



Viktor Frankl
Breathwork
Life-Coaching Program
Week 6



6

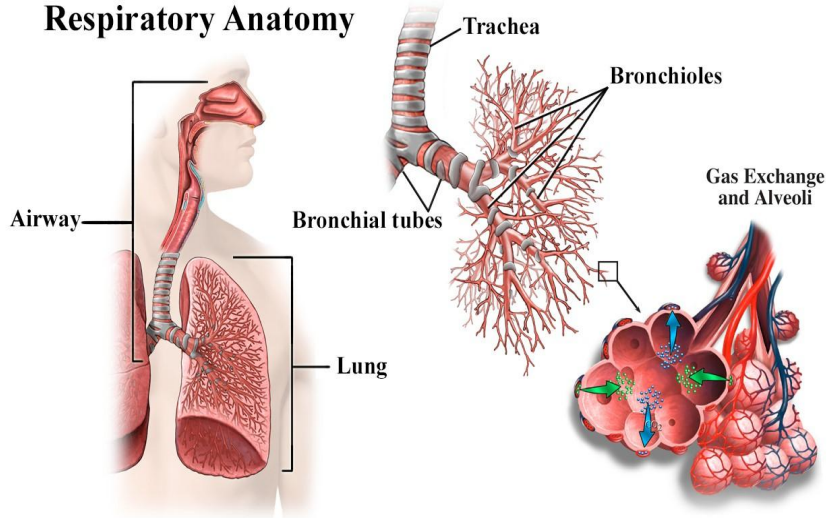
The Anatomy of Breathing



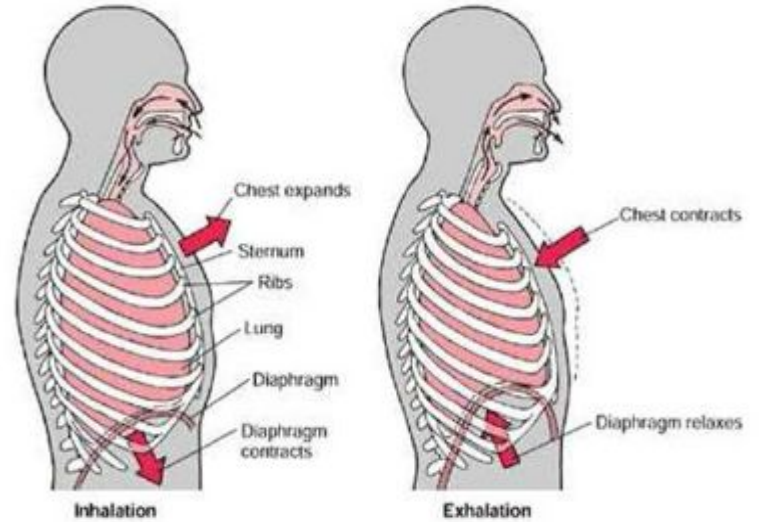
Hyperventilation, Hypoventilation & the Bohr Effect

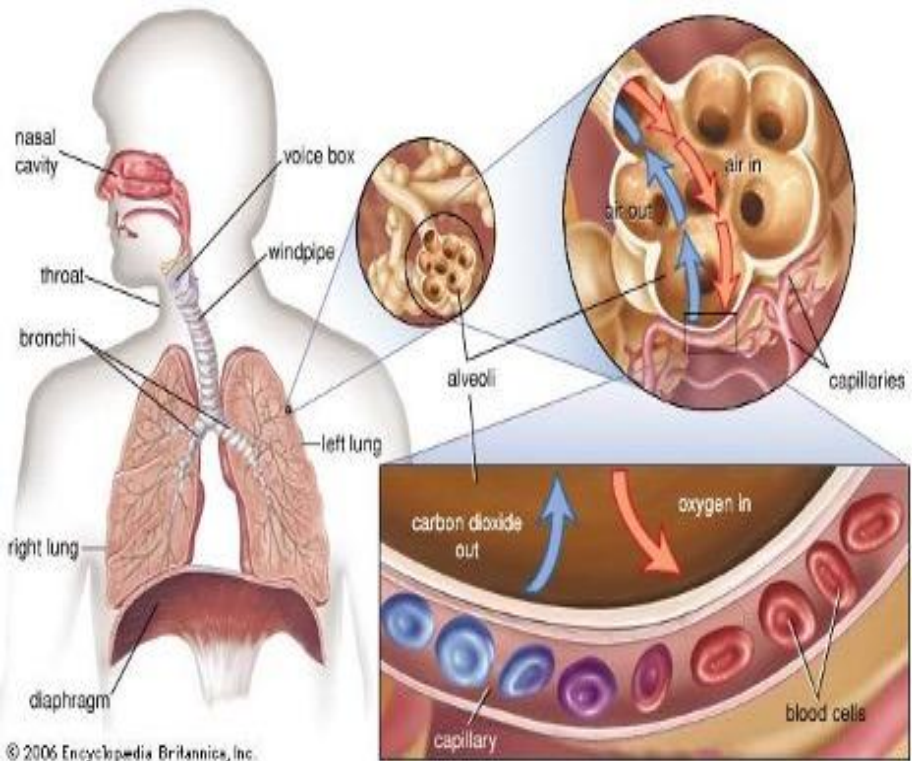
How Breathing Changes Oxygen Delivery, the Nervous System, and Conscious Experience

Respiratory Anatomy

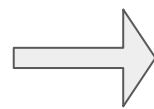


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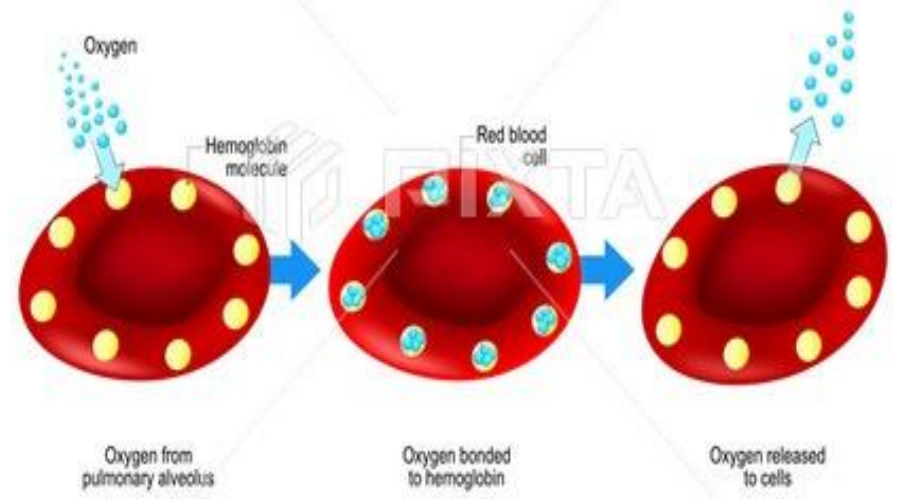


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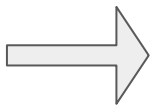


*What's happening in our lungs

How our blood carries and releases oxygen

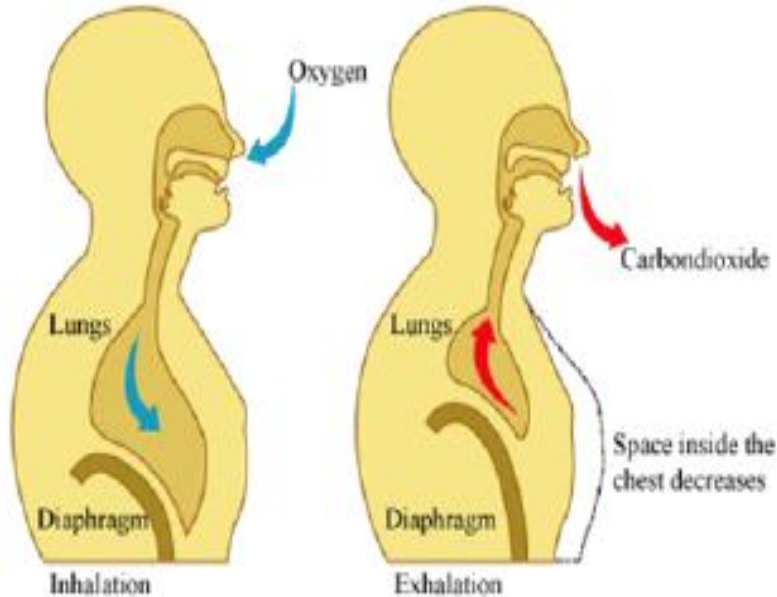


*What's happening in our blood



A Common Myth About Breathing

“Breathing is about oxygen”



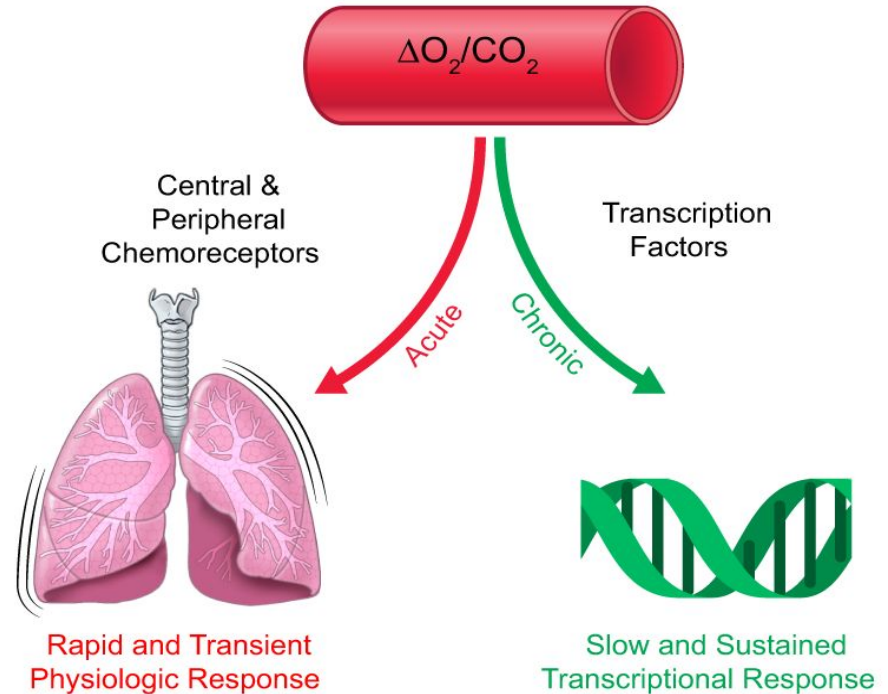
Blood oxygen saturation (SpO₂)

100 - 98 %		Normal
97 - 95 %		Insufficient Tolerable, patient hardly notices any influence
94 - 90 %		Decreased Immediate intervention (eating, exercise)
< 90 %		Critical Referral to specialist
< 80 %		Severe hypoxia Hospitalization
< 70 %		Acute danger to life

- More breathing ≠ more usable oxygen
- Oxygen saturation is usually normal
- Many symptoms come from overbreathing: **Hyperventilation*

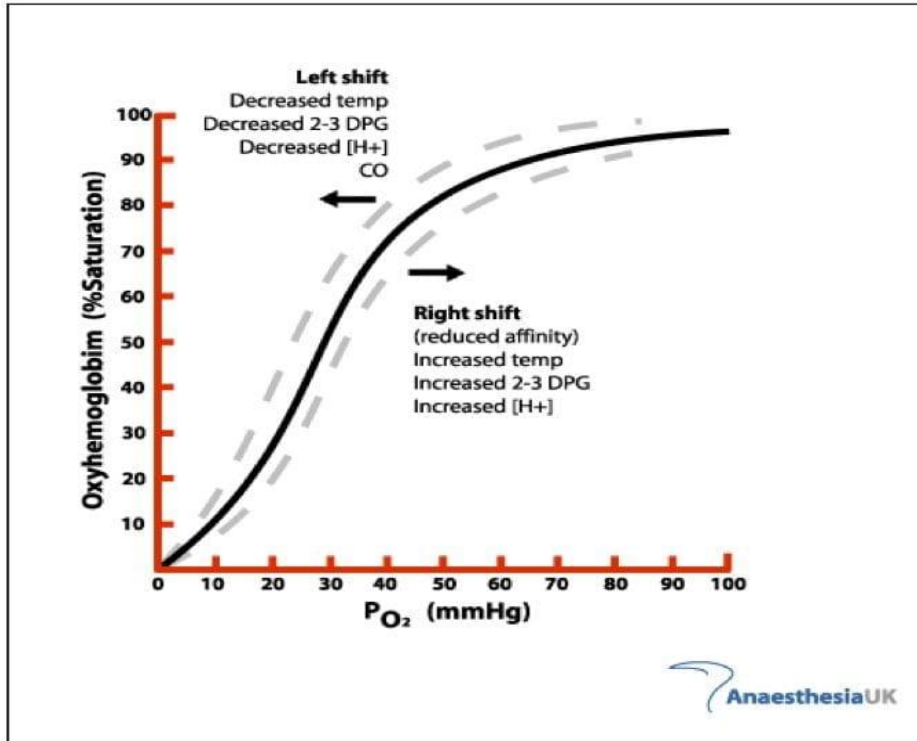
The Real Regulator: Carbon Dioxide (CO_2)

- CO_2 regulates blood pH
- CO_2 controls brain blood flow
- CO_2 affects nerve excitability
- CO_2 determines oxygen release



Introducing the Bohr Effect

Why CO₂ Controls Oxygen Delivery



- Oxygen must be released from hemoglobin
 - CO₂ and pH control oxygen release
 - This relationship is the Bohr effect
-
- Hemoglobin acts like a clamp
 - Low CO₂ → clamp tight
 - High CO₂ → clamp loosens

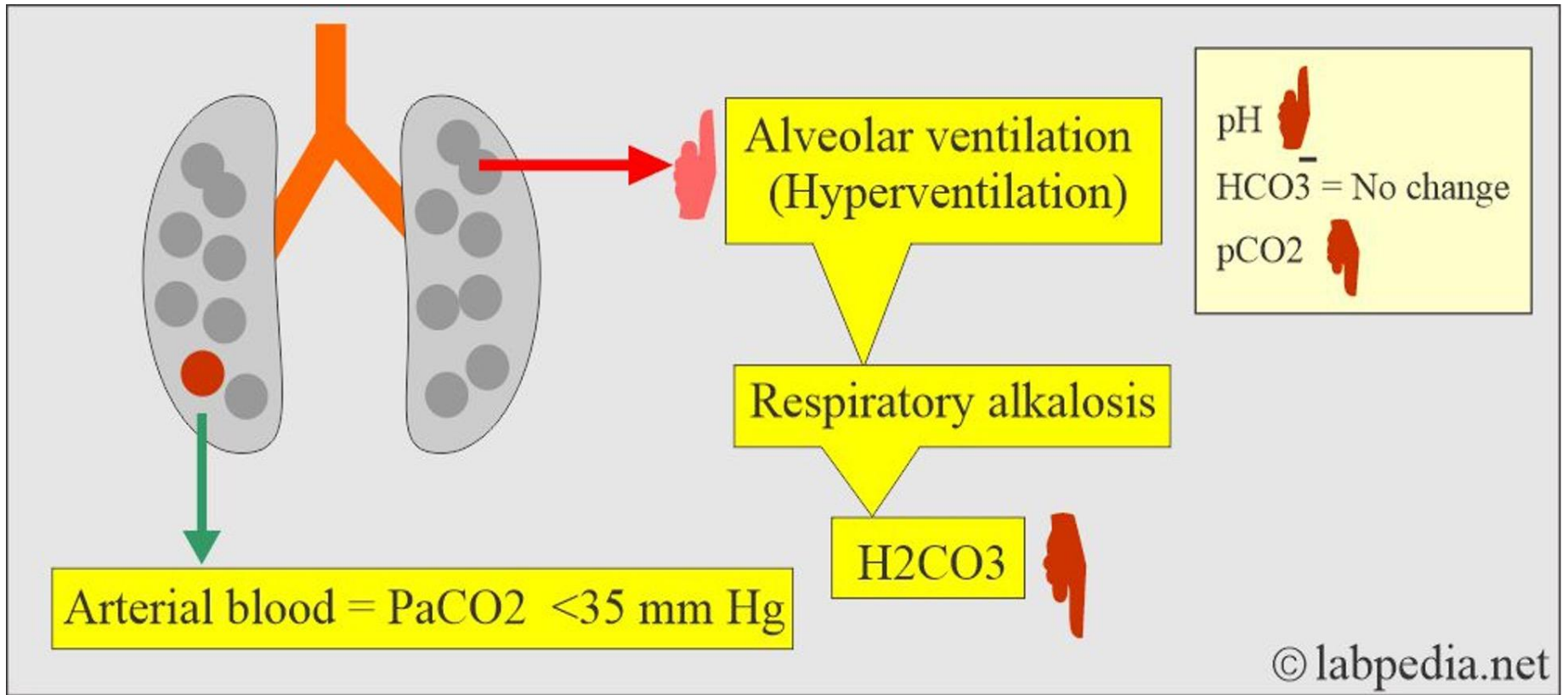
HYPERVENTILATION

breathing in excess of the body's metabolic requirements, typically characterized by rapid and deep breathing (overbreathing) that causes a significant drop in blood carbon dioxide levels (hypocapnia). Blood vessels constrict and blood becomes alkaline

Types:

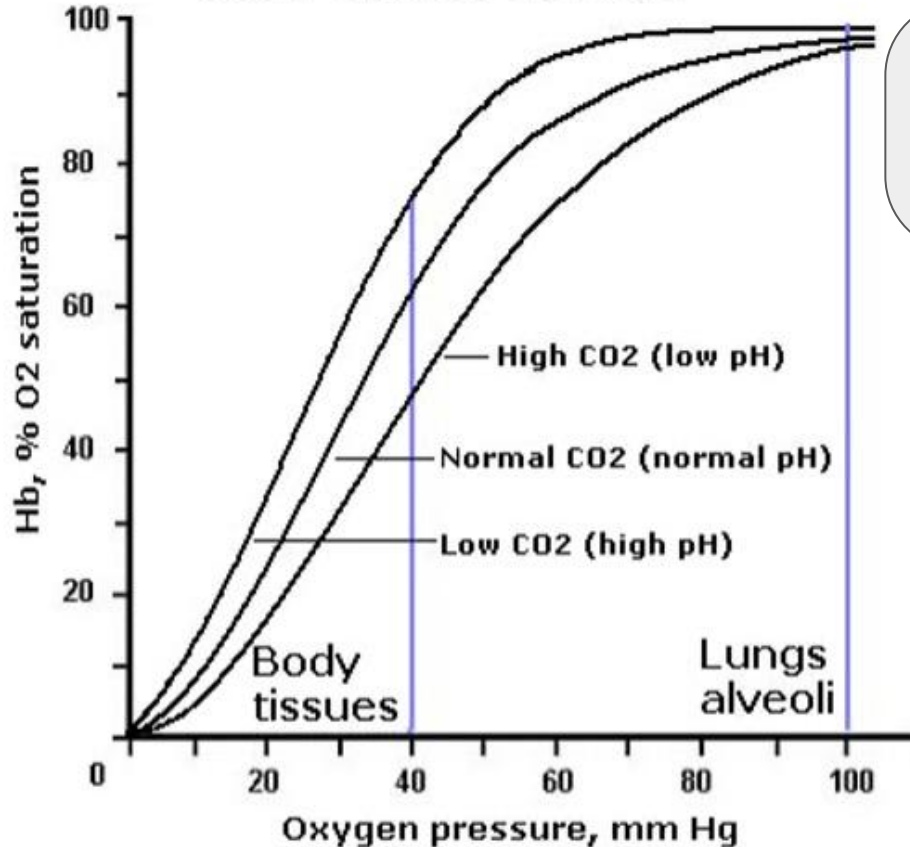
- Primary - Psychosomatic in nature (most common). Most likely related to anxiety, stress, phobias, panic attacks.
- Secondary - Medical in nature - diseases such as asthma, COPD, infections, fever, pain, and in some cases pregnancy
- Acute Hyperventilation (Hyperventilation Syndrome/Panic Attack):
 - Definition: Sudden, intense, and short-term overbreathing, commonly associated with panic attacks or severe anxiety.
 - Characteristics: It is an episodic, intense event that may be triggered by extreme emotion, fear, or stress.
 - Symptoms: Rapid onset of dizziness, chest pain, numbness, tingling around the mouth, and muscle spasms.
- Chronic Hyperventilation (Chronic Hyperventilation Syndrome):
 - Definition: A persistent or recurring pattern of improper breathing where the resting level of CO₂ is consistently lower than normal.
 - Characteristics: It is often overlooked because it is less dramatic than an acute attack. It is frequently caused by a habitual, incorrect breathing pattern, such as chest breathing rather than diaphragmatic breathing.
 - Symptoms: Vague and continuous symptoms, including frequent sighing or yawning, fatigue, insomnia, headaches, and a constant feeling of being unable to catch a full breath.
- Exercise-Induced Hyperventilation:
 - Definition: Overbreathing that occurs during or immediately after physical exertion, when the breathing rate exceeds the actual metabolic need for oxygen.
 - Characteristics: In a healthy person, breathing adjusts to exertion. In this case, the breathing is disproportionate to the exercise, often leading to rapid fatigue and sometimes a "vicious cycle" of hyperventilation during recovery.

HYPERVENTILATION AND THE BOHR EFFECT



What hyperventilation does...

Bohr effect curves



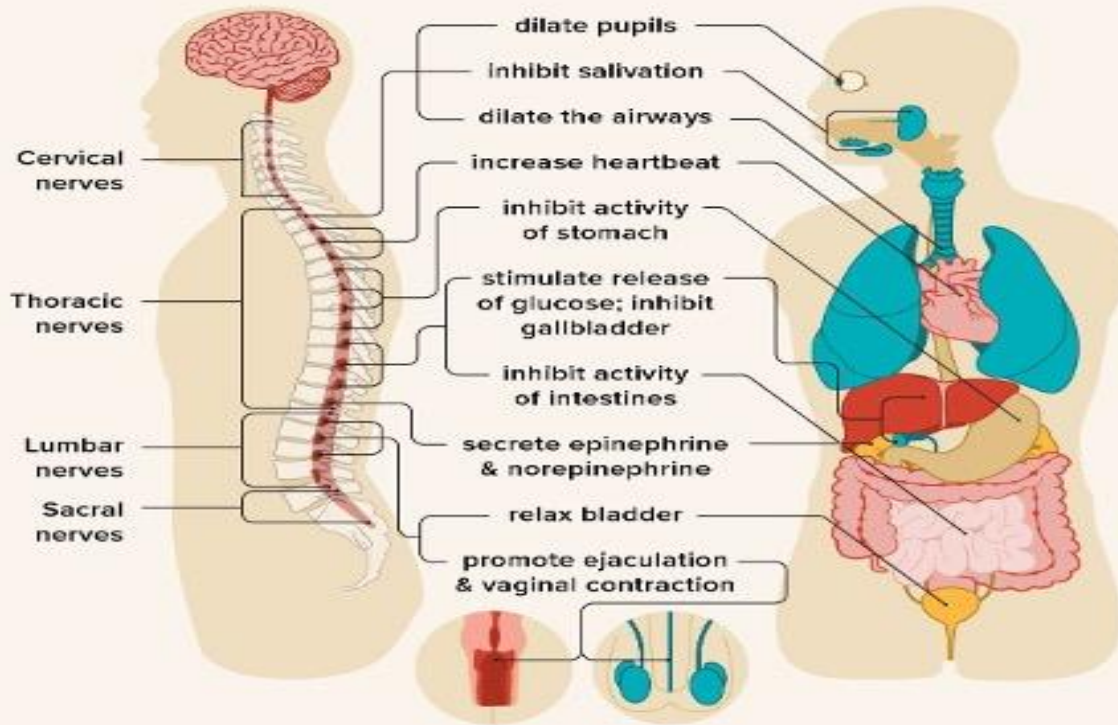
- Bohr effect suppressed
- Oxygen held tightly
- Reduced tissue oxygen delivery

What it feels like:

- Anxiety/Increased Heartrate
- Dizziness/Lightheadedness/Headache
- Breathlessness
- Muscle Spasms
- Numbness or tingling
- Chest pain/tightness
- Dissociation



The Sympathetic Nervous System



healthline

- Sympathetic dominance
- Fight-or-flight
- Reduced emotional tolerance

Physical Indications of Fight or Flight Response



dilated pupils



pale or flushed skin

trembling

rapid heart beat
and breathing

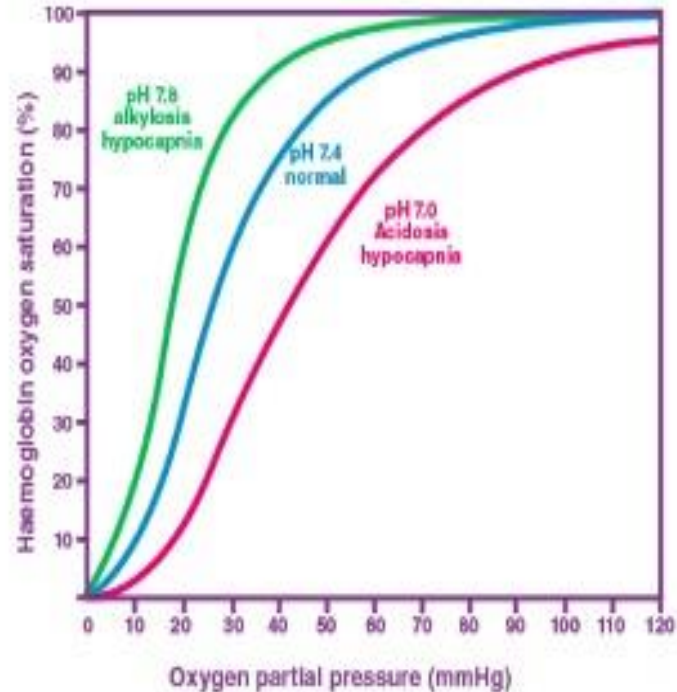
HYPOVENTILATION

Breathing less (gently and intentionally)

- Slower breathing
- CO₂ rises slightly
- Blood vessels dilate
- Oxygen delivery improves

Hypoventilation and the Bohr Effect

- Bohr effect enhanced
- Oxygen released more easily
- Improved tissue oxygenation



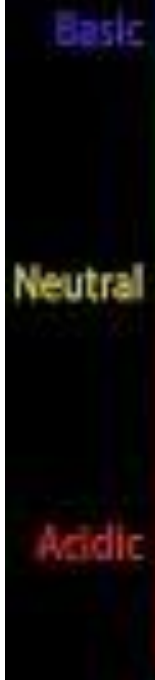
What Hypoventilation Feels Like

- Warmth
- Calm heaviness
- Mental quiet
- Emotional steadiness

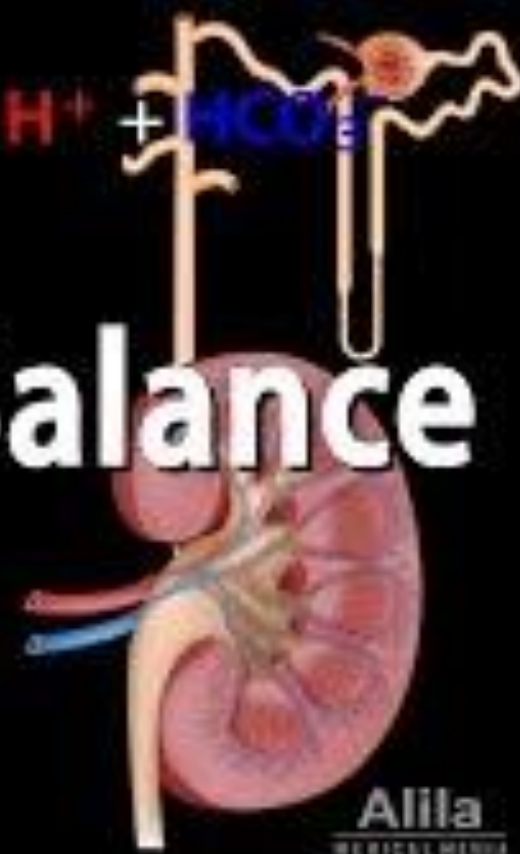
Hypoventilation Disorders

Factors that contribute to Hypoventilation

- **Neuromuscular disorders:** Muscle weakness affecting breathing muscles
- **Obstructive sleep apnea:** Repeated episodes of breathing pauses during sleep
- **Chronic lung diseases:** COPD, asthma
- **Drug overdose:** Certain medications can suppress the respiratory drive
- **Chest wall deformities:** Physical limitations to lung expansion
- **Obesity:** Increased pressure on the lungs due to excess weight



Acid-Base Balance



The Quick Coherence® Technique **Transform Stress into Resilience**

Step 1

Focus your attention in the area of the heart. Imagine your breath is flowing in and out of your heart or chest area, breathing a little slower and deeper than usual.

Suggestion: Inhale 5 seconds, exhale 5 seconds (or whatever rhythm is comfortable).

Step 2

Make a sincere attempt to experience a regenerative feeling such as appreciation or care for someone or something in your life.

Suggestion: Try to re-experience the feeling you have

for someone you love, a pet, a special place, an accomplishment, etc., or focus on a feeling of calm or ease.

Quick Coherence Quick Steps:

- 1. Heart-Focused Breathing**
- 2. Activate a positive or renewing feeling**

Alternate Nostril Breathing (ANB) — Summary

Meaning and Purpose

- Energy is like light; tension is where there is too much of a vessel blocking the light from entering into the body.
The practice is intended to *clear and balance* these channels, leading to physical calm and mental clarity.
- The technique is also commonly called **alternate nostril breathing** because you alternate inhalation and exhalation between the left and right nostrils.

✓ **Calms the mind and nervous system** —

By bringing balanced airflow and rhythm to the breath, mental agitation lessens and focus deepens.

✓ **Prepares for meditation** — The balanced breath promotes a steady, unified state of awareness that supports deeper meditative practice.

✓ **Balances internal energies** — In Chinese medicine, the left nostril is associated with cooling, calming energy and the right with stimulating energy. The Kabbalah talks about the forces of Chesed and Gevurah and their balance within Tiferes. ANB aims to harmonize these influences.

Alternate Nostril Breathing — Summary

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Instructions for Practice

1. **Sit comfortably** with a straight spine in a calm, quiet space.
2. Use *Vishnu mudra* (folding the first two fingers so the thumb and ring finger can close nostrils).
3. **Start on one side:**
 - Close the right nostril with your thumb.
 - **Exhale fully** through the left nostril slowly and smoothly.
 - The exhale should be slow, controlled, and free from exertion.
 - At the end of the exhalation, close the left nostril with the ring finger, open the right nostril and inhale slowly and completely: should be smooth, controlled and attempt to make it the same duration as the exhalation.
 - Repeat this cycle of exhalation through left nostril followed by inhalation through right nostril two more times.
4. **Transition:**
 - At the end of the third inhalation through the right nostril, exhale through the same (*right*) nostril fully, still keeping the left nostril closed with the ring finger
5. **Switch sides:**
 - At the end of this exhalation, close the right nostril and inhale with the left nostril. Repeat this cycle of exhalation through the right and inhalation through the left two more times.
6. There should be no pauses between the inhalation and the exhalation.

*In the evening, start this exercise with the exhalations out of the right nostril.

Nagasra Mudra



Vishnu Mudra



Break out in pairs

Integration and Discussion

1 — What Shifted?

Reflect silently for 60 seconds

- What changed in your body?
- What changed in your thinking?
- What changed emotionally?

2 — Regulation Awareness

- Did your nervous system settle or activate?
- Did your thoughts slow down?
- Did resistance show up?
Breath is a regulatory lever.

Integration and Discussion

3 — The Relational Effect

You practiced in pairs.

- Did co-breathing change your experience?
- Did you feel more grounded with someone present?
- Did you notice synchrony?

4 — Meaning & Agency

- Did you experience space between impulse and response?
- Did breath increase your sense of control?
- Where in your life do you need that space?

Integration and Discussion

5 — Weekly Integration Plan

Write this down:

1. When will I practice this week?
2. What will trigger it?
3. How long will I commit?
4. What obstacle might stop me?

6 — Closing Reflection

If you practiced this daily for 30 days...

Who would benefit most from the calmer version of you?