

BOOK REVIEW

Deep Breathing in Medicine: Historical Perspective

Abstract

Breathing, which entails continuous expansion, contraction, and change, is central to human life. Breathing can interact with other body systems to create positive change, allowing us to influence physiological functions that are typically limited by the body's direct command. Breathing can be used to intentionally affect the sympathetic nervous system, which regulates blood pressure, heart rate, circulation, and other physiological functions. Deep breathing still requires historical explanation despite its extensive background. To demonstrate the chronology of the development of this significant technique that enhances the comfort and functionality of the body's organs, this study documents the history of the deep breathing technique in medicine, including its origins and continuation across civilizations and empires over thousands of years. This study aims to fill the knowledge gap regarding the evolution of deep breathing over time. This study cites numerous publications and studies on breathing and related exercises to show how deep breathing and its exercises have been used throughout history until today.

Key words: Breathing Exercises, Respiration, Complementary Therapies, Deep Breathing, History of Medicine

Received: 2 Feb 2025; Accepted: 9 Sep 2025; Online published: 30 Aug 2026
Research on History of Medicine/ 2026 Aug; 15(3): 285-292.

Mohammed Salih Ibreesam
(M.Sc. Student)¹
Adraa Hussein Shawq (Ph.D.)²

1- Pediatric Nursing, University of Baghdad, Iraq

2- Assistant Professor, Pediatric Nursing, University of Baghdad, Iraq

Correspondence:

Adraa Hussein Shawq
Assistant Professor, Pediatric Nursing,
University of Baghdad, Iraq

e-mail:

adraa.hussein@conursing.uobaghdad.edu.iq

Citation:

Ibreesam, M.S., Shawq, A.H., 2026. Deep Breathing in Medicine: Historical Perspective. *Res Hist Med*, 15(3), pp. 285-292. doi: 10.30476/rhm.2025.105783.1286.

Copyright: © Journal of Research on History of Medicine. This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited non-commercially.



Introduction

The bridge that connects the body and the mind is the breath. It also reflects the inner world, absorbs experiences from the outside world, and can either support us or fail us. Although breathing is vital to life and usually instinctive, it can occasionally signal disease or anxiety. This is precisely when learning therapeutic breathwork—to foster nourishing, healthy breathing—can be truly transformative. (Brems, 2024)

A range of techniques known as breathwork includes controlling one's breathing, particularly to support mental, emotional, and physical well-being. These methods, like alternate nostrils, have developed globally and have intricate historical roots in a variety of traditions, including yoga, scientific/medical researchers and practitioners (e.g., coherent/resonant frequency), psychedelic cultures (e.g., mindfulness connected breathing), and Tibetan Buddhism and breathwork (e.g., vase breathing). Breathing exercises have recently become more well-known in the West because of their purportedly positive impacts on health and wellbeing and the COVID-19 respiratory diseases. (Fincham, et al., 2023)

Mental processes are intimately related to breathing. Breathing is considered a basic function in ancient Eastern cultures. This feature of the majority of meditation techniques is thought to be crucial for achieving the meditative state of awareness. In Western culture, breathing techniques, such as biofeedback, progressive relaxation, and autogenic stimulation, were created independently of any religious or spiritual beliefs or goals. Today, they are mostly employed for therapeutic purposes. These breathing methods, which rely on slowing down and lowering the breathing rate, are frequently referred to as regular breathing. (Zaccaro, et al., 2018)

The main objective of this article is to examine the origins of deep breathing techniques, their development over the ages, their historical significance, and their benefits up to the present day.

Materials and Methods

A systematic literature review was conducted using multiple databases, including PubMed, Scopus, Google Scholar, ResearchGate, and Medline, focusing on sources from 1982 to 2024. Keywords included: deep breathing, breathing exercises, pranayama, qi-gong, ancient medicine, breath control, and diaphragmatic breathing. Efforts were made to include direct classical texts and the earliest documented sources relevant to each culture. Examples include the Yoga Sutras, the Yellow Emperor Classic, and Avicenna's Canon of Medicine.

The collected data were categorized by civilization; a qualitative comparative historical approach was used to study each civilization's concept of breathing within its medical, spiritual, and cultural contexts. The sources were arranged chronologically and analyzed thematically to trace their development and influence across civilizations.

Result

As demonstrated in the research findings, there is historical evidence and interest in the mechanism of slow and deep breathing techniques throughout history, civilizations, and eras, including ancient Indian and Chinese civilizations, Persia, and European civiliza-



tions, as well as in practices such as yoga, among others. These techniques have proven effective in improving healing, health, and other aspects of well-being. This interest has extended to recent centuries and continues to the present day, and these techniques have been used to treat and alleviate respiratory diseases and symptoms.

Deep Breathing Technique in Medicine

Spirit and breath are interchangeable terms in several languages. *Pneuma*, for instance, means breath in Greek. It can also imply spirit and refers to a breath or puff of air. *Spiritus* implies both breath and spirit in Latin. In Hebrew, the word *Ruach* generally implies. “*Spirit*,” implying “*breathing*.” In addition to meaning wind, inspiration, rest, relaxation, returning home, happiness, and more, it also signifies deeply and soulfully. *Prana* denotes breath, life force, and vital energy in Sanskrit. *Pranayama* in yoga refers to the process of expanding the breath and life force. (Hardacre, 2014)

The foundation of the spiritual self is found in the act of breathing in many cultures worldwide. Christians talk about breathing the Holy Spirit into themselves, while Hindus talk about *prana*, Chinese people talk about *chi*, and Japanese people talk about *ki*. To baptize people, the ancient Essenes submerged them in water until they were almost suffocated, then breathed fresh life into them intermittently. Additionally, breathing has been central to Zen Buddhism, yoga meditation, and indigenous shamanic rituals. The word spirit actually comes from the Latin word *spiritus*, which means “*breath*” or “*life breath*”. (Young, et al., 2010)

For thousands of years, spiritual seekers, mystics, and yogis have used the power of breath to transform their consciousness. By controlling their breathing, they were able to access various levels of awareness and master their minds. They discovered that deep healing was possible through breathwork. Yogis believed that many illnesses were linked to breathing irregularities. Breathing techniques have been incorporated into exercise and relaxation regimens for thousands of years, even before the rise of the Roman Empire. While breathing naturally sustains life itself, it can also be used to enrich the mind, emotions, and soul on a deeper level. In many cultures, the words for breath carry deeper meanings. Over 5,000 years of self-awareness and self-discipline have led yogis to understand that deeper breathing yields profound results (Hardacre, 2014).

In the past, civilizations practiced deep breathing techniques, including:

1- Ancient China

Early Taoist and Buddhist practices (c. 2600 BC onwards) include the Huangdi Neijing (Yellow Emperor’s Inner Canon) (c. 2600–200 BC), evidence of Daoist and QiGong (pre-Han and Han dynasties), as well as the White Lotus Teachings (Song dynasty, 960–1279 AD). Terms such as *qi* (vital energy) and *qigong* (energy cultivation) were used during these eras. Breathing was central to Taoist philosophy and later Buddhist meditation practices. Breathing was used to regulate internal energy flows (*qi*), promote longevity, and achieve spiritual balance. Chinese medicine used breathing techniques to improve organ function, treat respiratory and nervous disorders, and restore energy balance in the body. Practitioners believed that breath control brought about harmony between mind and body. (van der Veer, 2009; Tipton, 2014)



2- Ancient India: Yogic and Vedic Traditions (c. 1500 BCE and later)

In these traditions, terms, such as *prana* (life force) and *pranayama* (breath control and expansion) were used.

In later Vedic and yogic traditions, breath (*prana*) was viewed as the manifestation of life energy. Spiritual practices focused on breath control as a means to self-realization, inner peace, and enlightenment. (Jayawardena, et al., 2020; Brems, 2024))

Pranayama was recommended for balancing bodily functions, improving concentration, relieving anxiety, and treating respiratory and cardiovascular disorders. Ancient yogis associated specific breathing patterns with the regulation of physical health and emotional states. (Jayawardena, et al., 2020; Zaccaro, et al., 2018)

3- Ancient Greece and Rome (c. 500 BC - 400 AD)

In ancient Greece and Rome, the term *pneuma* (soul/spirit/vital force) reflected the philosophical association between breathing, life force, and consciousness. The Greeks believed that air carried vital spirits essential for life and regulating temperament (Young, et al., 2010). Breath was associated with the balance of the body's humors. Both Hippocrates and Galen emphasized breathing patterns as important diagnostic tools and as a means of regulating health (Tipton, 2014).

4- Early Persian texts on humoral medicine and the diagnosis of respiration appear in Avicenna's Canon of Medicine (980–1037 CE)

Terms such as *soul* and *spirit* (referred to as *nafs* in ancient Semitic contexts) were used. Persian scholars collected and translated knowledge from Greek, Indian, and Islamic sources, integrating it with their own experiences. Respiration was viewed as a diagnostic indicator linked to emotional, spiritual, and physiological balance (Mahlooji and Abdoli, 2021; Abdolahinia, et al., 2016).

Avicenna described breathing patterns and their relationship to psychological and physical disorders, focusing on both the voluntary and involuntary components of respiration. Respiration was assessed diagnostically and manipulated to achieve therapeutic outcomes. (Gutas, 1998; Mahlooji and Abdoli, 2021)

5- Europe in the Middle Ages and Renaissance (17th-19th centuries AD)

The 19th century saw the emergence of works such as Manuel García II's "*Mesa de Vos*" techniques and Dr. M. Roth's *The Prevention and Treatment of Many Chronic Diseases by Movement* (1851), which introduced concepts like controlled breathing and vocal breathing techniques. During this period, breathing techniques evolved from religious/spiritual practices to secular and therapeutic applications, particularly in voice training and physical therapy (Lyle, 2011; Roth, 1851). They were used in pulmonary rehabilitation, voice therapy, and to enhance lung capacity. Techniques such as diaphragmatic breathing became part of respiratory therapy and physical rehabilitation programs. (Lyle, 2011)

6- Modern Western Medicine (20th and 21st Centuries AD)

Terms like *slow deep breathing (SDB)* and *diaphragmatic breathing (DB)* have emerged in modern medical practice. Growing scientific interest in these techniques is reflected



in research across physiological psychology, neuroscience, and behavioral medicine (Joseph, et al., 2022; Hamasaki, 2020). Deep breathing is now evidence-based for reducing stress, anxiety, high blood pressure, and pain, and improving respiratory conditions. It is widely integrated into cognitive behavioral therapy, mindfulness, and rehabilitation protocols. (Zaccaro, et al., 2018; Jayawardena, et al., 2020)

Numerous psychospiritual breathing techniques have since emerged. These methods, which frequently included guided imagery, music, hypnosis, and regulated breathing, were employed in trauma therapy, self-discovery, and emotional catharsis. The psychological and physiological advantages of controlled breathing have been validated by recent research:

- *Slow deep breathing (SDB)* lowers stress hormones and enhances vagal tone. (Joseph, et al., 2022)
- *Diaphragmatic breathing* increases pain tolerance, decreases sympathetic arousal, and improves oxygenation. (Hamasaki, 2020)

Discussion

This study aimed to provide a historical overview of the development and use of deep breathing techniques across different civilizations, focusing on their medical, spiritual, and cultural contexts. The findings revealed that, despite temporal and geographical differences, most civilizations recognized the importance of self-control in maintaining health and psychological well-being. However, differences were observed in terms of conceptual frameworks, techniques, and desired outcomes.

In ancient India, China, Persia, Greece, and later Europe, deep breathing was viewed as more than just a physiological process. Each civilization developed unique models for understanding and applying self-control. In ancient Indian traditions, particularly in Vedic texts and yoga philosophy, deep breathing (pranayama) was considered a means of regulating the flow of prana (life energy). The primary goal was to achieve mental clarity, spiritual enlightenment, and physical health (Jayawardena, et al., 2020). In ancient Chinese civilization, self-control was an integral part of qigong and Daoist practices, with an emphasis on regulating the flow of qi (vital energy). The goal was to harmonize the body with nature, prolong life, and prevent disease (Tipton, 2014; van der Veer, 2009).

Similarly, Persian and Islamic medicine, particularly in the works of Avicenna, considered breathing (nafs) a diagnostic and therapeutic tool. Breathing patterns were classified and linked to physical and psychological health conditions. Avicenna discussed voluntary and involuntary breathing and its role in maintaining internal balance (Abdolahinia, et al., 2016). In ancient Greek medicine, represented by Hippocrates and Galen, breathing (nafs) was considered a vital spirit necessary for life, playing a role in balancing the body's moods and emotional states (Young, et al., 2010). In European medical practice (17th–19th centuries), breath control became part of traditional medical interventions, particularly in voice therapy, pulmonary rehabilitation, and kinesiology, as evidenced by the works of Garcia II and Roth (1851) (Lyle, 2011; Roth, 1851). Finally, modern medicine has adopted deep breathing techniques, such as diaphragmatic breathing and slow deep breathing (SDB), as evidence-based interventions to reduce stress, anxiety, and chronic pain, supported by systematic reviews and clinical trials (Zaccaro, et al., 2018; Joseph, et al., 2022).



The most notable finding of this review was the similarity of philosophical understandings of breathing across civilizations. For example, breathing was considered a life force, with virtually all traditions considering it essential for sustaining life, whether called prana, chi, breath, or pneuma. There was also a universal recognition of the influence of breathing on both physiological and psychological states. Breath control was also an integral part of broader therapeutic or spiritual systems, such as yoga, Chinese medicine, Islamic medicine, and Greek humoral theory. These commonalities suggest that ancient civilizations independently reached similar conclusions about the pivotal role of breathing in health. As for the differences between civilizations, despite the similarities, there were fundamental differences, including philosophical foundations. Indian and Chinese approaches were deeply rooted in spiritual and cosmological frameworks, while Greek, Persian, and later European traditions emphasized the physiological and diagnostic functions of breathing. The diversity of techniques also varied, with practices ranging from alternate nostril breathing in yoga, to dynamic breathing with movement in qigong, to diagnostic breath control in Persian medicine, and breath control for sound projection in European medicine. Historical evidence supports the possibility of knowledge exchange and mutual influence between these civilizations, as the Silk Road trade routes facilitated intellectual exchange between India, Persia, and China (van der Veer, 2009).

During the Islamic Golden Age, texts from Greek, Indian, and Chinese medical traditions were translated and incorporated into Islamic medical practice. (Gutas, 1998). During the Renaissance, European scholars were able to access Arabic translations of Greek and Indian texts, which may have contributed to the transfer of concepts of breathing to Western medicine (Tipton, 2014). However, convergent evolution is also likely to have occurred, with different cultures independently developing similar concepts as a result of the universal human experience of breathing.

Recent research also empirically validates many of these ancient ideas, demonstrating the physiological effects of slow, controlled breathing on the autonomic nervous system, heart rate variability, and the regulation of stress hormones (Zaccaro, et al., 2018; Joseph, et al., 2022).

Clinical trials have confirmed that pranayama, qigong, and diaphragmatic breathing improve respiratory health, reduce anxiety, and improve cardiovascular function (Hamasaki, 2020).

Conclusion

Since ancient times, breath has moved between the realms of medicine and mysticism. What was once considered a sacred rite is now acknowledged as a scientifically backed method for managing stress, improving health, and fostering well-being. The convergence around breath—from ancient yogis and Daoist monks to modern neuroscientists and doctors—attests to its ageless and universal potency.

For thousands of years, spiritual seekers, mystics, and yogis have used the power of breathing for healing and health purposes. There has been the development of breathing techniques, such as breathing exercises known as qigong, which cultivate the ability to harness the body's vital energy (qi) and create breathing techniques such as biofeedback, progressive relaxation, and autogenic stimulation independent of any religious or spiritual beliefs or goals. Breathing techniques, such as breath holding, slow inhalation,

and slow exhalation, have continued to evolve over the centuries. As early as 400 years ago, in the 18th and 19th centuries, and in the 1950s, breath holding was used for healing and health purposes. To this day, breathing exercises have become increasingly popular in the West due to their purported positive effects on health, well-being, and respiratory diseases.

Authors' Contribution

Mohammed S. I.: conceptualization, literature synthesis, methodology, and analysis data. Adraa H. S: manuscript preparation, methodology, manuscript review. All authors read and approved the final version of the work.

Funding

None.

Conflict of Interest

None.

References

- Abdolahinia, A., et al., 2016. Breathlessness from the perspective of the Persian medicine. *Tanafos*, 15(4), pp. 191–196.
- Brems, C., 2024. *Creating a Context for Breathwork*. In: Therapeutic Breathwork. Switzerland: Springer Nature. pp. 3–37. https://doi.org/10.1007/978-3-031-66683-4_1.
- Fincham, G.W., et al., 2023. Effect of breathwork on stress and mental health: A meta-analysis of randomised-controlled trials. *Scientific Reports*, 13(1), p. 432. <https://doi.org/10.1038/s41598-022-27247-y>.
- Gutas, D., 1998. *Greek thought, Arabic culture: The Graeco-Arabic translation movement in Baghdad and early 'Abbāsid society. 2nd–4th/8th–10th centuries*. England: Routledge. pp. 245–251.
- Hamasaki, H., 2020. Effects of Diaphragmatic Breathing on Health: A Narrative Review. *Medicines*, 7(10), p. 65. <https://doi.org/10.3390/medicines7100065>.
- Hardacre, H., 2014. *The History of Reiyukai*. Chapter One. In: Lay Buddhism in Contemporary Japan. Princeton: Princeton University Press, pp. 10–53. <https://doi.org/10.1515/9781400855377.10>
- Jayawardena, R., et al., 2020. Exploring the therapeutic benefits of Pranayama (yogic breathing): A systematic review. *Int J Yoga*, 13(2), p. 99. https://doi.org/10.4103/ijoy.IJOY_37_19.
- Joseph, A.E., Moman, R.N., Barman, R.A., Kleppel, D.J., Eberhart, N.D., Gerberi, D.J., Murad, M.H., and Hooten, W.M., 2022. Effects of Slow Deep Breathing on Acute Clinical Pain in Adults: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *J Evidence-Based Integrative Medicine*, 27, 2515690. <https://doi.org/10.1177/2515690X221078006>.
- Lyle, H., 2011. A Historical Look at Breathing Methods for Singing. *Voice and Speech Review*, 7(1), pp. 310–317. <https://doi.org/10.1080/23268263.2011.10739560>.
- Mahlooji, K., and Abdoli, M., 2021. The Report of Ali ibn Sahl Rabban al-Tabari about Jondishapour (Gandhi Shapur) Hospital in the 9th Century. *Res Hist Med*, 10(3), pp. 199–202.
- Roth, M., 1851. *The prevention and cure of many chronic diseases by movements*. London: John Churchill.
- Tipton, C.M., 2014. The history of “Exercise Is Medicine” in ancient civilizations. *Advances in Physiology Education*, 38(2), pp. 109–117. <https://doi.org/10.1152/advan.00136.2013>.



van der Veer, P. 2009. *Global breathing: Religious utopias in India and China*. In: T.J. Csordas, ed., *Transnational transcendence: Essays on religion and globalization*. California: University of California Press. pp. 263–278. <https://doi.org/10.2307/j.ctv11hp8t5.14>

Young, J.S., et al., 2010. Breathwork as a Therapeutic Modality: An Overview for Counselors. *Counseling and Values*, 55(1), pp. 113–125. <https://doi.org/10.1002/j.2161-007X.2010.tb00025.x>.

Zaccaro, A., Piarulli, A., Laurino, M., Garbella, E., Menicucci, D., Neri, B., and 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>.

