

Facilitating Respiratory System Through Pranayama

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ABSTRACT

Air is one of the minute form of cosmic energy, it is an energy, which is as essential as soul in the human body. One experiences this energy through breathing process, which is the most vital process of the body. It influences the activities of each and every cell. The breath is intimately linked to all aspects of human experiences. This energy is regulated, maintained and can be enhanced through Pranayama. The process of controlling the Prana or vital life force is known as Pranayama in Yoga science.⁵ Pranayama establishes regular breathing patterns, breaking the negative cycle (Irregular breathing) and reversing the debilitations process. It does so by giving us control over the breath and re-establishing the natural, relaxed rhythms of the body and the mind. Pranayama removes all the physical and mental illness and makes life easy, simple and joyful. We can see the descriptions of Pranayama in many different Ancient yogic scriptures. Pranayama not only maintains the physical energy level it also cures many diseases and detoxifies the body indirectly. Maintenance of breathing keeps human respiratory systems healthy forever and this one is the only purpose of Pranayama. In modern era many researches have been done on Pranayama and they have proved that deep and rhythmic breathing during Pranayama multiplies the efficiency of respiratory system.

Key words: Pranayama, Respiratory System

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Introduction:

The Sanskrit word pranayama (also known as pranayam) is translated as “the science of breath” in some circles, and in others it has a broader meaning, “expansion, manifestation of energy.” Pra (first unit) na (energy) is the vital and primal energy of the universe. According to some Indian writers, the universe comes from akasha (ether, space) through the energy of prana. Akasha is the infinite, raw material of the universe. Prana is the infinite, raw energy of the universe. One who has learned how to control prana controls all the energies of the universe, thus controlling his or her body, emotions and mind.¹

Breath is an energizing force concerning the matter in our bodies. Energy is referred to as prana in Sanskrit terms. Breath is our first and foremost energy, carrying over to all the other bodies after reaching the physical body. Even the physical body comes after energy, not before. We talk about mental energy, emotional energy, physical energy, spiritual energy...all of these are types of prana.

Four aspects of pranayama:

In the pranayama practices there are four important aspects of breathing which are utilised. These are:

1. *Pooraka* or inhalation
2. *Rechaka* or exhalation
3. *Antarkumbhaka* or internal breath retention
4. *Bahir kumbhaka* or external breath retention.

The different practices of pranayama involve various techniques which utilise these four aspects of breathing. There is another mode of pranayama which is called *kevalakumbhaka* or spontaneous breath retention. This is an advanced stage of pranayama which occurs during high states of meditation.² During this state, the lungs stop their activity and the respiration ceases. At this time, the veil which prevents one from seeing the subtle aspect of existence is lifted and a higher vision of reality is attained.

The most important part of pranayama is actually kumbhaka or breath retention. However, in order to perform kumbhaka successfully, there must be a gradual development of control over the function of respiration. Therefore, in the pranayama practices more emphasis is given to inhalation and exhalation at the beginning, in order to strengthen the lungs and balance the nervous and pranic systems in preparation for the practice of kumbhaka. These practices influence the flow of prana in the nadis, purifying, regulating and activating them, thereby inducing physical and mental stability. (For more information on nadis see the chapter *Psychic Physiology of Yoga*.)

The Pranic body

According to yogic physiology, the human framework is comprised of five bodies or sheaths, which account for the different aspects or dimensions of human existence.³ These five sheaths are known as:

1. *Annamaya kosha*, the food or material body
2. *Manomaya kosha*, the mental body
3. *Pranamaya kosha*, the bioplasmic or vital energy body
4. *Vijnanamaya kosha*, the psychic or higher mental body
5. *Anandamaya kosha*, the transcendental or bliss body.

Although these five sheaths function together to form an integral whole, the practices of pranayama work mainly with *pranamaya kosha*. The *pranamaya kosha* is made up of five major pranas which are collectively known as the *pancha*, or five, pranas: *prana*, *apana*, *samana*, *udana* and *vyana*.

Even though prana is a term loosely used to cover all energies, ancient manuals of yoga speak of ten pranas, five major and five minor ones. The five major pranas are *udana*, *prana*, *samana*, *apana*, and *vyana*.

Udana rules the upper part of the body from the larynx up, and governs use of special senses beyond the five senses.

Prana rules between the larynx and the heart, governing speech, breath and the respiratory system.

Samana rules between the heart and the navel, governing all metabolic activity in the act of digestion.

Apana rules below the navel and governs the kidneys, colon, rectum bladder and genitals.

Vyana permeates the entire body and governs relaxation and contraction of all muscles, voluntary or involuntary. It also governs the joints and their movements. By controlling the prana (breath) one can access and influence all the other pranas, which explains the universal usage of this word for representing all the pranas.⁴

Breath and Health:

The breath is the most vital process of the body. It influences the activities of each and every cell and, most importantly, is intimately linked with the performance of the brain. Human beings breathe about 15 times per minute and 21,600 times per day. Respiration fuels the burning of oxygen and glucose, producing energy to power every muscular contraction, glandular secretion and mental process.⁶ The breath is intimately linked to all aspects of human experience. Most people breathe incorrectly, using only a small part of their lung capacity. The breathing is then generally shallow, depriving

Performing Pranayama:

Athaasanedridheyogeevasheehitamitaashanaha.

Guroopadishtamaargenapraanaayaamaansamabhyset.

Thus being established in asana and having control (of the body), taking a balanced diet; Pranayamas should be practiced according to the instructions of the guru.

Hatha Yoga Pradipika (2:1)

According to our ancient scripture one who wants to practice the Pranayama should practice under the great guidance or under supervision of guru. The Pranayama can make an adverse effect towards practitioner if he do the Pranayama wrongly. So, practitioner needs to follow the guidelines mentioned in the scripture.

Most people breathe incorrectly, using only a small part of their lung capacity. The breathing is then generally shallow, depriving

the body of oxygen and prana essential to its good health. The first five practices given in this section are preparatory techniques which introduce correct breathing habits. In addition, they help focus the awareness on the breathing process, which is otherwise normally ignored. Practitioners develop sensitivity to the respiratory process and retrain the muscles of the pulmonary cavity, enhancing their vital capacity and preparing them for pranayama.

Rhythmic, deep and slow respiration stimulates and is stimulated by calm, content states of mind. Irregular breathing disrupts the rhythms of the brain and leads to physical, emotional and mental blocks. These, in turn, lead to inner conflict, imbalanced personality, disordered lifestyle and disease. Pranayama establishes regular breathing patterns, breaking this negative cycle and reversing the process. It does so by taking control of the breath and re-establishing the natural, relaxed rhythms of the body and mind.^[5,6,7,8]

Although breathing is mainly an unconscious process, conscious control of it may be taken at any time. Consequently, it forms a bridge between the conscious and unconscious areas of the mind. Through the practice of Pranayama, the energy trapped in neurotic, unconscious mental patterns may be released for use in more creative and joyful activity.

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Guidelines for the Pranayama:

In the traditional texts, there are innumerable rules and regulations pertaining to pranayama. The main points are to exercise moderation, balance and common sense with regard to inner and outer thinking and living. However, for those who seriously wish to take up the advanced practices of pranayama, the guidance of a guru or experienced teacher is essential.

Breathing: Always breathe through the nose and not the mouth unless specifically instructed otherwise. The nose should be cleaned regularly by jalāneti prior to the practice session. Be aware of the nostrils throughout the techniques. While inhaling, the nostrils should dilate or expand outwards and while exhaling, they should relax back to their normal position.

Time of practice: The best time to practise pranayama is during the early morning when the body is fresh and the mind has very few impressions. If this is not possible, another good time is just after sunset. Tranquillising pranayamas may be performed before sleep. Try to practise regularly at the same time and place each day. Regularity in practice increases strength and willpower as well as acclimatising the body and mind to the increased pranic force. Do not be in a hurry; slow, steady progress is essential.

Place of practice: Practise in a quiet, clean and pleasant room which is well ventilated but not draughty. Generally, avoid practising in direct sunlight, as the body will become over-heated, except at dawn when the soft rays of the early morning sun are beneficial. Practising in a draught or wind, in air-conditioning or under a fan may upset the body temperature and cause chills.

Sitting position: A comfortable, sustainable meditation posture is necessary to enable efficient breathing and body steadiness during the practice. Siddha/siddha yoni asana is one of the best postures for pranayama. The body should be as relaxed as possible throughout the practice with the spine, neck and head erect. Sit on a folded blanket or cloth of natural fibre to ensure the maximum conduction of energy during the practice.

Sequence: Pranayama should be performed after asanas and before meditation practice. After practising pranayama one may lie down in shavasana for a few minutes.

Clothes: Loose, comfortable clothing made of natural fibres should be worn during the practice. The body may be covered with a sheet or blanket when it is cold or to keep insects away.

Bathing: Take a bath or shower before commencing the practice, or at least wash the hands, face and feet. Do not take a bath for at least half an hour after the practice to allow the body temperature to normalise.

Empty stomach: Wait at least three to four hours after meals before starting pranayama. Food in the stomach places pressure on the diaphragm and lungs, making full, deep respiration difficult.

Digestion: When commencing pranayama practice, constipation and a reduction in the quantity of urine may be experienced. In the case of dry motion, stop taking salt and spices, and drink plenty of water. In the case of loose motion, stop the practices for a few days and go on a diet of rice and curd or yoghurt.

Diet: A balanced diet of protein, carbohydrates, fats, vitamins and minerals is suitable for most pranayama practices. A combination of grains, pulses, fresh fruit and vegetables, with a little milk product if necessary, is recommended. The more advanced stages of pranayama require a change in diet and a guru should be consulted for guidance on this.

Avoid strain: With all pranayama practices it is important to remember that the instruction not to strain, not to try to increase your capacity too fast, applies just as it does to asana practice. If one is advised to practise a pranayama technique for a specific length of time, before moving on to a more advanced practice or ratio, it is wise to follow that instruction. Furthermore, breath retention should only be practised for as long as is comfortable. The lungs are very delicate organs and any misuse can easily cause them injury. Not only the physical body but also the mental and emotional aspects of the personality need time to adjust. Never strain in any way.

Side effects: When practising for the first time, various symptoms may manifest in normally healthy people. These are caused by the process of purification and the expulsion of toxins. Sensations of itching, tingling, heat or cold and feelings of lightness or heaviness may occur. Such experiences are generally temporary but if they persist during the practice, check with a yoga teacher.

Contra-indications: Pranayama should not be practised during illness, although simple techniques such as breath awareness and abdominal breathing in shavasana may be performed. Always consult a yoga therapist or teacher before using any pranayama for therapeutic purposes.

No smoking : It is not advisable for pranayama practitioners to smoke tobacco or cannabis.

Mechanism of Pranayama:

The air is drawn into the lungs by the action of the diaphragm. When it expands, the size of the chest and lungs is increased and the outside air rushes into the vacuum thus created. The chest and lungs contract, when diaphragm relaxes and the air is expelled from the lungs. It is through vocal cords that are located in the larynx that sound is produced. Larynx is the sounding box. When the vocal cords are affected by too much straining, as in singing and continuous lecturing, the voice becomes hoarse. In females these cords are shorter. Hence they have a sweet melodious voice. The number of respiration per minute is 16. In pneumonia it is increased to 60, 70, 80 per minute. In Asthma, the bronchial tubes become spasmodic. They contract. Hence there is difficulty in breathing. Pranayama removes the spasm or constriction of these tubes. A small membranous flat cap covers the upper surface of larynx. It is called Epiglottis. It prevents the food particles or water from entering into the respiratory passage. It acts the part of a safety valve.

When a small particle of food tries to enter the respiratory passage, cough comes in and the particle is thrown out. Lungs purify the blood. The blood starts in its arterial journey, bright-red and rich-laden with life-giving qualities and properties. It returns by the venous

route, poor, blue-laden with the waste matter of the system.⁹ Arteries are tubes or vessels that carry pure oxygenated blood from the heart towards the different parts of the body. Veins are vessels or tubes that carry back impure blood from the different parts of the body. The right side of the heart contains impure venous blood. From the right side of the heart the impure blood goes to the lungs, for purification. It is distributed among the millions of tiny air-cells of the lungs. A breath of air is inhaled and the oxygen of the air comes in contact with the impure blood through the thin walls of the hair-like blood-vessels of the lungs called pulmonary capillaries. The walls of the capillaries are very thin. They are like muslin cloth or sieve. Blood oozes out or exudes readily. Oxygen penetrates through the walls of these thin capillaries. When the oxygen comes in contact with the tissues a form of combustion takes place.

The blood takes up oxygen and releases carbonic acid gas generated from the waste products and poisonous matter, which has been gathered up by the blood from all parts of the system. The purified blood is carried by the four pulmonary veins to the left auricle and thence to the left ventricle. From the ventricle it is pumped into the biggest artery, aorta. From aorta, it passes into the different arteries of the body.¹⁰ It is estimated that in a day 35,000 pints of blood traverses the capillaries of the lungs for purification. From the arteries the pure blood goes into the thin capillaries. From the capillaries the lymph of the blood exudes, bathes and nourishes the tissues of the body. Tissue respiration takes place in the tissues. Tissues take up the oxygen and leave the carbon dioxide. The impurities are taken by the veins to the right side of the heart. Who is the creator of this delicate structure? Are you feeling the invisible hand of God behind these organs? The structure of this body bespeaks undoubtedly of the omniscience of the Lord. The Antaryamin or the Indweller of our hearts supervises the working of the inner factory as rashtha. Without His presence, heart cannot pump blood into the arteries. Lungs cannot carry out the process of purifying the blood. Pray. Pay your silent homage to Him.

Remember Him at alltimes. Feel His presence in all the cells of the body.

Conclusion:

It can be concluded as the Pranayama can make a significant difference in the term of

physical, mental, social and spiritual Health of mankind if it is practiced as mentioned in spiritual scriptures.

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