

Just Breathe: Influence Your Stress Between Appointments

NACADA 2021 Annual Conference
October 8, 2021
Jason Higa
University of Hawaii at Manoa

Autonomic Nervous System

1. Sympathetic Nervous System (SNS)
 - a. Fight or flight
 - i. Heart beats faster
 - ii. Respiration rate increases
 - iii. Glucose level in the bloodstream increases
2. Parasympathetic Nervous System (PNS)
 - a. Relaxation

Leaving Stress Unchecked

- Fatigue
- Anxiety
- Restlessness
- Lack of motivation
- Irritability
- Depression
- Other physical and mental health issues

Relationship Between Stress & Breath

- When we are stressed we tend to hyperventilate
 - Carbon dioxide level can drop too low
 - Leads to more stress or even panic attacks
- Unconsciously take very shallow breaths or sometimes do not breathe for extended periods of time
 - Email & texting (Email Apnea)
 - Can trigger the SNS
 - Affects sleep, memory, and learning
- We only absorb about a quarter of the oxygen in the air, and the majority of oxygen is exhaled back out in a normal breath

Breathing Mechanics: Nasal Breathing

- Cleans, heats and moistens the air for easier absorption
- Can absorb about 18% more oxygen than through the mouth
- Can trigger hormones that lower blood pressure and ease digestion

Nasal Breathing & The Connection Autonomic Nervous System

Right Nostril

- Activates SNS
- Speeds circulation
- Body gets hotter
- Increases cortisol levels
- Increases blood pressure
- Increases heart rate

Left Nostril

- Connected to the PNS
- Rest and relax
- Lowers blood pressure
- Cools the body
- Reduces anxiety

Decongest Nose

1. Sit up straight
2. Deep breath in
3. Controlled exhale
4. Pinch nose shut
5. Shake your head up and down or side to side
6. When you feel the urge to breathe, take a slow and controlled breath in through the nose (If the nose is still congested, breathe softly through the mouth with pursed lips)

Deep Breathing

- Utilizing the diaphragm to promote deeper and slower breathing induces relaxation
- One of the reasons deep and slow breathing exercises help us relax is because the nerves that connect to the PNS are located in the lower lobes of the lungs
- To further slow our exhales, and induce even more relaxation, you can purse lips

Abdominal breathing

1. Relax your shoulders
2. Put one hand on your chest and the other hand on your stomach
3. Take a breath in through your nose for 2 seconds
4. Purse your lips and breathe out slowly (pressing lightly on your stomach)

Slow Breathing

1. Sit or stand with your elbows slightly back (This allows your chest to expand more fully)
2. Inhale deeply through your nose.
3. Hold your breath as you count to 5.
4. Release the air via a slow, deep exhale, through your nose, until you feel your inhaled air has been released.

Breathing Coordination

1. Take fewer inhales and exhales in a smaller volume
2. Each breath we draw in should take about 3 seconds and each breath out should take 4.
3. We'll then continue the same short inhales while lengthening the exhales to a 5, 6, and 7 counts as the run progresses.

Breathing Coordination (Alternative)

1. Sit up so that the spine is straight and chin is perpendicular to the body.
2. Take a gentle breath in through the nose. At the top of the breath begin counting softly aloud from one to 10 over and over (1, 2, 3, 4, 5, 6, 7, 8, 9, 10; 1, 2, 3, 4, 5, 6, 7, 8, 9, 10).
3. As you reach the natural conclusion of the exhale, keep counting but do so in a whisper, letting the voice softly trail out. Then keep going until only the lips are moving and the lungs feel completely empty.
4. Take in another large and soft breath and repeat.

Breathing Exercises

- Alternating Nostril Exercise
- Resonant (Coherent) Breathing
 - The Perfect Breath
- Box Breathing Exercises
- Tranquility Breathing Exercises
- Tummo (Wim Hof Method)

Alternating Nostrils

- Improves lung function
- Lowers heart rate, blood pressure, and sympathetic stress

Alternating Nostrils Exercise

1. Place the thumb of your right hand gently over your right nostril and the ring finger of that same hand on the left nostril (The forefinger and middle finger should rest between the eyebrows)
2. Close the right nostril and inhale through the left nostril
3. Pause briefly, holding both nostrils closed
4. Exhale through the right nostril
5. Hold both nostrils closed
6. Inhale through the right nostril

Resonant (Coherent) Breathing

- Slow your breathing pattern
- Increased blood flow to the brain
- Calm
- Alert

Resonant (Coherent) Breathing Exercise: 4-4

1. Sit up straight and relax your shoulders and belly
2. 4 second inhale
3. 4 second exhale

Resonant (Coherent) Breathing Exercise: 5-5

1. Sit up straight and relax your shoulders and belly
2. 5 second inhale
3. 5 second exhale

Resonant (Coherent) Breathing Exercise: 6-6

1. Sit up straight and relax your shoulders and belly
2. 6 second inhale
3. 6 second exhale

The Perfect Breath

- Slow breathing pattern
- Increased blood flow to the brain
- Systems in the body entered a state of coherence
- Functions of the heart, circulation, and nervous system are coordinated to peak efficiency

The Perfect Breath Exercise

1. Sit up straight, relax the shoulders and belly, and exhale.
2. Inhale softly for 5.5 seconds, expanding the belly as air fills the bottom of the lungs.
3. Without pausing, exhale softly for 5.5 seconds, bringing the belly in as the lungs empty. Each breath should feel like a circle.

Box Breathing

- Destress
- Calm your nervous system
- Distract your mind

Box Breathing Exercise: 3-3-3-3

1. Inhale 3 seconds
2. Hold 3 seconds
3. Exhale 3 seconds
4. Hold 3 seconds

Box Breathing Exercise: 4-4-4-4

1. Inhale 4 seconds
2. Hold 4 seconds
3. Exhale 4 seconds
4. Hold 4 seconds

Box Breathing Exercise: 4-4-6-2

For deeper relaxation and to help with sleep

1. Inhale to a count of 4
2. Hold 4
3. Exhale 6
4. Hold 2

Tranquility Breathing

- Relax
- Reduce Anxiety
- Sleep

Tranquility Exercise: 3-6-6

1. Sit or lay in a comfortable position
2. Inhale through the nose for 3 seconds
3. Hold for 6 seconds
4. Exhale through pursed lips for 6 seconds

Tranquility Exercise: 4-6-7

1. Sit or lay in a comfortable position
2. Inhale through the nose 4 seconds
3. Hold for 6 seconds
4. Exhale through pursed lips for 7 seconds

Tranquility Exercise: 4-7-8

1. Sit or lay in a comfortable position
2. Inhale through the nose for 4 seconds
3. Hold for 7 seconds
4. Exhale through pursed lips for 8 seconds

TUMMO (Wim Hof Method)

WARNING: This technique should never be practiced near water, or while driving or walking, or in any other circumstances where you might get hurt should you pass out. Consult your doctor if you are pregnant or have a heart condition.

1. Sit or lay in a comfortable position
2. 30 quick and deep breaths
3. After the last exhale hold your breath as long as possible
4. Once you have the urge to breath, take a deep inhale and hold it another 15 seconds

Repeat two to three times.

Wim Hof Method

- Reduce stress
- Increase energy
- Reduce inflammation

Wim Hof Method Exercise

<https://www.youtube.com/watch?v=oBNejY1e9ik>

1. Sit or lay in a comfortable position
2. 30 quick and deep breaths
3. After the last exhale hold your breath as long as possible
4. Once you have the urge to breath, take a deep inhale and hold it another 15 seconds

Repeat three times.

References

American Psychological Association. (2018, November 1). *Stress effects on the body*.
<http://www.apa.org/topics/stress/body>

Cleveland Clinic. (2018, September 14). *Pursed lip breathing*. Retrieved from
<https://my.clevelandclinic.org/health/articles/9443-pursed-lip-breathing>

Mayo Clinic. (2019, April 4). *Stress symptoms: Effects on your body and behavior*. Retrieved from
<https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/stress-symptoms/art-0050987>

Nestor, J. (2020). *Breath: The new science of a lost art*. Penguin Random House.

Pollak, S. (2014, November 06). Email apnea: Breathing meditations for the workplace. Retrieved from
<https://www.psychologytoday.com/us/blog/the-art-now/201411/email-apnea>

Timms, D. (n.d.). *Wim hof method – Biology of breathing*. Retrieved from
www.daniel-timms.com/wim-hof-method-biology-of-breathing/.