

Review Article On: Effect of Pranayam on Stress

Venice Mairya David

Professor, Chirayu College of Nursing, Bhopal, M.P., India

Abstract: Pranayama, a branch of yoga practice is extremely beneficial to mankind in maintaining sound physical and mental health. Prana is define as life force or energy (in Japan = Qi, China = Chi). Ayama means to control flow of life force through the body. Pranayama helps in controlling all the functions of breathing namely inspiration, expiration, and retention. Pranayama is one of the yogic techniques that can produce different physiological responses in healthy individuals (Upadhyay et al., 2008). Breathing techniques and patterns are regularly advocated for relaxing, stress management, control of psycho physiological states (Ritz & Roth, 2003). Various respiratory patterns and maneuvers can provide striking influences on the autonomic nervous system and may exacerbate or reduce adverse responses to stressors

Keywords: Pranayama, Stress, Yoga, Effect

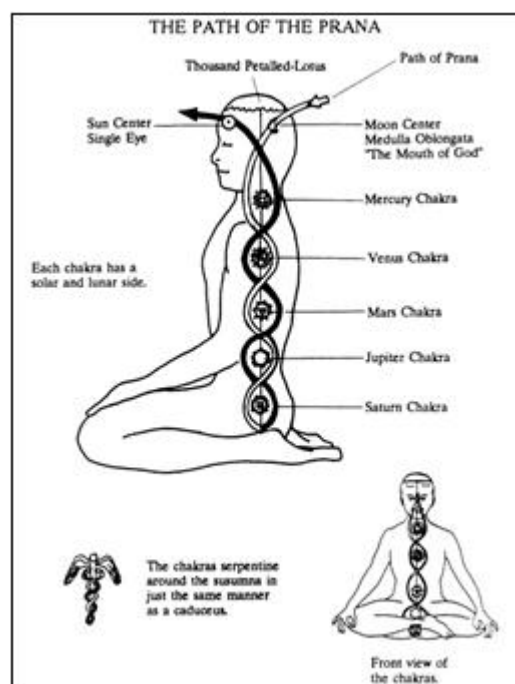
1. Introduction

Yoga is an ancient discipline designed to bring balance and health to the physical, mental, emotional, and spiritual dimensions of the individual. It is long popular practice in India that has become increasingly more common in Western society. "Yoga" means union of our individual consciousness with the Universal Divine Consciousness in a super-conscious state known as *Samadhi*. In Indian religions, yoga (from the Sanskrit word meaning "yoking" or "joining") is "the means or techniques for transforming consciousness and attaining liberation (*moksha*) from karma and rebirth (*samsara*). It is "a practice by means of which a spiritual seeker strives, (1) to control nature to make the soul fit for union with the Over soul (the true Self or *Atman-Brahman* or "God"), and (2) to attain union with God and thus the liberation of the soul from the rounds of rebirth and death." Yoga is popularly understood to be a program of physical exercises (*asana*) and breathing exercises (*pranayama*). Yoga began in India as early as 3000 B.C, according to archeological evidence. It emerged in the later hymns of the ancient Hindu texts (Upanishads or Vedanta) (600–500 B.C.). It is mentioned in the classic Indian poem *Mahabharata* (400 B.C. - 400 A.D.) and discussed in the most famous part of that poem, the *Bhagavad Gita*. Yoga was systemized by Patanjali in the *Yoga Sutras* (300–200 B.C.). Patanjali defined the purpose of yoga as knowledge of the true "Self" (God) and outlined eight steps for direct experience of "Self."

Meaning of Pranayam: Pranayama is made of two words "pra" meaning to fill is added to the root word "an" (to breathe or to live) creating new the new meaning life that fills with breath. Pranayama is control of Breath". "Prana" is Breath or bio energy in the body. On subtle levels, prana represents the pranic energy responsible for life or life force, and "ayama" means control. Therefore, Pranayama is "Control of Breath". One can control the rhythms of pranic energy with pranayama and achieve healthy mind and body.

In other words, the prana is related to the mind and mind is related to the brain, the brain is related to the soul (Atma) the soul (Atma) is ultimately related to that eternal divine force called Paramatma "God".

According to yogic point, Pranayama is basically series of exercises, which aims at bringing more oxygen to blood and to the brain. It not only automates flow of blood but also regulates proper functioning of thoughts and desire. The practice of this asana removes the obstruction, which encumber the flow of prana. It gives poise and tremendous will power. It generates lots of courage and will power within an individual.



Objective of Pranayama: Pranayam is to stimulate, communicate, regulate and control the vital life force that exists in the body.

Importance of Pranayam: Pranayama helps in reducing different kinds of diseases. Moreover, because pranayama (breathing) is the important means of supplying our body and its various organs with prana (oxygen) it is vital for our survival. Another important reason that pranayama is important is that it is because breathing is one of the most important ways that we are able to get rid of waste products and toxins from our body. The practice of asana tuned to pranayama the breath builds internal heat and prana (vital

energy). This process removes impurities and transforms blockages in the body.

Pranayama is an art and has techniques to make the respiratory organs to move and expand intentionally, rhythmically and intensively. 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 (daigrhya), 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."

Type of Pranayama

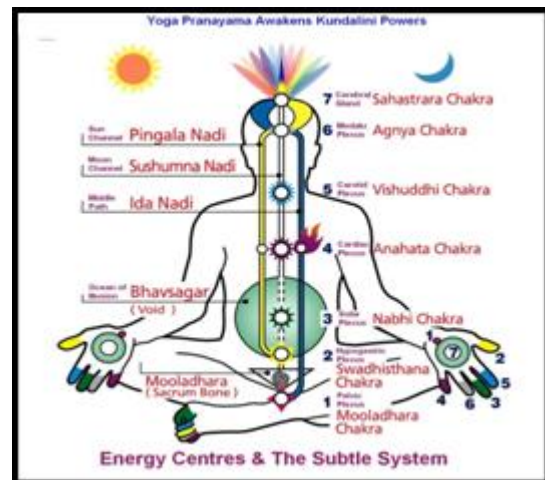
- Sheetal Pranayama.
- Sheetkari Pranayama.
- Ujjayi Pranayama.
- NadiShodhan Pranayama.
- Bhastrika Pranayama.
- Bhramari Pranayama.
- Kapalbhathi Pranayama.
- Anulom Vilom Pranayama.

Benefits of Pranayam

- 1) Pranayama control ageing.
- 2) Pranayama makes oxygen circulation smooth, helps in weight regulation by melting fat as more oxygen burns more fat.
- 3) Pranayama is the key of Intelligence.
- 4) It provides lightness to the body; acts as diseases destructor, brings vigour and power.
- 5) Pranayama helps in lungs expansion thereby improves its efficiency and makes it healthy.
- 6) It also helps in contending blood pressure and heart diseases; makes digestion smooth.
- 7) It cures the phlegm, mucus and tonsillitis problems. Makes your gums and teeth healthy.
- 8) Pranayama brings stillness and calmness to the mind, increased concentration and stability of mind. Pranayama is good for physical, mental and spiritual happiness.
- 9) It makes you free from constipation and indigestion problems.
- 10) Pranayama stimulates autonomic nervous system, sympathetic nervous system and parasympathetic nervous systems. It helps to ease stress, anxiety and tension. It also eases depression, dullness and lethargy.

Mechanisms Pranayam on Stress: The relationship is the autonomic nervous system, which governs the body's sympathetic (stress or fight-or-flight) and parasympathetic (rest-and-relax) responses, and controls the actions and reactions of the body's systems, including the cardiovascular, respiratory, and digestive systems. Breath rate directly affects the vagus nerve, which is central to the nervous system response. During the stress response, the sympathetic nervous system is triggered and we are thrust into survival mode and all the physical and mental states that go with that: the heart rate increases to send more blood rushing to the muscles, the muscles tense in preparation, and

stress hormone production increases. However, humans have the capability of initiating an opposite response with the use of behavioral strategies including meditation and slow breathing. When the relaxation response is activated, we see virtually the opposite physiological changes to those of the stress response.



Supportive study: A 2013 study published in the *Journal of Alternative and Complementary Medicine* looked at the effect of right unilateral nostril breathing (UNB) on various measures of attention, language, spatial abilities, depression, and anxiety in post-stroke individuals, with and without aphasia. Right UNB significantly decreased levels of anxiety for individuals in both groups. Performance on language measures increased for the individuals with aphasia. In the yogic physiology described for the so-called alternate nostril breathing technique, the belief is that respiration through a particular nostril has specific nostril-dependent effects on psychophysiology, with left-nostril breathing leading to calming, restorative functioning, and right-nostril breathing leading to activating, stimulating functioning. Although the mechanism by which this could be mediated is unclear, this study is one of a number of such studies suggesting that there is some truth to this belief.

Process of Pranayam

The process of inhaling Pranashakti (Energy associated with Prana) and exhaling it out is called Pranayama. This Pranashakti can be achieved through the control of respiration. There are certain functions of the human body, which are both voluntary and involuntary. In the same way, the act of respiration, and the process of thinking and emotion, is also both voluntary and involuntary. It is the movement of lungs that produces the breath, and it is the Prana that moves the lungs. By diligently practicing the nerves and the muscles that control the process of breathing, it can be controlled at will. So Pranayama means not control of breath, but the control of the energy or force that controls the breath.

PRANAYAMAS; Anulom-viloma (alternate nostrils), Ujjayi, Sheetal, and Sheetkari Pranayama promote vertical breathing. In all the Pranayama's, that inspiration is done slowly and deeply, as much as possible. When we take the breath in, the lungs are expanded considerably and walls of the alveoli are stretched maximum. Therefore the alveoli in

the upper pulmonary part are filled with air completely. This has a beneficial effect on the gaseous exchange, which then works efficiently throughout the day. When we breathe out slowly, through one nostril only, (as in Ujjayi or Anulom-viloma) or through both the nostrils, by contracting the glottis partially at the same time, (another variety of Ujjayi) the exhalatory force is reduced, and the air is allowed to escape slowly. This helps in prolonging the exhalation and reducing the force of the outgoing air. To feel the pressure of the inspired air in the lungs, and to experience the stillness of the mind during retention, or emptiness of the lungs while exhaling, one should do Pranayama's, with concentration and awareness. In short, during the practice of Pranayama, one tackles all the respiratory reflexes, on account of our volitional control on the respiration.

2. Conclusion

The supportive research finding suggested that pranayama is easy to instruct, can be performed in virtually all circumstances without cost or equipment, has significant psychophysiological effects that may be specific to different types of pranayama (e.g., fast vs. slow, left vs. right nostril), is free of side effects, and is a simple behavioral strategy suitable for virtual any medical condition, it is likely that we will see a continued application of pranayama in clinical settings and an associated growing body of biomedical research to validate its effectiveness. It is conceivable that, in the future, health-care providers will confidently prescribe specific yogic breathing practices for specific conditions and individuals.

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