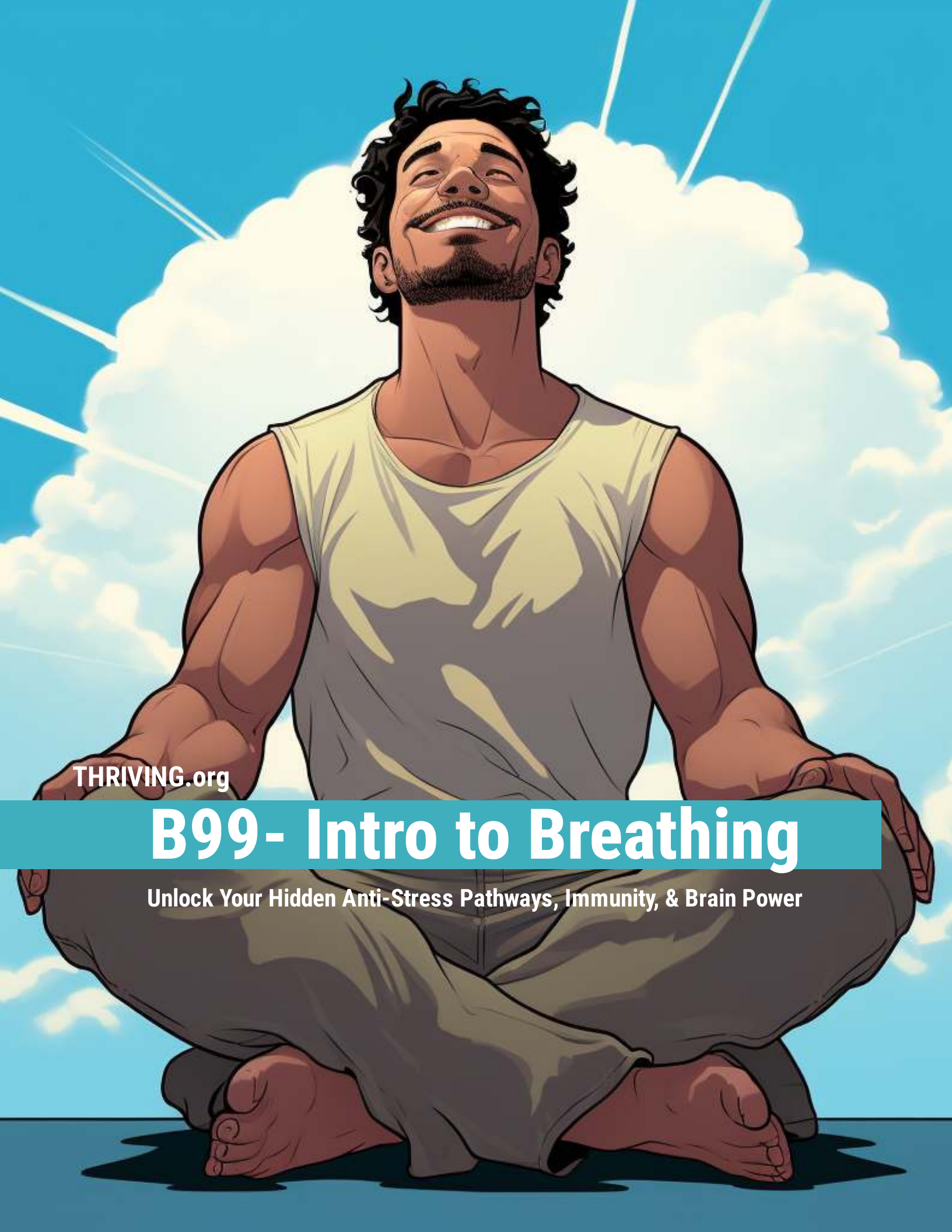


THRIVING.org

B99- Intro to Breathing

Unlock Your Hidden Anti-Stress Pathways, Immunity, & Brain Power

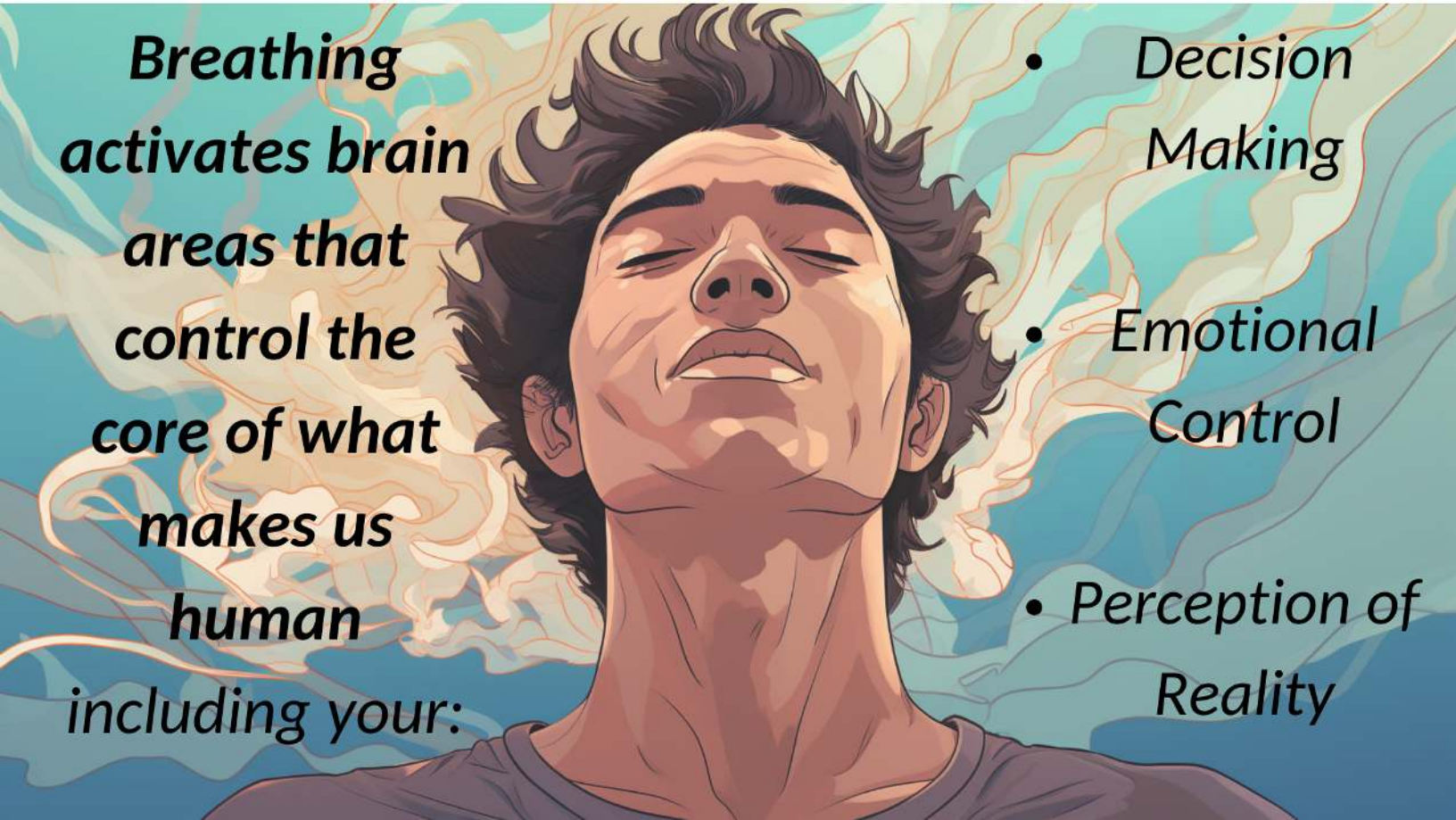
Table Of Contents

02

Why is Breathing Important?

Why is Breathing Important?

Respiration or breathing as it is commonly known is one of the most fundamental processes of life and has a profound impact on your mental state, physical performance, and quality of life. Even though breathing is profoundly important, easy to change, and pleasurable, we often take the action of breathing for granted since we do it automatically and rarely think much about it. Unfortunately, ignoring the action of breathing can have dire consequences for our lives, relationships, mental capacity, physical capacity, and emotional regulation. The good news is fixing bad respiration habits is relatively easy and the benefits are far-reaching. First, let's take a look at how breathing affects every part of your body and mind through the nervous system. Breathing has been closely linked to spiritual practices in the east, west, and everywhere in between. Yogic and Buddhist breathing practices are the most well-known, but breathing is also integral in Christian monastic traditions such as Gregorian chants and Russian Orthodox breath moving [1] as well as across the world in Islamic, Greek,



Chinese, and shamanic traditions [2]. Modern medical research has discovered that breathing is intimately tied to nervous system functioning (both the autonomic nervous system (ANS) and central nervous system (CNS)) which includes your brain, spinal cord, "fight or flight" response, "rest and digest" response, and a large part of how you perceive and interpret the world.[3]

Our ancestors in disparate parts of the world noticed the power breathing had over the very essence of a person and now science is beginning to catch up. In fact, *"Neuroanatomic and brain imaging studies reveal breath-activated pathways to all major networks involved in emotion regulation, cognitive function, attention, perception, subjective awareness, and decision making."* [4] That means that breathing can directly influence your intelligence, decision-making, mood, perception of reality, and ability to deal with stress, anger, anxiety, as well as other difficult emotions.

You can reap massive benefits with little physical effort through proper breathing or you can face very real and devastating dangers when breathing improperly. First, let's start with what happens when you improperly breathe.

Breathing plays a key role in reducing stress & inflammation which are linked to ***80% of all health problems.***

03

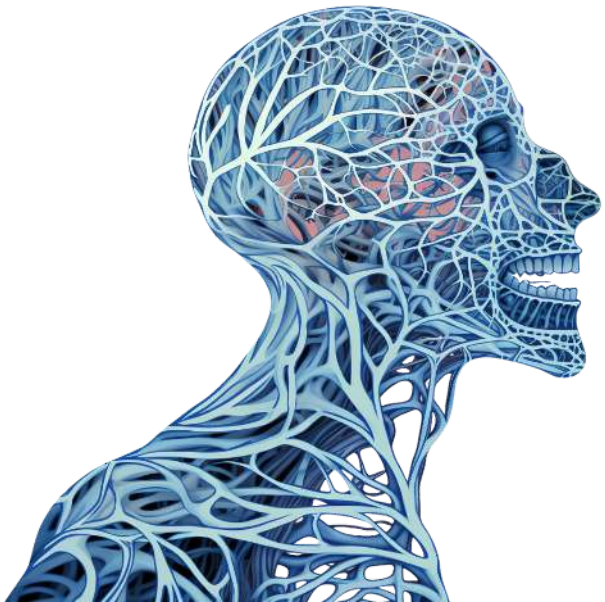
Dangers of Improper Breathing

Dangers of Improper Breathing

Improper breathing is shallow, erratic, and oftentimes completely through the mouth. Breathing in and out through the mouth is the default mode for most of the Western world. In 2015, a survey of over 1,000 adults from the Breathe Right brand, found that 61% of respondents identify themselves as mouth breathers.

Mouth breathing promotes shallow breathing and can lead to numerous physical problems including:

- Structural deformities in the face of children [5], [6], [7], [8]
- Chronic bad breath, dry lips, sleep apnea, and snoring [9], [10]
- Increased risk of gum disease, tooth decay, and crowded teeth [11], [12]
- Reduced brain function and brain speed [13], [14], [15]
- Narrowing of airways [16]
- Increased stress and risk of disease. [17]
- Chronic stress, increased anxiety, and depression. [18], [19], [20]
  When you breathe in through the mouth you may be artificially creating an environment in your body mimicking a constant fight or flight situation. Living in a constant state of stress and suboptimal energy can create a downward spiral that often leads to anxiety and/or depression.



Improper breathing can lead to:

- *Facial deformities*
- *Chronic bad breath*

04

Benefits of Proper Breathing

Benefits of Proper Breathing

Improper breathing may plague over half the populace and lead to devastating consequences like chronic stress, disease, and death. The saddest part is that these people may have been able to alter their futures by spending a few minutes a day breathing differently. The good news is that changing something as simple as your breathing pattern can have a hugely positive impact on deep and meaningful parts of your life including improving your mental functioning and emotional control. Improper patterns of breathing can be unlearned and they can be unlearned from the comfort of a chair, couch, or bed which makes it almost seem too easy.

Once you have the correct knowledge and begin to practice proper breathing regularly you can expect to see major benefits such as:

- **Decreased stress and increased stress tolerance.**[21], [22], [23], [24]
  Breathing can directly stimulate the "rest and digest" and "fight or flight" responses made by the autonomic nervous system (ANS) to influence how much stress you feel. Decreasing and managing stress is more important than ever considering the American Medical Association (AMA) reports 80 percent of all health problems are stress related and the World Health Organization (WHO) has classified stress as the health epidemic of the 21st century. [25]

- **Improved cognitive ability, focus, and decision-making.** [26], [27], [28], [29], [30]
  By providing more circulation to the brain and stimulating neural pathways directly linked to focus and decision making you can be the best version of yourself simply through breathing properly.

- **Increased well-being and emotional regulation (including more control over anxiety, anger, and depression). [31], [32], [33], [34], [35], [36], [37], [38]**
  Breathing properly promotes calm thoughts and actions that help reduce negative emotions giving you more control than ever over the direction of your emotions, especially in difficult situations.

Additional Benefits of Proper Breathing

- Increased pain tolerance **[39]**
- Reduces symptoms of insomnia **[40]**, **[41]**
- Reduces symptoms of ADD, ADHD, PTSD, OCD, & Schizophrenia **[42]**, **[43]**, **[44]**, **[45]**
- Elimination of Waste
  Every time we breathe in we inhale oxygen to our lungs that gets transported into our blood and throughout our bodies to our organs, tissues, and eventually every cell in our body. When we breathe out, waste is gathered in the form of carbon dioxide and exhaled. Breathing is the primary means of eliminating waste from our bodies accounting for 70% of the waste elimination. The other 30% is primarily through defecation and urination.

Imagine a gross thought for a moment - combine all your urine, feces, and sweat throughout the day into a giant ball. The amount of waste you eliminate through breathing is over double the size of that ball. [46]

05

How Can You Reap the Rewards of Breathing?

How Can You Reap the Rewards of Breathing?

How can you gain all the benefits of proper breathing? How can you learn to freshen your mind at will to markedly improve your focus, eliminate stress, maximize your cognitive abilities, improve your well-being, increase your lifespan, and improve heart, brain, and lung health? And how can you do it all without becoming a monk?

Easily & Simply

We simplify and condense scientifically validated breathing exercises from monastic traditions across the world as well as from the world of professional sports that specialize in breathing such as free divers, and even from clinical breathing practices for health and wellness, into simple practices for the modern professional with little free time.

With a Low Time Commitment

That's where we come in. At Thriving.org we offer an evidence-based, no-nonsense course, that focuses on brevity for the busy individual. By dedicating as little as one minute a day to breathing you can begin to conquer stress and increase your emotional control, gaining profound benefits to your mental health in the process.

By progressing at your own speed

We have created a simple step-by-step format that you can follow at your own pace, no matter how fast or relaxed it may be. You can start this course right now regardless of your current knowledge and/or current level of breathing skill.

By Taking Action!

True learning occurs through doing. Each level has real exercises that you can incorporate into your routine that will be key in your progress. In this course the practices will be breathing exercises, some of which have accompanying guided audio. For most exercises, there are multiple guided audios with varying durations to choose from which allow you to customize how long your practice will be. You will also have the option to practice without audio.

All you have to do is sit down comfortably and listen to the audios to gain benefits that humans have spent hundreds of lifetimes worth of time striving for and perfecting. You will learn breathing skills, strategies, and tactics that are clearly defined and custom-made to seamlessly integrate into your daily schedule in a practical and time-efficient manner. This is a course that will benefit you for the rest of your life with an extremely low time investment. Once you learn the skills and integrate them into your life they start to become second nature and the benefits continue to flow to you for life like free daily deposits into your bank account.

By Creating Habits that Stick for Life

We focus on providing you true value by changing your life for the long term. That is why we integrate evidence-based behavioral science tools designed to make proper ways of breathing lifelong habits. Basically, behavioral science has shown that you can increase your motivation by making everything as easy as possible and by tying learning objectives to your deepest wants, needs, and purpose. We do things like providing two versions of every reading, one extremely short reading that you can scan through in less than a minute and one longer, more in-depth reading for comprehensive study. This allows you to use your time effectively and get right to real-world applications if desired.

Make no mistake, regular practice is required to see drastic change. We give you the tools to make regular practice as easy as possible by leveraging technology and the study of behavioral science, but you still must put in the effort (minimum of 10 seconds per practice).

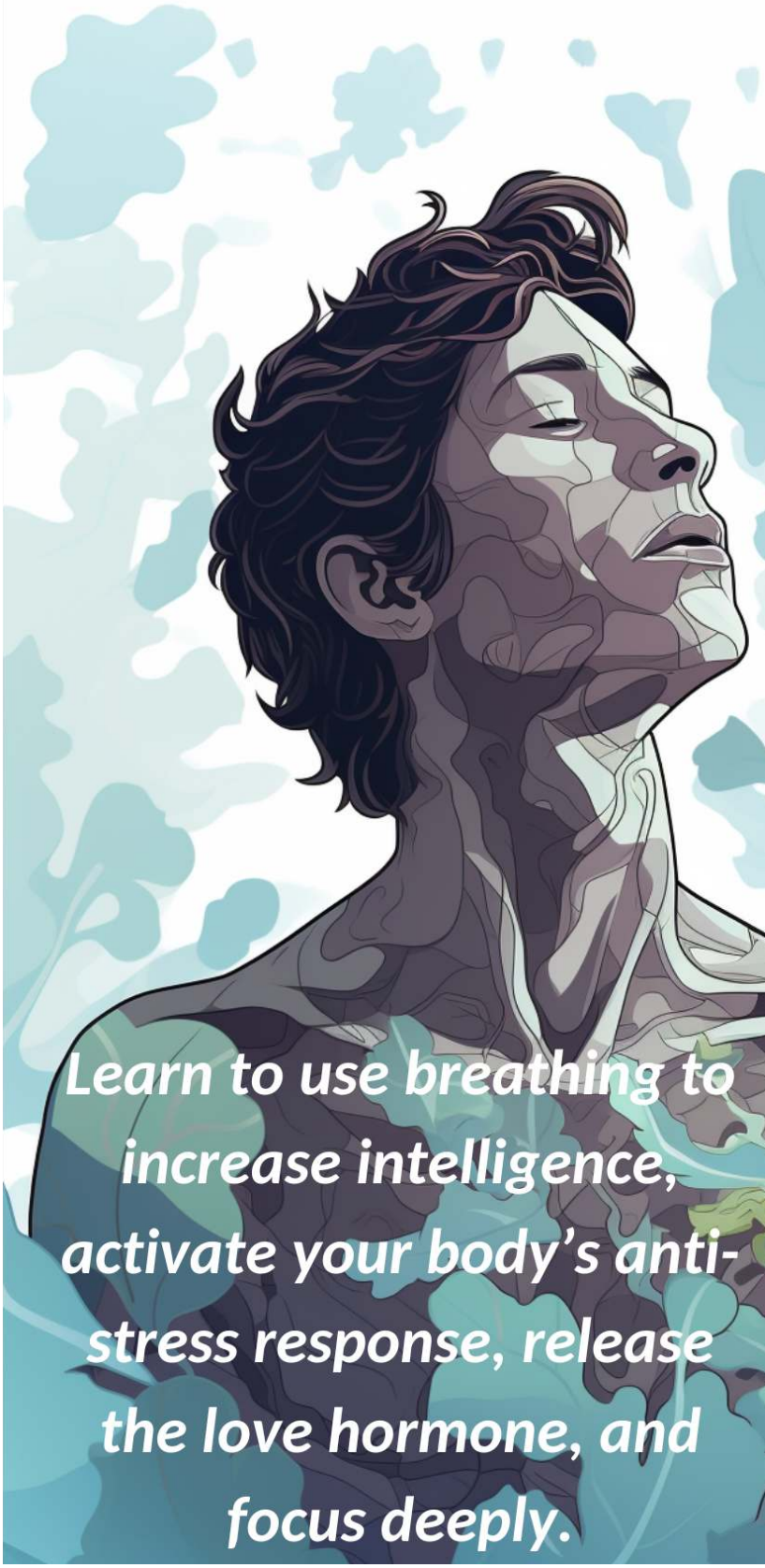
06

Course Benefits

What Will I Learn From This Course?

What you should expect from this course:

- Gain the ability to activate your anti-stress pathway to destress when stress hits.
- Gain the ability to enhance your focus, mood, and well-being.
- Increase your ability to regulate your emotions and decrease your anxiety, depression, and anger.
- Increase your stress threshold (feel less stress than you're used to for similar situations).
- Increase your resistance to illness.
- Enhance your physical markers of health such as your resting heart rate, blood pressure, VO2 max, and even increase the efficiency of your lungs.
- Avoid structural deformities (especially in the face) caused by poor breathing habits.
- Build a base of knowledge that will allow you to engage in advanced practices designed to further steel you to stress, deal with emotional trauma, and improve skills in sports, music, or anything else you desire.



07

Overview

Overview

Breathing is a foundational practice that can increase your cognitive abilities, improve your mental health, and increase the control you have over your emotional state at any time. Breathing properly can increase your resilience against viruses and diseases. Breathing properly can reduce or eliminate certain deformities from forming in a growing body. When you learn to breathe properly you also learn how to take control of your autonomic nervous system which you can use to decrease your stress and increase your resilience to stress.
Learn simple techniques, built upon ancient knowledge discovered by sages of ages past, recently scientifically verified, and commonly used by top performers including Olympic gold medalists, military special forces, and filthy rich CEOs to “hack” your body into producing a feeling of natural calm whenever you want. Build your practice into a force that transforms your life by giving you the power to control your emotions, your resilience to stress, and your mental states with greater ease eventually to the point where practically nothing can phase you. We make it easy to start, easy to progress, and easy to reap all the benefits of proper breathing by helping you create a long-term habit.

Key Points

- Stress kills and is responsible for 80% of health problems (and you are stressed, so connect the dots).
- Improper breathing can deform your face, give you bad breath, constantly stress you out, and lead to energy loss, disease, and death.
- You can use the scientifically validated breathing techniques of monks, top performers, and elite Olympic athletes to reduce stress, improve emotional control, and improve your mental and physical health.
- Practice for as little as 10 seconds a day to learn to control and hack your body to destress, refocus, and control your emotional state.

08

Sources

1. Vasiliev, V., Meredith, S., & Vasiliev, V. (2006). Let every breath ...: Secrets of the russian breath masters. Vasiliev. ISBN: 978-0978104900. **https://www.amazon.com/Every-Breath-Secrets-Russian-Masters/dp/0978104900**
2. Breath and Breathing ." Encyclopedia of Religion. . Retrieved June 17, 2019 from Encyclopedia.com: **https://www.encyclopedia.com/environment/encyclopedias-almanacs-transcripts-and-maps/breath-and-breathing**
3. Zaccaro, A., Piarulli, A., Laurino, M., Garbella, E., Menicucci, D., Neri, B., & Gemignani, A. (2018). How Breath-Control Can Change Your Life: A Systematic Review on Psycho-Physiological Correlates of Slow Breathing. Frontiers in human neuroscience, 12, 353. **https://doi.org/10.3389/fnhum.2018.00353**
4. Brown, R. P., Gerbarg, P. L., & Muench, F. (2013). Breathing practices for treatment of psychiatric and stress-related medical conditions. The Psychiatric clinics of North America, 36(1), 121–140. **https://doi.org/10.1016/j.psc.2013.01.001**
5. Crelin E. S. (1976). Development of the upper respiratory system. Clinical symposia (Summit, N.J. : 1957), 28(3), 1–30. **https://pubmed.ncbi.nlm.nih.gov/1053096/**
6. Guilleminault, C., Partinen, M., Hollman, K., Powell, N., & Stoohs, R. (1995). Familial aggregates in obstructive sleep apnea syndrome. Chest, 107(6), 1545–1551. **https://doi.org/10.1378/chest.107.6.1545**
7. Okuro, R. T., Morcillo, A. M., Sakano, E., Schivinski, C. I., Ribeiro, M. ., & Ribeiro, J. D. (2011). Exercise capacity, respiratory mechanics and posture in mouth breathers. Brazilian journal of otorhinolaryngology, 77(5), 656–662. **https://doi.org/10.1590/s1808-86942011000500020**

8. Jefferson Y. (2010). Mouth breathing: adverse effects on facial growth, health, academics, and behavior. General dentistry, 58(1), 18–80. **https://pubmed.ncbi.nlm.nih.gov/20129889/**
9. Pacheco, M. C., Casagrande, C. F., Teixeira, L. P., Finck, N. S., & de Araújo, M. T. (2015). Guidelines proposal for clinical recognition of mouth breathing children. Dental press journal of orthodontics, 20(4), 39–44. **https://doi.org/10.1590/2176-9451.20.4.039-044.oar**
10. Katz, E. S., Mitchell, R. B., & D'Ambrosio, C. M. (2012). Obstructive sleep apnea in infants. American journal of respiratory and critical care medicine, 185(8), 805–816. **https://doi.org/10.1164/rccm.201108-1455CI**
11. Felcar, J. M., Bueno, I. R., Massan, A. C., Torezan, R. P., & Cardoso, J. R. (2010). Prevalência de respiradores bucais em crianças de idade escolar [Prevalence of mouth breathing in children from an elementary school]. Ciencia & saude coletiva, 15(2), 437–444. **https://doi.org/10.1590/S1413-81232010000200020**
12. Mummolo, S., Nota, A., Caruso, S., Quinzi, V., Marchetti, E., & Marzo, G. (2018). Salivary Markers and Microbial Flora in Mouth Breathing Late Adolescents. BioMed research international, 2018, 8687608. **https://doi.org/10.1155/2018/8687608**

13. Genef Caroline Andrade Ribeiro, Isadora Diniz dos Santos, Ana Claudia Nascimento Santos, Luiz Renato Paranhos, Carla Patrícia Hernandez Alves Ribeiro César, Influence of the breathing pattern on the learning process: a systematic review of literature, Brazilian Journal of Otorhinolaryngology, Volume 82, Issue 4, 2016, Pages 466-478, ISSN 1808-8694, **https://doi.org/10.1016/j.bjorl.2015.08.026**
14. Academy of General Dentistry. (2010, April 6). Mouth breathing can cause major health problems. ScienceDaily. Retrieved June 9, 2021 from **www.sciencedaily.com/releases/2010/04/100406125714.htm**
15. Leng, Y., McEvoy, C. T., Allen, I. E., & Yaffe, K. (2017). Association of Sleep-Disordered Breathing With Cognitive Function and Risk of Cognitive Impairment: A Systematic Review and Meta-analysis. JAMA neurology, 74(10), 1237–1245. **https://doi.org/10.1001/jamaneurol.2017.2180**
16. Fayez Saleh and Wisam Al Hamadi (November 5th 2018). Orthosurgical Correction of Severe Vertical Maxillary Excess: Gummy Smile, Current Approaches in Orthodontics, Belma Işık Aslan and Fatma Deniz Uzuner, IntechOpen, DOI: 10.5772/intechopen.80384. Available from: **https://www.intechopen.com/books/current-approaches-in-orthodontics/orthosurgical-correction-of-severe-vertical-maxillary-excess-gummy-smile**
17. Fan, C., Guo, L., Gu, H., Huo, Y., & Lin, H. (2020). Alterations in Oral-Nasal-Pharyngeal Microbiota and Salivary Proteins in Mouth-Breathing Children. Frontiers in microbiology, 11, 575550. **https://doi.org/10.3389/fmicb.2020.575550**
18. Won, E., & Kim, Y. K. (2016). Stress, the Autonomic Nervous System, and the Immune-kynurenine Pathway in the Etiology of Depression. Current neuropharmacology, 14(7), 665–673. **https://doi.org/10.2174/1570159×14666151208113006**
19. Yaribeygi, H., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017). The impact of stress on body function: A review. EXCLI journal, 16, 1057–1072. **https://doi.org/10.17179/excli2017-480**

20. McKeown, P., O'Connor-Reina, C., & Plaza, G. (2021). Breathing Re-Education and Phenotypes of Sleep Apnea: A Review. Journal of clinical medicine, 10(3), 471. **https://doi.org/10.3390/jcm10030471**

21. Brown, R. P., & Gerbarg, P. L. (2005). Sudarshan Kriya Yogic breathing in the treatment of stress, anxiety, and depression. Part II--clinical applications and guidelines. Journal of alternative and complementary medicine (New York, N.Y.), 11(4), 711–717. **https://doi.org/10.1089/acm.2005.11.711**

22. Critchley, H. D., Nicotra, A., Chiesa, P. A., Nagai, Y., Gray, M. A., Minati, L., & Bernardi, L. (2015). Slow breathing and hypoxic challenge: cardiorespiratory consequences and their central neural substrates. PloS one, 10(5), e0127082. **https://doi.org/10.1371/journal.pone.0127082**

23. Telles, S., Naveen, K. V., & Dash, M. (2007). Yoga reduces symptoms of distress in tsunami survivors in the andaman islands. Evidence-based complementary and alternative medicine : eCAM, 4(4), 503–509. **https://doi.org/10.1093/ecam/nem069**

24. Ma, X., Yue, Z. Q., Gong, Z. Q., Zhang, H., Duan, N. Y., Shi, Y. T., Wei, G. X., & Li, Y. F. (2017). The Effect of Diaphragmatic Breathing on Attention, Negative Affect and Stress in Healthy Adults. Frontiers in psychology, 8, 874. **https://doi.org/10.3389/fpsyg.2017.0087**

25. World Health Organization. Guidelines for the management of conditions specifically related to stress [Internet]. Geneva: 2013 . Available from: **http://apps.who.int/iris/bitstream/10665/85119/1/9789241505406_eng.pdf?ua=1**

26. Yu, X., Fumoto, M., Nakatani, Y., Sekiyama, T., Kikuchi, H., Seki, Y., Sato-Suzuki, I., & Arita, H. (2011). Activation of the anterior prefrontal cortex and serotonergic system is associated with improvements in mood and EEG changes induced by Zen meditation practice in novices. International journal of psychophysiology : official journal of the International Organization of Psychophysiology, 80(2), 103–111. **https://doi.org/10.1016/j.ijpsycho.2011.02.004**

27. Lehrer, P., Kaur, K., Sharma, A., Shah, K., Huseby, R., Bhavsar, J., & Zhang, Y. (2020). Heart Rate Variability Biofeedback Improves Emotional and Physical Health and Performance: A Systematic Review and Meta Analysis. Applied psychophysiology and biofeedback, 45(3), 109–129. **https://doi.org/10.1007/s10484-020-09466-z**

28. The rhythm of memory: how breathing shapes memory function, Detlef H. Heck, Robert Kozma, and Leslie M. Kay, Journal of Neurophysiology 2019 122:2, 563-571. **https://doi.org/10.1152/jn.00200.2019**

29. Zelano, C., Jiang, H., Zhou, G., Arora, N., Schuele, S., Rosenow, J., & Gottfried, J. A. (2016). Nasal Respiration Entrains Human Limbic Oscillations and Modulates Cognitive Function. The Journal of neuroscience : the official journal of the Society for Neuroscience, 36(49), 12448–12467. **https://doi.org/10.1523/JNEUROSCI.2586-16.2016**

30. Gothe, N. P., & McAuley, E. (2015). Yoga and Cognition: A Meta-Analysis of Chronic and Acute Effects. Psychosomatic medicine, 77(7), 784–797. **https://doi.org/10.1097/PSY.0000000000000218**

31. Salyers, M. P., Hudson, C., Morse, G., Rollins, A. L., Monroe-DeVita, M., Wilson, C., & Freeland, L. (2011). BREATHE: a pilot study of a one-day retreat to reduce burnout among mental health professionals. Psychiatric services (Washington, D.C.), 62(2), 214–217. **https://doi.org/10.1176/ps.62.2.pss6202_0214**

32. Yu, W. J., & Song, J. E. (2010). Journal of Korean Academy of Nursing, 40(3), 442–452. **https://doi.org/10.4040/jkan.2010.40.3.442**

33. Siepmann, M., Aykac, V., Unterdörfer, J., Petrowski, K., & Mueck-Weymann, M. (2008). A pilot study on the effects of heart rate variability biofeedback in patients with depression and in healthy subjects. Applied psychophysiology and biofeedback, 33(4), 195–201. **https://doi.org/10.1007/s10484-008-9064-z**

34. Katzman, M. A., Vermani, M., Gerbarg, P. L., Brown, R. P., Iorio, C., Davis, M., Cameron, C., & Tsirgielis, D. (2012). A multicomponent yoga-based, breath intervention program as an adjunctive treatment in patients suffering from generalized anxiety disorder with or without comorbidities. International journal of yoga, 5(1), 57–65. **https://doi.org/10.4103/0973-6131.91716**
35. Granath, J., Ingvarsson, S., von Thiele, U., & Lundberg, U. (2006). Stress management: a randomized study of cognitive behavioural therapy and yoga. Cognitive behaviour therapy, 35(1), 3–10. **https://doi.org/10.1080/16506070500401292**
36. Dhawan, A., Chopra, A., Jain, R., Yadav, D., & Vedamurthachar (2015). Effectiveness of yogic breathing intervention on quality of life of opioid dependent users. International journal of yoga, 8(2), 144–147. **https://doi.org/10.4103/0973-6131.154075**
37. Fumoto, M., Sato-Suzuki, I., Seki, Y., Mohri, Y., & Arita, H. (2004). Appearance of high-frequency alpha band with disappearance of low-frequency alpha band in EEG is produced during voluntary abdominal breathing in an eyes-closed condition. Neuroscience research, 50(3), 307–317. **https://doi.org/10.1016/j.neures.2004.08.005**
38. Kozasa, E. H., Santos, R. F., Rueda, A. D., Benedito-Silva, A. A., De Ornellas, F. L., & Leite, J. R. (2008). Evaluation of Siddha Samadhi Yoga for anxiety and depression symptoms: a preliminary study. Psychological reports, 103(1), 271–274. **https://doi.org/10.2466/pr0.103.1.271-274**

39. Busch, V., Magerl, W., Kern, U., Haas, J., Hajak, G., & Eichhammer, P. (2012). The effect of deep and slow breathing on pain perception, autonomic activity, and mood processing--an experimental study. Pain medicine (Malden, Mass.), 13(2), 215–228. **https://doi.org/10.1111/j.1526-4637.2011.01243.x**
40. Jerath, R., Beveridge, C., & Barnes, V. A. (2019). Self-Regulation of Breathing as an Adjunctive Treatment of Insomnia. Frontiers in psychiatry, 9, 780. **https://doi.org/10.3389/fpsyt.2018.00780**
41. Laborde, S., Hosang, T., Mosley, E., & Dosseville, F. (2019). Influence of a 30-Day Slow-Paced Breathing Intervention Compared to Social Media Use on Subjective Sleep Quality and Cardiac Vagal Activity. Journal of clinical medicine, 8(2), 193. **https://doi.org/10.3390/jcm8020193**
42. Zucker, T. L., Samuelson, K. W., Muench, F., Greenberg, M. A., & Gevirtz, R. N. (2009). The effects of respiratory sinus arrhythmia biofeedback on heart rate variability and posttraumatic stress disorder symptoms: a pilot study. Applied psychophysiology and biofeedback, 34(2), 135–143. **https://doi.org/10.1007/s10484-009-9085-2**
43. Babatunde Aideyan, Gina C. Martin, Eric T. Beeson; A Practitioner's Guide to Breathwork in Clinical Mental Health Counseling. Journal of Mental Health Counseling 1 January 2020; 42 (1): 78–94. **https://doi.org/10.17744/mehc.42.1.06**
44. Gerbarg, Patricia L., and Richard P. Brown, 'Breathing Practices for Mental Health and Aging', in Helen Lavretsky, Martha Sajatovic, and Charles Reynolds III (eds), Complementary and Integrative Therapies for Mental Health and Aging (New York, 2015; online edn, Oxford Academic, 1 Mar. 2016), **https://doi.org/10.1093/med/9780199380862.003.0016**
45. Brown, R. P., Gerbarg, P. L., & Muench, F. (2013). Breathing practices for treatment of psychiatric and stress-related medical conditions. The Psychiatric clinics of North America, 36(1), 121–140. **https://doi.org/10.1016/j.psc.2013.01.001**
46. Biologydictionary.net, 24 Apr. 2019, **https://biologydictionary.net/respiratory-system-fun-facts/**

Breathing is fundamental to life

Breathing is one of the most basic processes of life that we share with so much of the animal world. It directly provides power to our cells and gives us the strength to perform mentally and physically. Start unlocking the power of breathing in your life. Its so easy, it feels amazing, and it provides your mind and body huge benefits like stress relief, better cardiovascular health, and it can even lead to making better decisions! Get started with the Breathe Module now and reap the benefits of better breathing for life!