neocortex = increased parasympathetic system = rest, digest, restore

Biochemical Impacts

- Over breathing = ↑ O₂
- ↑ O₂ = ↓ CO₂
- ↓ CO₂ = change in pH

- 6 Main Effects of CO₂:
 - Regulates rate & depth of breathing
 - Controls blood flow to brain
 - Constricts flow - brain fog
 - Affects hemoglobin uptake of O₂
 - Decreased flow to muscle
 - Vascular Regulation
 - Regulates muscular systems
 - Governs activity of nervous tissue
 - Regulates activity in autonomic nervous system

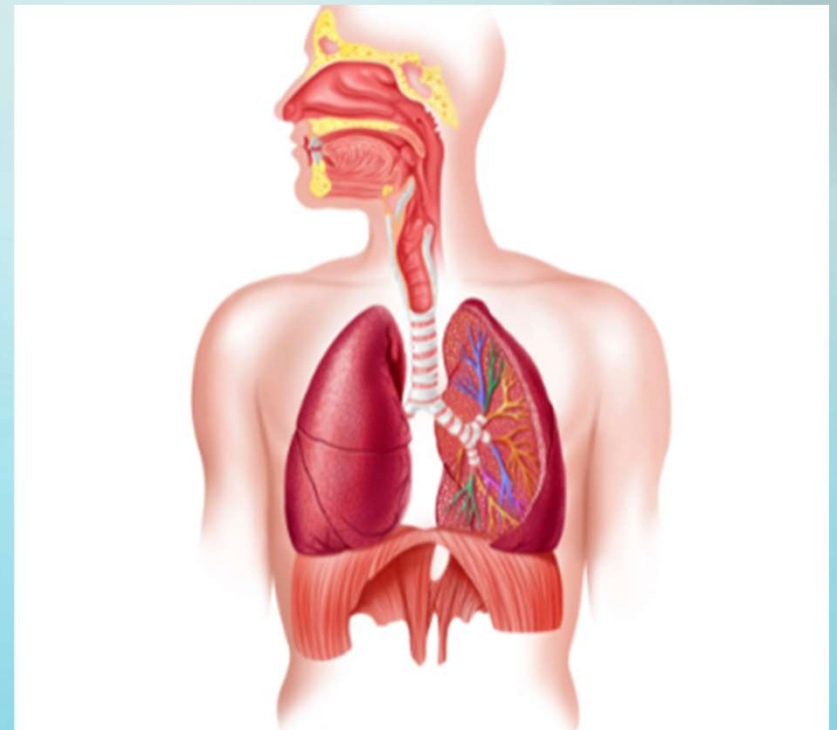
When to Seek Medical Attention

- Shortness of breath limiting your daily tasks
- Unexplained chest pain
- Clammy, inappropriate exhaustion, shortness of breath
- Anxiety, mood, thoughts of self-harm



How to Breath Well

- Nose breathing
 - Warms, filters, humidifies
- Diaphragm
 - Acts like a pump
 - Works with pelvic floor
- 10-14 breaths/min
- Low, Slow, Flow



Hi-Lo & Sniff Test



Home Practice: Belly Breathing

- Lay on your back with one hand on your chest and one on your belly
- Use the Hi-Lo Test position to check-in with your breath
- Use this hand position and practice diaphragmatic breathing
- Monitor how you felt before, during and after
- Nasal breathing
- Inhale for 4sec, exhale 6sec
- 3-5 minutes/day



Possible Outcomes of Shifting Your Breath

- Breathless
- Anxiety
- Emotional

- What to do: 5 x 5



Home Practice: 5x5

- Use if: breathless, anxious
- Cup hands around nose & mouth
- Take 5 low, slow breaths
- Remove hands from face, take another 5 breaths
- Repeat up to 5 times

*fan blowing on face = decreased air hunger



Home Practice: Beach Pose

- Laying on your back, bring your hands behind you head
- Breath in through your nose, and low & slow into your belly
- Aim for an inhale of 4 seconds, and an exhale of 6 seconds
- 3-5 minutes/day



Home Practice: Pursed Lip Breathing

- Breathe in through your nose, then out through pursed lips, like you're breathing through a straw
- Helps to lengthen exhale



Home Practice: Progression

- Laying → 4 point → sitting → standing → walking/moving
- 4-6 weeks of consistent practice
 - Long-COVID lung damage likely impacts recovery
- Easy into this slowly
- Post-exercursion Fatigue (PEF)
 - precautious with breath work



Any Questions?

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