A woman with long, curly hair is shown in profile, eyes closed, in a meditative pose. She is looking towards the left. The background is a soft, out-of-focus sunset or sunrise over a body of water, with a city skyline visible in the distance. The lighting is warm and golden, creating a peaceful atmosphere.

Reducing Burnout: Stress Management Techniques for RRT's.

Sherri Kozubal,
RRT, CRE, RPSGT, CCSH,
CHt

Objectives

Burnout and the unique influence of healthcare in its development.

Understanding the integrative approach of mindset and breathwork on burnout and anxiety.

Applications of mindset and breathwork in burnout and anxiety management.

The mindfulness and mind-body connection.

Results

“We included eight studies in our review, covering a sample size of 215,787. The pooled proportion of burnout was 39% (95% CI: 25–53%; p -value: < 0.001). We also identified high heterogeneity among the included studies in our review (I^2 : 99.67%; p -value: < 0.001). Seven out of the eight studies were of good quality. The pooled proportion of the studies conducted during the COVID-19 pandemic was 42% (95% CI: 17–66%), whereas for the studies conducted during the non-pandemic period, it was 35% (95% CI: 10–60%).”

Conclusion

“In our review, more than one-third of public health workers suffer from burnout, which adversely affects individuals' mental and physical health. Burnout among the public health workforce requires attention to improve the well-being of this group. sociodemographic characteristics and type of work responsibilities. We must design and implement workplace interventions to cope with burnout and increase well-being.

Review | [Open access](#) | Published: 21 May 2024

Global estimate of burnout among the public health workforce: a systematic review and meta-analysis

[Ramya Nagarajan](#) , [Padmavathi Ramachandran](#), [Rajendran Dilipkumar](#) & [Prabhdeep Kaur](#)

[Human Resources for Health](#) **22**, Article number: 30 (2024) | [Cite this article](#)

3997 Accesses | **3** Citations | **13** Altmetric | [Metrics](#)

burnout

- Is a work-related stress syndrome resulting from chronic exposure to stress.
- Defined as a syndrome of emotional exhaustion, depersonalization, and a sense of low personal accomplishment that leads to decreased effectiveness at work.
- In Healthcare, it is magnified by a workplace that is culturally and economically inclined to produce stressful conditions.





Unique Demands of Working in Healthcare

- Care is 24 hours a day and adrenaline/cortisol filled.
- Emergent patient care focus with little time for self-care.
- Fatigue = dedication/excellence culture.
- Stress is often due to time spent doing work that is not patient care. ie admin, support outside of scope due to lack of staffing or resources.
- Environment of artificial light and chaotic activity.
- A bad day at work can be a loss of life, even when we do everything right.



The 5-stage model of burnout.

Developed 1970's by Herbert Freudenberger, an American psychologist.

Stage 1: Honeymoon Stage – enthusiasm

Stage 2: Onset of stress – stagnation

Stage 3: Chronic Stress – Frustration

Stage 4: Burnout – Apathy

Stage 5: Habitual Burnout – Intervention

Stage 2 and 3 result of uncontrolled stress and more easily recoverable. Symptoms such as anxiety, irritability, frustration, headaches, frequent illness.

Stage 4 and 5 may result in disorders such as chronic tiredness, depression, anxiety disorders, and physical disease.



Treatment Stages 1 & 2

- Boundaries (Work life Balance)
- Stress management techniques (meditation, physical activity, breathwork)
- Family, friend, or online support
- Changes in work environment (US Surgeon General Recommendations post Covid).

A photograph of a therapist and a client in a session. The therapist, on the left, is a woman with dark hair, wearing a light-colored cardigan over a pink top, sitting in a wooden chair and holding a clipboard. The client, on the right, is a woman with long brown hair, wearing a white turtleneck sweater, sitting in a grey armchair and looking towards the therapist. The background shows a window with books on a shelf and a globe on a table.

Treatment Stages 4 & 5

- Treatment is most often pharmaceutical and Cognitive Behavioral Therapy (CBT) combination.
- Pharmaceuticals include anxiolytics and anti-depressants.
- CBT is wide ranging in techniques.
- Most commonly CBT involves breathwork and meditation.



anxiety

- APA Definition: an **emotion** characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure.
- Anxiety is a ***future-oriented***, long-acting response broadly focused on a diffuse threat.
- Fear is a present-oriented, and short-lived response to a clearly identifiable and specific threat.



The Face of Anxiety

- How do you experience it?
- What happens first?
Thoughts? Body reaction?
Or something else?
- What would you prefer to experience?

anxiety disorders

- Panic Disorder
- Phobias
- Post-Traumatic Stress Disorder (PTSD)
- Obsessive Compulsive Disorder (OCD)
- Generalized Anxiety Disorder (GAD)
- In COPD, we see that GAD, Panic Disorders and phobias are most prevalent.



Results of the Household Pulse Survey (an experimental data system) performed by the National Center for Health Statistics (NCHS) and the Census Bureau. (age differences)

Indicators of Anxiety or Depression Based on Reported Frequency of Symptoms

Select Indicator

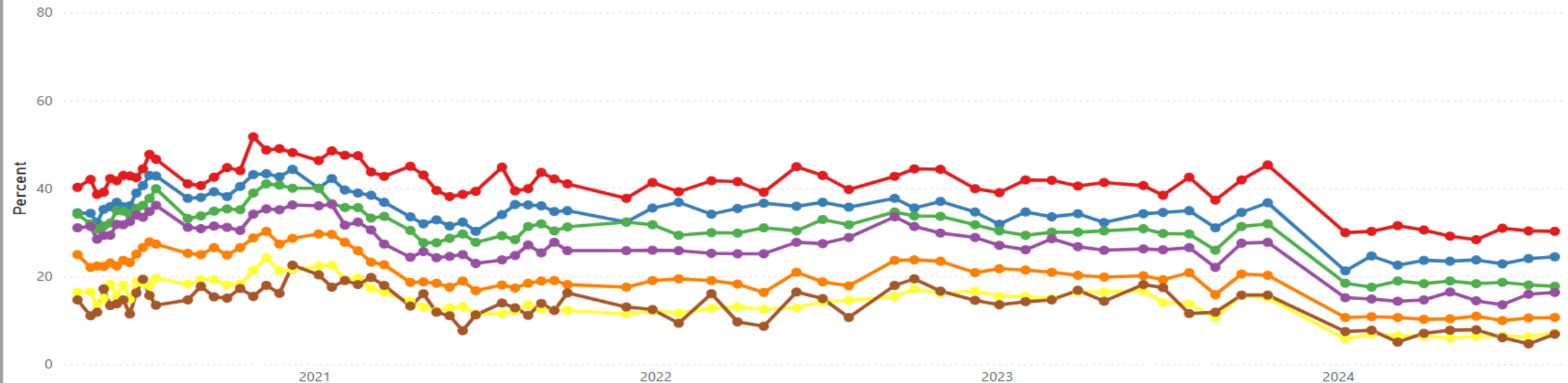
Symptoms of Anxiety Disorder

Select Group

By Age

Symptoms of Anxiety Disorder

Subgroup ● 18 - 29 years ● 30 - 39 years ● 40 - 49 years ● 50 - 59 years ● 60 - 69 years ● 70 - 79 years ● 80 years and above



NOTES: All estimates shown meet the NCHS standards of reliability. See Technical Notes below for more information about the content and design of the survey. From Phase 1 through Phase 3.1 of data collection and reporting, the question reference period was 'during the last 7 days'. Beginning in Phase 3.2, the question reference period changed to 'during the last two weeks'.

SOURCE: U.S. Census Bureau, Household Pulse Survey, 2020-2024

Results of the Household Pulse Survey (an experimental data system) performed by the National Center for Health Statistics (NCHS) and the Census Bureau. (National Estimate)

Indicators of Anxiety or Depression Based on Reported Frequency of Symptoms

Select Indicator

Symptoms of Anxiety Disorder



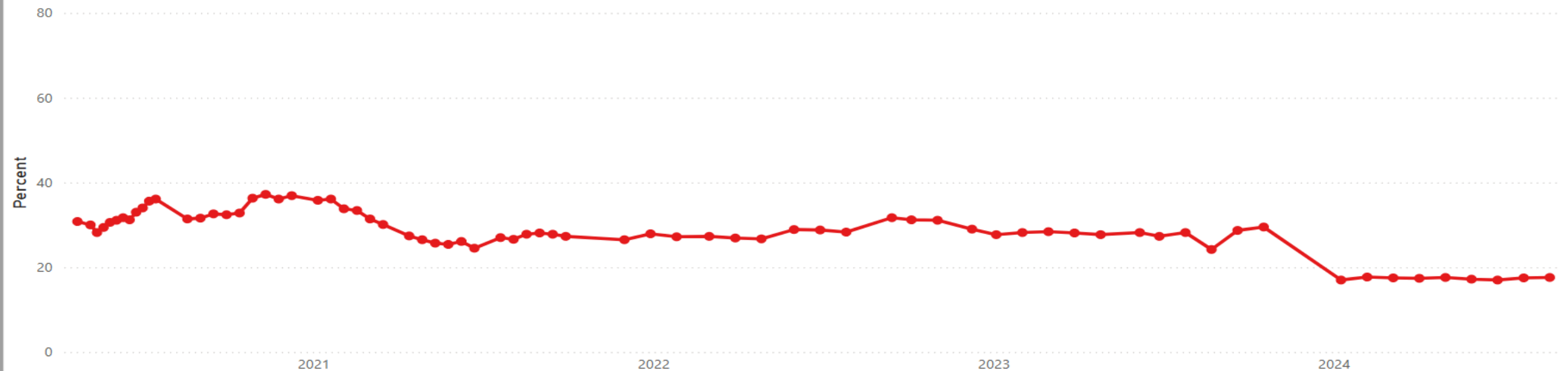
Select Group

National Estimate



Symptoms of Anxiety Disorder

Subgroup ● United States



NOTES: All estimates shown meet the NCHS standards of reliability. See Technical Notes below for more information about the content and design of the survey. From Phase 1 through Phase 3.1 of data collection and reporting, the question reference period was 'during the last 7 days'. Beginning in Phase 3.2, the question reference period changed to 'during the last two weeks'.

SOURCE: U.S. Census Bureau, Household Pulse Survey, 2020-2024

Factors Associated with Increased Anxiety

- Ethnicity
- Gender
- Gender Identity, Sexual Orientation
- State (where you live)
- Education, Socioeconomic status
- Age
- Disability status



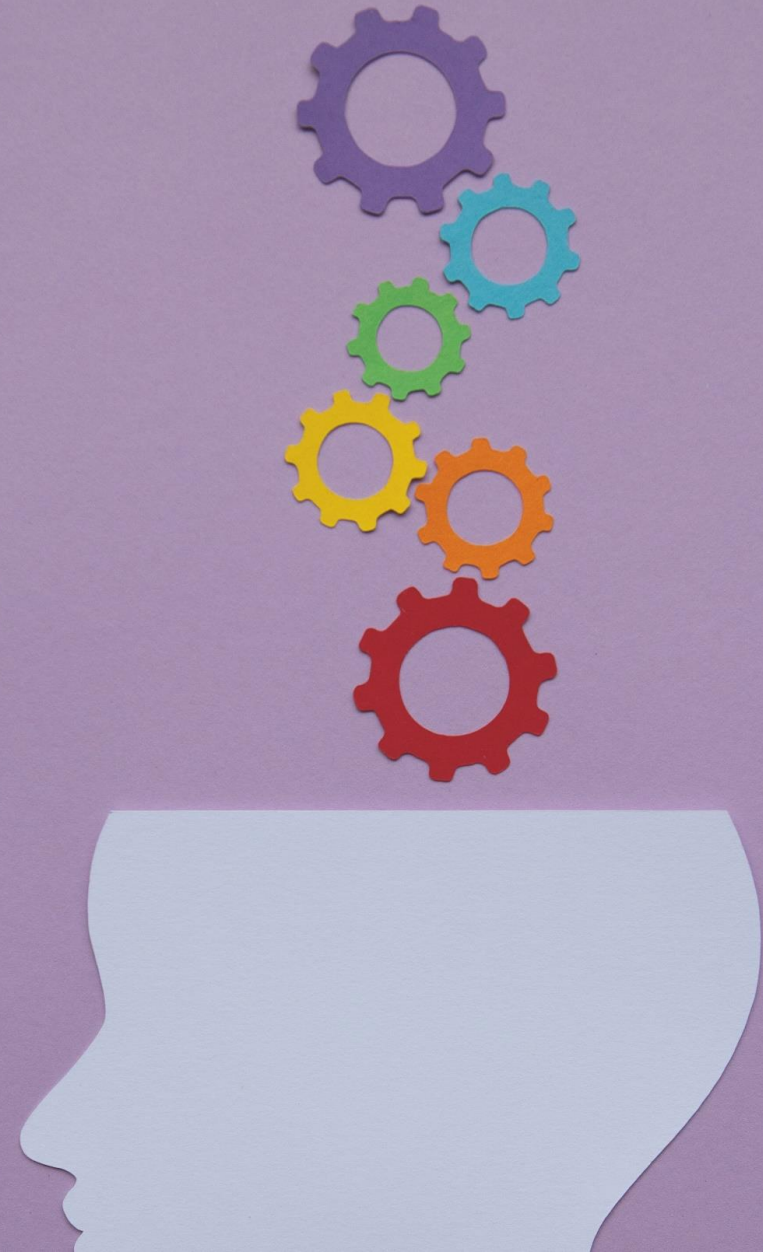


How we self care...

- What does that mean to you?
- Do you work it into your day?
- What happens when you take the time? Thoughts? Body reaction?
- How balanced is your life?

mindset

- APA definition: a state of mind that influences how people think about and then enact their goal-directed activities in ways that may systematically promote or interfere with optimal functioning.
- From a Hypnotherapy perspective, 2 main things shape mindset: CNS tone and Subconscious Mind.



Sympathetic vs Parasympathetic Neurological Response

- Sympathetic tone is your fight/flight mode
- Parasympathetic tone is your rest/digest mode.
- We use both systems at all times but predominantly appropriate to the task.
- Thoughts and brain function determine which is predominant.
- Awareness can drive the tone for best response.





THE HEART-BRAIN

CONTAINS 40,000 NEURONS WORKING INDEPENDENT OF THE BRAIN.

CONTROLS ELECTRICAL ACTIVITY OF THE BRAIN CHEMICALLY AND ELECTRICALLY.

RECEIVES INTUITIVE INFORMATION BEFORE THE BRAIN.

HEART CONTROLS THE BRAIN MORE THAN THE BRAIN CONTROLS THE HEART.

Electrophysiological Evidence of Intuition: Part 2. A System-Wide Process?

Rollin McCraty, Mike Atkinson, and Raymond Trevor Bradley

Published Online: 5 Jul 2004 | <https://doi.org/10.1089/107555304323062310>

Conclusions: Overall, our data suggest that the heart and brain, together, are involved in receiving, processing, and decoding intuitive information. On the basis of these results and those of other research, it would thus appear that intuitive perception is a system-wide process in which both the heart and brain (and possibly other bodily systems) play a critical role. To account for the study's results, Part 3 will develop a theory based on holographic principles explaining how intuitive perception accesses a field of energy into which information about "future" events is spectrally enfolded.

THE GUT-BRAIN

Contains 500 million neurons working independent of the brain.

Controls activity of the brain with Serotonin and Vagus Nerve

95% of Serotonin (happy hormone) is made in the gut.

Most of vagus nerve signal goes one way – gut to brain.

THE BRAIN



Contains 1 billion neurons to drive body function and conscious mind.



Connects to the Heart and Gut mainly through the Vagus Nerve.



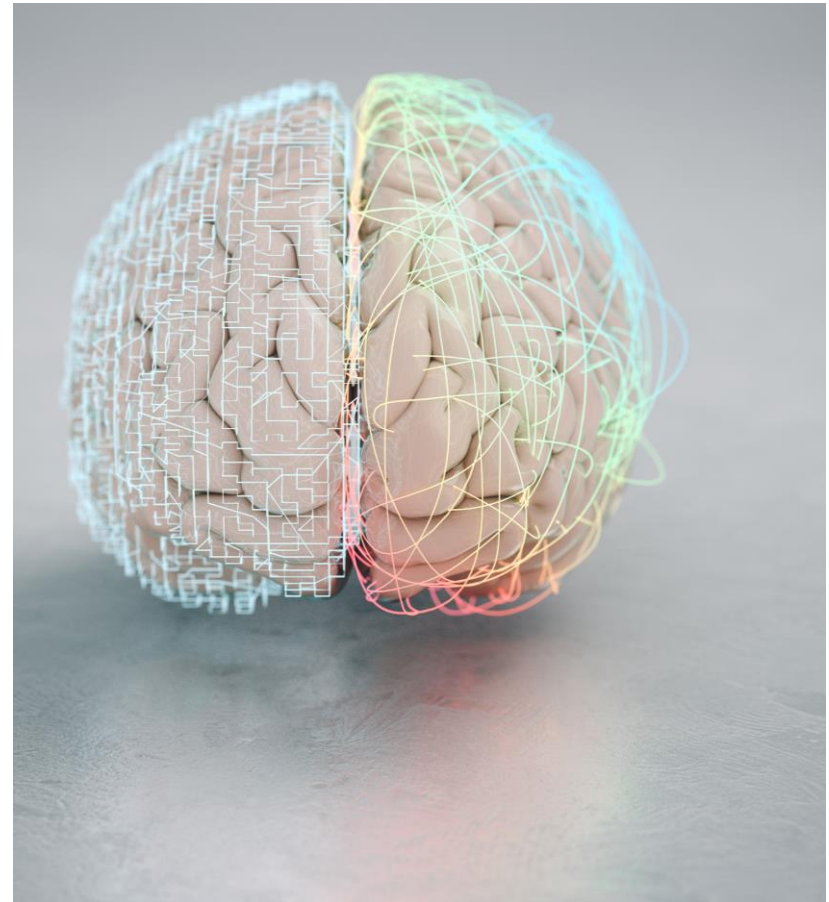
Main function is to RECEIVE and process it.



Generates brain waves specific to body needs, thoughts, emotions.



Creates 3D reality based on internal programs.



SURVIVE OR THRIVE?

100% survival rate to date

Thinking/planning=Survival.

Imagination/possibility=Thriving.

Imagination is key.



A hand is shown holding a pair of sunglasses against a sunset background. The sunglasses have a dark frame and lenses that reflect the bright light of the sun. The background is a warm, golden-yellow sky with a bright sun low on the horizon, creating a lens flare effect. The overall mood is serene and contemplative.

THE SUBCONSCIOUS MIND

The lens with which you choose to see the world.

Builds starting at birth and continues to add throughout your life.

Completely objective. It either accepts or rejects based on familiarity or enhancement of survival.

Purpose: to give meaning to everything.

The source of “triggers” both positive or negative.

CREATING THE WORLD IN WHICH YOU LIVE

- Mind Body Connection talks about equal focus on mind and body.
- Literal people relate more to their bodies and movement.
- Inferential people relate more to their minds.
- Knowing which one you are makes it easier to know what you want.



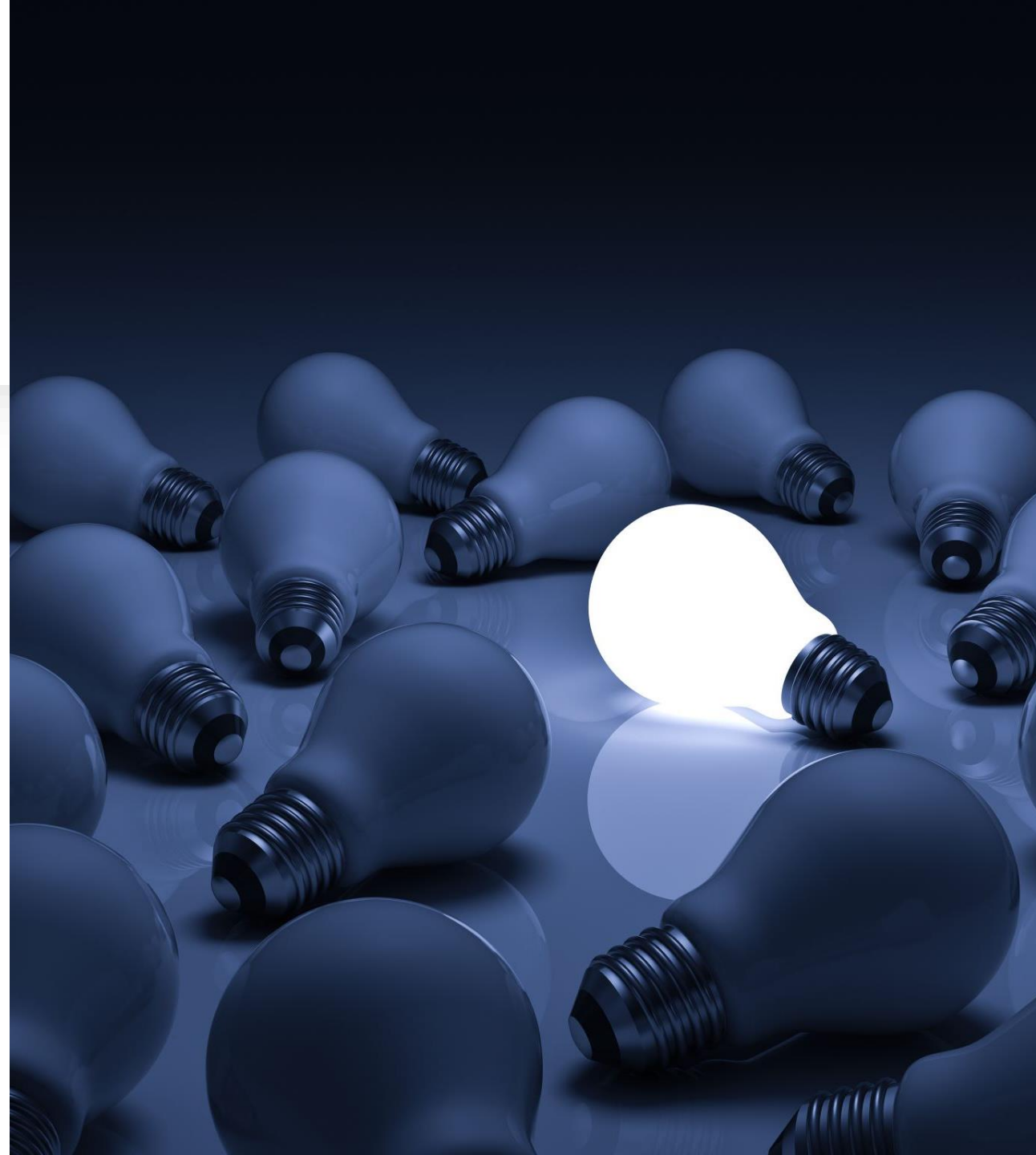
Intention and Focus

- Where your focus goes, energy flows.
- Direct your CNS.
- Yogic breathing.
- Mindfulness + CBT focus on changing your thoughts.
- Thoughts trigger hormones which create emotions which create body response which creates response to environment (internal or external) and neuroplasticity.



mindset generators

- meditation
- visualization
- setting intentions
- mindfulness practices (present moment)
- physical activity
- breathwork
- internal dialogue
- external environment





WHAT IS WITHIN YOUR CONTROL?

Choice

Tools: Technique and Education

Cognitive, Emotional, Physical Needs

Balance

RELAXATION THERAPY

Body tension reduction - Abdominal breathing, Progressive muscle relaxation and Autogenic training

Stress Reduction – Guided Imagery Training and Meditation (further reduction would be in Hypnosis range)

Depending on one's suggestibility, one method will be more effective than the other.

People with PTSD or ADD need guidance in person or through media to relax on their own.



Should we take our own advice?

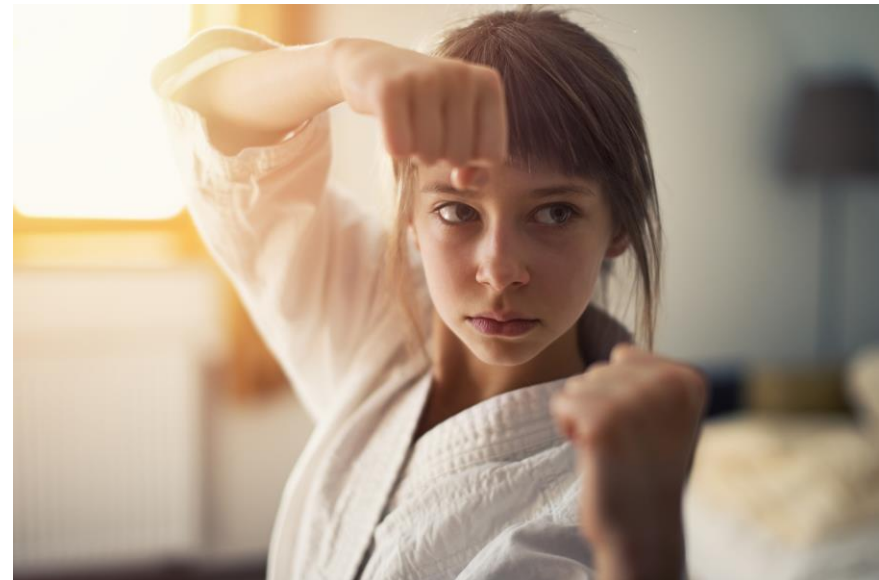
Characteristic COPD Breathing

- Fast and shallow due to chest wall and lung changes.
- Intention is to manage shortness of breath (sustain life).



Characteristic Anxiety or Fight/Flight Breathing

- Fast and shallow to move enough O₂ for short periods.
- Intention is survival short term.

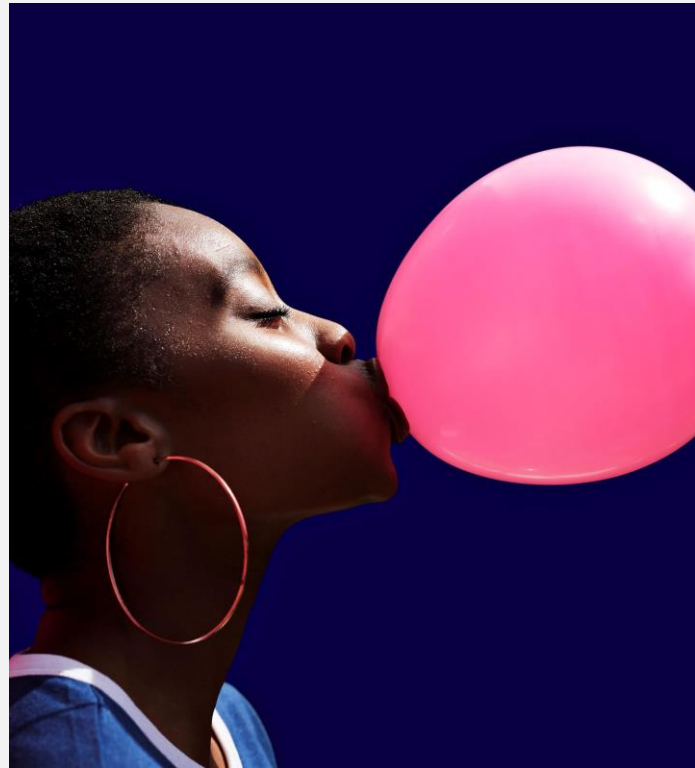


breathwork

- Structured, intentional breathing exercises or techniques that aim to improve physical and mental well being.
- Focus is present moment.
- Coupled with imagination can be powerful.



Pursed Lip Breathing



Slows the rate down which allows time to exhale and signals brain to calm.

Inflates more lung space at bottom of lungs which activates more calm.

Releases old air for new air = more O₂=better clinical outcome.

Gives you something to focus on instead of worry.

Diaphragmatic(Belly) Breathing



The backbone of many breathwork techniques

Stimulates vagus nerve and activation of parasympathetic nervous system.

Increased Stroke Volume and Tidal Volume trigger decreased fight/flight.

Increases Heart Rate Variability.

Short Term vs Long Term Slow Breathing

Short-term:

Reduces oxygen consumption, HR, and BP. Increases the amplitude of theta and delta waves (indicating predominant parasympathetic tone), decreases the sympathetic activity, and improves the sympathovagal balance (HRV) (Chinagudi et al., [2014](#)).

Long-term:

- Reduces the risk of developing CVD and T2DM (endothelial function) and improves pulmonary function (RV and deadspace ventilation)(Jerath et al., 2006; Russo et al., 2017).

COPD and Breathwork



Hallmarks of COPD:

- Hyperinflation causing flattened diaphragm.
- *Irreversible* Obstructed flow.
- Gas trapping.
- V/Q Mismatch

Breathwork focus is on mindset and mechanics:

- Pursed lip breathing for gas trapping and optimal V/Q matching.
- Diaphragmatic breathing for PNS effect and improved lung functions.
- Coordinated breathing on exertion for heart effect.

Asthma and Breathwork



Hallmarks of Asthma:

- *Reversible* Obstructed flow.
- Reactive airways to triggers both internal and external environment.
- Internal and external triggers can be known and unknown leading to anxiety and cyclical negative effect.

Breathwork focus is on mindset:

- Pursed lip breathing for benefits of nasal breathing, lung recruitment and rate control.
- Diaphragmatic breathing, 4-7-8 breathing and Pranayama breathing in general for calming effect on mindset.

THE POWER OF BREATH: DIAPHRAGMATIC BREATHING



Diaphragmatic breathing is sometimes referred to as belly, deep, relaxed, or abdominal breathing. It optimizes use of the main muscle of breathing, the diaphragm, resulting in slower, deeper breathing. It can be an important skill in a Veteran's self-management toolbox. With practice, most clinicians can teach it to their patients in 5-10 minutes.

“The Power of Breath” was written by Janice Singles, PsyD and Shilagh Mirgain, PhD and Adrienne Hampton, MD (2016) and updated by Janice Singles, PsyD and Shilagh Mirgain, PhD (2023). This **Whole Health tool** was made possible through a collaborative effort between the University of Wisconsin Integrative Health Program, VA Office of Patient Centered Care and Cultural Transformation, and Pacific Institute for Research and Evaluation.

Insomnia and Breathwork

Hallmarks of Insomnia:


1. **Difficulty falling asleep at night.**
2. **Waking up frequently during the night.**
3. **Waking up too early and being unable to fall back asleep.**
4. **Daytime fatigue or sleepiness.**
5. **Irritability, depression, or anxiety.**
6. **Difficulty with focus and memory.**
7. **Increased errors or accidents.**
8. **Persistent worries about sleep.**

Breathwork focus is on mindset:

- Pursed lip breathing for benefits of nasal breathing and rate control.
- Diaphragmatic breathing and Pranayama breathing in general for PNS effect on mindset.
- Mindful breathing for present moment.



breathwork techniques

- box breathing
 - cyclic sighing
 - diaphragmatic
 - coordinated breathing
 - pursed lip breathing
 - 4-7-8 Andrew Weil (based on pranayama)
 - yogic breathing (pranayama)
 - mindful breathing
- 



A scenario of mutual interactions

- **Conclusions:** "...we found evidence of links between parasympathetic activity (increased HRV and LF power), CNS activities (increased EEG alpha power and decreased EEG theta power) related to emotional control and psychological well-being in healthy subjects. Our hypothesis considers two different mechanisms for explaining psychophysiological changes induced by voluntary control of slow breathing: one is related to a **voluntary regulation** of internal bodily states (interoception), the other is associated to the **role of mechanoreceptors** within the nasal vault in translating slow breathing in a modulation of olfactory bulb activity, which in turn tunes the activity of the entire cortical mantle.

> [Front Hum Neurosci.](#) 2018 Sep 7:12:353. doi: 10.3389/fnhum.2018.00353. eCollection 2018.

How Breath-Control Can Change Your Life: A Systematic Review on Psycho-Physiological Correlates of Slow Breathing

Andrea Zaccaro ¹, Andrea Piarulli ^{1 2}, Marco Laurino ³, Erika Garbella ⁴, Danilo Menicucci ¹, Bruno Neri ⁵, Angelo Gemignani ^{1 3 6}

Affiliations + expand

PMID: 30245619 PMCID: [PMC6137615](#) DOI: [10.3389/fnhum.2018.00353](#)

Abstract

Background: The psycho-physiological changes in brain-body interaction observed in most of

4-7-8

+

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○

- Breathe in for 4, Hold for 7, and exhale for 8 seconds.
- Intended to slow breath rate down and inflate the entire lung.
- Uses pursed lip breathing to extend exhalation (perfect for COPD).
- Has been shown to positively impact heart rate variability, blood pressure, blood glucose, and endothelial function in healthy young adults.



stress is stress...

PHYSIOLOGICAL REPORTS

ORIGINAL ARTICLE |  Open Access |  

Effects of sleep deprivation and 4-7-8 breathing control on heart rate variability, blood pressure, blood glucose, and endothelial function in healthy young adults

Jaruwan Vierra, Orachorn Boonla, Piyapong Prasertsri 

First published: 13 July 2022 | <https://doi.org/10.14814/phy2.15389> | Citations: 1

- “...participants practiced 4-7-8 breathing control for six cycles/set for three sets interspersed between each set by 1-min normal breathing.”
- “The HRV, HR, and BP variables and FBG were not significantly different between the two groups. However, endothelial function was significantly lower in the sleep deprivation group than that in the control group ($p < 0.05$).”
- “Sleep deprivation may disturb heart rate variability, blood pressure, blood glucose, and endothelial function in healthy young adults. The 4-7-8 breathing control may improve these outcomes in those with and without sleep deprivation.”

- Using Diaphragmatic (Belly) Breathing technique, take 3 deep breaths (in and out...no cheating!)
- Use your senses to notice how your breath feels from the tip of your nose down to the bottom of your lungs and back again.
- Notice thoughts, emotions and see if they need a breath!
- Used in meditation and hypnosis to bring on a calm state of mind.
- ALL about PRESENT moment. You can't be anxious if you're present!

+

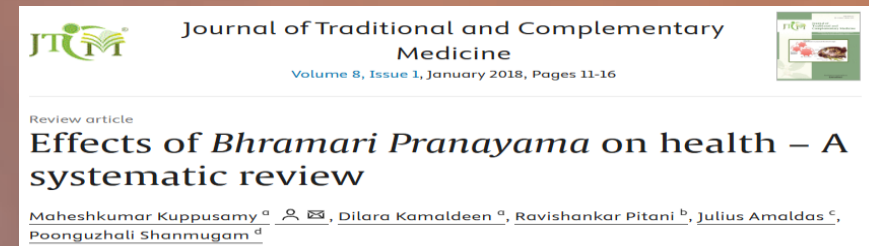
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Mindful Breathing



Pranayama: Yogic Breathing



- “Pranayama, by continuous practice reduces the dead space ventilation and decreases the work of breathing.”
- “Practicing pranayama regularly has a positive impact on cardiovascular and respiratory functions improves the autonomic system towards parasympathetic (vagal tone) dominance.”

TRIAGE

Stress management can be effective in 1 minute or 1 hour.

Triage the situation by checking in with yourself.

Several short stress management techniques throughout the day can change your world by changing your perception.

Set up reminders throughout your day to start such as on your phone, computer, or sticky note

Depending on your work task and stress level, you can intersperse, coordinate or later add in management techniques.



STRESS MANAGEMENT RECAP



Create a routine based on your preference. Keep it fun!



Breathwork has no limitations.



Release the pressure! Write, Talk, or Dance it out!



Boundaries are key to work life balance.



Social support comes in many forms.



Triage yourself.





Summary

- Burnout is a progressive response to conditions of continual stress.
- It is a result of perception and lack of tools to manage stress in a workplace that is culturally and economically inclined to produce stressful conditions.
- It can be managed most effectively early on with cognitive, emotional and physical recharging activities.
- Anxiety is one of the most common feelings in early stages and as a disorder in later stages
- Know what is affecting you most and start there.
- CBT is a common psychological approach and most commonly involves Breathwork and forms of meditation that focus on supporting health.
- Mindfulness can improve clarity around boundaries and work life balance.

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