

Effect Of Pranayama In Relieving Stress: A Review Article

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Abstract:

In order to preserve sound physical and mental wellbeing, Pranayama is a subset of yoga practise, is highly beneficial to humanity. Prana is defined as life or energy, Ayama implies regulating the flow of life through the body. Pranayama helps to regulate all of the breathing processes, including inspiration, expiration, and retention. Pranayama is one of the yogic techniques for healthy individuals which can produce various physiological responses for relaxation, stress management, control of psychophysiological conditions, breathing strategies. Various breathing habits and manoeuvres may impact the autonomic nervous system significantly and may intensify or decrease adverse reactions to stressors.

Keywords- Yoga, Pranayam, Stress

INTRODUCTION-

Yoga is an ancient discipline aimed at bringing harmony and health to the individual's physical, mental, emotional & spiritual aspects. In India it has long been a traditional practice that has become more & more prevalent in western society. *Pranayama* is the next important step in the practice of *Yoga*. *Tejobindu Upanisad* keeps *Pranayama* as step Four in its fifteen phase schedule of *Yoga* practice.¹ The *Astangayoga* of *Patanjali* also considers *Pranayama* as step Four in the comprehensive practice of *Yoga*. The *Upanishads* describing *Sadanga Yoga*,² place *Pranayama* as step one, two or three in the comprehensive practice of *Yoga*.³ The *Mandala-Brahma*, *Amrtanad*, *Yogakundali*, *Darsanand Sadilya Upanisads* describe the *Recaka*, *Puraka* and *Kumbhaka* components of *Pranayama*. Some times in view of three dimensions *Pranayama* is considered *Trividha*.

Meaning of Pranayama

Pranayama is made up of two words "*Prana*" meaning that the root word *an* (to breath or to live) is added to *feel*, producing fresh life with a new meaning that fills with breath. *Pranayama* is breath control⁴. In the body, "*Prana*" is breath or bioenergy. *Prana* represents the pranic energy responsible for life focus at subtle stages, and *ayama* means power. Therefore, "Management of Air" is *Pranayama*. The rhythms of pranic energy can be controlled with *pranayama* and a balanced mind & body can be achieved.⁵

In Pranayama mind is passively attached to the *Pranayamic* process, mind becomes calm, quiet & tranquil because of slow smooth & prolonged breathing.⁶ With the help of *pranayama* the most wonderful mirror of *chittai.e* the thinking of mind becomes perfectly clear.⁷ *Pranayama* is essentially a set of exercises according to the *yogic* point, which seeks to add more oxygen to the blood and brain. Not only does it automate blood supply, but it also governs the proper functioning of thoughts and desires. The practise of this *asana* reduces the barrier that burdens the flow of *prana*. It offers poise an immense strength of will. It generates a lot of courage inside a person and will power. The process of inspiration & expiration and controlling our breath is known as *pranayama*.⁸ *Pranayama* consists of 3 stages mainly *Puraka*, *Kumbhaka* & *Rechaka*. ordinarily *Puraka* refers to an input of atmospheric air inside the body, *Kumbhaka* means the retention of external air inside the body and *Recaka* refers to the exhalation of the air inhaled earlier.¹ On the other hand in certain *Upanisads* the terms, *Puraka*, *Kumbhaka* and *Recaka* have been considered in certain spiritual dimensions where the term, *Puraka* is used to certain Godly state – *Brahmaivasmitya Vrttih Purako Vayurucyate* (Tejobindu 1/23-33). And a continuum of such an affirmation is considered *Kumbhaka* while an avoidance of *Pranayama* is considered *Recaka*. The *Varaha-upanisad* states that all matters contained in the external world are *Recaka* while the materials available in the *Sastra* fall in the category of the *Puraka* and the self-experience is *Kumbhaka*. *Dhyana Vinodu Upanisad* designate *Puraka*, *Kumbhaka* and *Recaka* as *Brahma*, *Visnu* and *Rudra* respectively.¹⁰ According to synonymous to the state of realization of the illusive nature of the universe and the state the *Tejobindu Upanisad* considers *Pranayama* as a state of cessation of all *Vrittis* – “*Nirodhah sarvavrttinam Pranayam*”.

According to *hathayoga*, *Pranayama* are divided into 3 types according to symptoms appearance these are, *Kanishtha* pranayama in these there is appearance of *sweda*, *madhyama pranayama*, there is appearance of *kampa*, *uttama pranayama*, achievement of place.¹²

In certain *Upanisads* *Pranayama* and *Kumbhaka* have been used as synonymous. In this concept of *Pranayama* (*Kumbhaka*) one finds two types as described below:

- 1) *Sahita* (*Recaka-Purakayuktakumbhaka, pranayama*) further classified into 1) *Surya Bheda*, 2) *Ujjayai* 3) *Sitali and Bhastika*.
- 2) *Kevala* (*Recaka – Puraka Viharjita Kumbhaka Pranayama*). Among these the *Kevala Kumbhaka* has been considered as the most difficult practice and it has been admitted to be one of the higher practices. One who is able to practice *Kevala Kumbhaka* successfully, his *Kumbhaka* is activated.¹¹

In the context of *Pranayama*, *Nadis* have been considered to be of great significance – ‘*Pranayama svandibhih tasmannadih pracaksate*’. Different *Upanisads* have described the *Nadi Cakra* in the context of *Pranayama* and *Pranayama* has been considered as *Nadi Suddhi*. Different texts have described different number of *Nadis* using different names. Amongst these *Susumna*, *Pingla* and *Ida* have been different considered important, *Susumna* being the most important. It has been postulated that the ten-fold *Vayu* flows through these *Nadis* – ‘*Avama – tasunadis, caranti Dasa Vayavh*’ (*Varah.5:31*). It has been further stated that *Nadi Suddhi* leads to healthful life with improved digestion and metabolism. It also delays the onset of ageing. *Darsanoupanisad* has discussed in greater detail various types of *Nadi Suddhi* and considers it as the promoter of *Jivanamukri*.

The *Pranayama* (*Prana*= Breath + *Ayam*=Pause) is concerned with the controlled breathing exercise and in a border sense the control of the vital force i.e. *Prana*. Basically *Pranayama* consists of three phases namely.

1) *Purka* (Inhalation), 2) *Kumbhaka* (Pause or breath holding) and 3) *Recaka* (Exhalation).¹ The best proportion of time to be allotted to the three steps is 1:4:2 respectively for inhaling, controlling and exhaling the breath. The practice of breath control must be under the guidance of an experienced *Yogin*. *Kumbhaka* may be practiced during *Recaka* phase (*Vahya Kumbhaka*) or in the *puraka* phase (*Abhyantara Kumbhaka*).⁹

Objective of Pranayama:

Pranayam is vital life force that exists in the body to stimulate, communicate, regulate and control our body

Importance of *Pranayama*:

Pranayama aims to eliminate various kinds of illnesses. Moreover, since *pranayama* (breathing) is the basic means of supplying *prana* (oxygen) to our body and its various organs, it is necessary for our survival. Another important explanation why *pranayama* is necessary is because breathing is one of the most important ways we can get rid of our body's waste products and toxins.

The practice of *asana* tuned to *pranayama* the breath builds internal heat and *prana* (vital energy). This method extracts impurities in the body and transforms blockages.

Pranayama is an art and has strategies for consciously, rhythmically and intensively shifting and extending the respiratory organs. It consists of long, sustained subtle flow of inhalation (*puraka*), exhalation (*rechaka*) and retention of breath (*kumbhaka*). *Puraka* stimulates the system, *rechaka* throws out vitiated air and toxins; *kumbhaka* distributes the energy throughout the body. The movements include horizontal expansion (*dairghya*), vertical ascension (*aroha*) and circumferential extension (*visalata*) of the lungs and the rib cage. This disciplined breathing helps the mind to concentrate and enables the *sadhaka* to attain robust health and longevity.").

Evidences of stress related health conditions are available from GBD studies¹³⁻¹⁷. Nagdiv reported a study of emotional intelligence, perceived stress and coping in final year medical undergraduates¹⁸. Other related articles were reported by Gaidhane et al¹⁹, Patnaik et al²⁰ and Khatib et al.^{21,22,23,24}.

Type of *Pranayama*:-

Pranayama is described to be of many kinds.² but primarily eight types of *Pranayama* have been described as mentioned below:

1. *Ujjai* i.e. to pronounce a loud.
2. *Suryabhedana* i.e. inhalation through *Surya Nadi* (Right nostril).
3. *Sitkari* i.e. producing typical sneezing sound during inspiration.
4. *Sitali* i.e. a cooling procedure by inhaling with a protruded tongue and beak like opening of the lips.
5. *Bhastrika* i.e. breathing like fellows
6. *Bhramari* i.e. imitating humming of bees during inhalation and exhalation.
7. *Murcoha* i.e. rendering the mind passive
8. *Plavini* i.e. enabling the person to float on water while practicing *Pranayama*.

Though *Pranayama* is primarily a system of breathing exercise, it is practiced in a specified manner and accordingly it yields comprehensive effects including systemic physiological vitalization and psychosomatic relaxation.

CONCLUSION-

Many research findings suggested that *pranayama* is very simple to instruct, it can be performed in all circumstances without any investment, it shows significantly psychophysiological effects that may be related to different types of *pranayama*, is free from side effects, and is a simply behavioural process comfortable for virtually any medical condition, it's like that we will see a continued application process of *pranayama* in clinical level and an related growing body of biomedical research to validate its real effectiveness. It is acceptable that, in future, health-care providers will confidently prescribe & advise specific yogic breathing procedure for specific conditions and according to individuals.

REFERENCES

1. Prof. (Dr) Satyendra Prakash Mishra, Yoga and Ayurveda, Art & ethics of yoga, Choukhamba publication, 2015, Chapter no 4, page no 49
2. Prof. (Dr) Satyendra Prakash Mishra, Yoga and Ayurveda, Art & ethics of yoga, Choukhamba publication, 2015, Chapter no 4, page no 49
3. Prof. (Dr) Satyendra Prakash Mishra, Yoga and Ayurveda, Art & ethics of yoga, Choukhamba publication, 2015, Chapter no 4, page no 49

4. Dr.Mangalagawri V. Rao,The essence of Yoga,astanga yoga, choukhamba orientalia,2011,Chapter no-3,page no125-126.
5. Venice Mairya David, International ,Journal of Science and Research (IJSR), ISSN: 2319-7064, Volume 9 Issue 4, April 2020,Page no 97-99.
6. Dr Ravi R. Javalgekar,The yoga science for everyone,Methods of yoga, choukhamba publication,2005,Chapter no 3, Page no 62.
7. Prof SatyendraPrakashMishra,Yoga and Ayurveda, yoga as a health science, choukhamba publication,2011,Chapter no 5,page no 80.
8. Ahmed, M.S., Naznin, N. and Alam, M.J. 2020. Adaptation of Apraxia Battery for Assessing the Patient with Apraxia. *Journal of Medical Research and Health Sciences*. 3, 10 (Oct. 2020), 1114-1123. DOI:<https://doi.org/10.15520/jmrhs.v3i10.263>.
9. Drkashinathsamgandi,Swasthvrittassudha,ashtangyoga,Jagdish Sanskrit Pustakalaya,2015,chapter no 21,page no 214.
10. Dr. (Mrs.) UzomaOguduAja-Okorie (2017) Secondary School Male Dropouts in Ohaozara Local Government Area: Causes, Implications For Students And Intervening Measures For Educational Administrators International Journal Of Scientific Research And Education.05,05 (May2017) 6486-94
11. Rafat Khan, AshaAgarwal (2018) Ameliorative Effect of Vitamin C And E Against The Toxicity of Nitrogen Dioxide Gas on Clotting Factors in Albino Rats International Journal Of Scientific Research And Education.06,09 (Sep-18) 8023-28
12. Dr. Vijay Patrikar,Sampoornaswasthvrittavigyana,Pranayama,shriDhanvantarai books publishers,2019, chapter no 23,Page no 252
13. Prof DrsubhashRanade,A textbook of swasthvritta,Pranayama, choukhamba Sanskrit pratishthan,2017,chapter no 4, page no 309.
14. Dr. sarveshkumarAgrawal,Pranayama the modular of life, Choukhamba orientalia,Varanasi,,2007,chapter no 6,page no 57.
15. P. Hariprasadrtriphati,Hathyogpradipa, choukhambakrishnads academy,2010,chapter no Dyudiyapudesh,page no 37.
16. ElShanti, A., EL syedEtewa, B., Dhair, A. and Abo Samra, N. “ Risk Factor of Intra-Uterine Fetal Death in Gaza Governmental Hospitals:Case-Control Study (2018-2019). *Journal of Medical Research and Health Sciences*. 3, 10 (Oct. 2020). DOI:<https://doi.org/10.15520/jmrhs.v3i10.275>.
17. James, Spencer L, Chris D Castle, Zachary V Dingels, Jack T Fox, Erin B Hamilton, Zichen Liu, Nicholas L S Roberts, et al. “Estimating Global Injuries Morbidity and Mortality: Methods and Data Used in the Global Burden of Disease 2017 Study.” *Injury Prevention* 26, no. Supp 1 (October 2020): i125–53. <https://doi.org/10.1136/injuryprev-2019-043531>.
18. James, Spencer L, Chris D Castle, Zachary V Dingels, Jack T Fox, Erin B Hamilton, Zichen Liu, Nicholas L S Roberts, et al. “Global Injury Morbidity and Mortality from 1990 to 2017: Results from the Global Burden of Disease Study 2017.” *Injury Prevention* 26, no. Supp 1 (October 2020): i96–114. <https://doi.org/10.1136/injuryprev-2019-043494>.
19. Murray, Christopher J L, Cristiana Abbafati, Kaja M Abbas, Mohammad Abbasi, Mohsen Abbasi-Kangevari, FoadAbd-Allah, Mohammad Abdollahi, et al. “Five Insights from the Global Burden of Disease Study 2019.” *The Lancet* 396, no. 10258 (October 2020): 1135–59. [https://doi.org/10.1016/S0140-6736\(20\)31404-5](https://doi.org/10.1016/S0140-6736(20)31404-5).
20. Murray, Christopher J L, Aleksandr Y Aravkin, PengZheng, Cristiana Abbafati, Kaja M Abbas, Mohsen Abbasi-Kangevari, FoadAbd-Allah, et al. “Global Burden of 87 Risk Factors in 204 Countries and Territories, 1990–2019: A Systematic Analysis for the Global Burden of Disease Study 2019.” *The Lancet* 396, no. 10258 (October 2020): 1223–49. [https://doi.org/10.1016/S0140-6736\(20\)30752-2](https://doi.org/10.1016/S0140-6736(20)30752-2).
21. Vos, Theo, Stephen S Lim, Cristiana Abbafati, Kaja M Abbas, Mohammad Abbasi, MitraAbbasifard, Mohsen Abbasi-Kangevari, et al. “Global Burden of 369 Diseases and Injuries in 204 Countries and Territories, 1990–2019: A Systematic Analysis for the Global Burden of Disease Study 2019.” *The Lancet* 396, no. 10258 (October 2020): 1204–22. [https://doi.org/10.1016/S0140-6736\(20\)30925-9](https://doi.org/10.1016/S0140-6736(20)30925-9).

22. Nagdiv, Amit A. P. "A Study of Emotional Intelligence, Perceived Stress and Coping in Final Year Medical Undergraduates." *INDIAN JOURNAL OF PSYCHIATRY* 61, no. 9, 3 (January 2019): S464–65.
23. Smith, R. G. (2020). An Argument for the Use of Amantadine to Treat Complex Regional Pain Syndrome. *Journal of Current Medical Research and Opinion*, 3(10), 692–701. <https://doi.org/10.15520/jcmro.v3i10.353>
24. Gaidhane, S., N. Khatib, Q.S. Zahiruddin, A. Gaidhane, S. Telrandhe, and P. Godhiwal. "Depression, Anxiety and Stress among the General Population in the Time of COVID-19 Lockdown: A Cross-Sectional Study Protocol." *International Journal of Research in Pharmaceutical Sciences* 11, no. Special Issue 1 (2020): 360–64. <https://doi.org/10.26452/ijrps.v11iSPL1.2726>.
25. Patnaik, K.C., and D. Rajput. "Role of Antioxidant Herbs and Yoga Practices in Prevention of Infectious Diseases with Special Reference to Covid-19 Pandemic." *International Journal of Research in Pharmaceutical Sciences* 11, no. Special Issue 1 (2020): 317–22. <https://doi.org/10.26452/ijrps.v11iSPL1.2719>.
26. Khatib MN, Kirubakaran R, Gaidhane S, Shankar AH, Quazi Syed Z. Yoga for improving functional capacity, quality of life and cardiovascular outcomes in people with heart failure. *Cochrane Database of Systematic Reviews* [Internet]. 2017;2017(7). <https://doi.org/10.1002/14651858.CD012015.pub2>.
27. DeepaliGiri, SonaliWairagade, Priti Desai, AbhilashaAgrawal, Roshan Kumar Jha. Relation BetweenPrakriti and Stress Handling Capacity: An Observational Study *International Journal of Current Research and Review*. Vol 12 Issue 15, August, 2020, 103-109