

# Prāṇāyāma: The Science of Breathing (An Analysis)

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**Sumit Kumar**

Research Scholar  
Dept. of Philosophy,  
Panjab University, Chandigarh,  
Punjab, India

## Abstract

It is known universally that it is the breathing which demonstrates the life in us. It is the same breathing which speaks that we are living being not the life less bodies. Further it is the same breathing which also demonstrates whether we are living with perfection or there is sort of destruction in our living i.e. mental or physical health. If there is any destruction in our mental or physical health that is the breathing which explores it first in form of some kind of interaction in our pitch of breathing if there is no uncommon activity like running or any exercise. If there is a common or normal condition and there is any problem with our health, it signals that there is some sort of problem related to our health. So we can easily observe that this is breathing which demonstrates the good or bad condition of our health because it is the breathing which carries the oxygen and Co<sub>2</sub> respectively while we inhale and exhale and that is the oxygen which circulates into our body through the blood and provides us life. So the breathing is that fundamental principle which is needed to be understood scientifically by several experiments. Those experiments are accomplished theoretically in Indian philosophy especially in the yogasutra and practically they are demonstrated as the yoga practice of Pranayama. In this research paper we are going to collect and analyse the pranayama in a holistic approach as the science of breathing.

**Keywords:** Prana, Ayama, Pranayama, Breath, Kumbhaka, Rechaka etc.

## Introduction

The Sanskrit word pranayama is often divided into two words - prana, meaning "life force" or "energy of life," and yama, means "control." Pranayama is the yogic science of controlling the energy of life, mainly through the efficient manipulation of the breath. Another division of the word is used by the yoga adepts. These adepts stated that the second word in the compound is actually ayama, meaning "to extend" or "to lengthen." They describe the practice of pranayama as a method to increase and expand life energy, and eventually reunite it with its source-consciousness. Thus, the term "pranayama" translates into the control of life force. It is also known as extension of breath. Every cell in our body needs oxygen to function properly. So it's no surprise that research suggests that regular practice of controlled breathing can reduce the effects of stress on the body and increase overall physical and mental health.<sup>1</sup>

In Bhagvad Gita, Pranayama is mentioned in verse 4.29. as;

Pranayama is translated to "trance induced by stopping all breathing", also being made from the two separate Sanskrit words, prana and ayam.<sup>2</sup>

The Indian tradition of Hatha Yoga uses various pranayama techniques. The 15th-century Hatha Yoga Pradipika is a major text of this tradition and includes various forms of pranayama such as; Kumbhak breath retention and various body locks (bandha)<sup>3</sup>. Other forms of Pranayama breathing include Ujjayi breath (Victorious Breath), Bhastrika (Bellows Breath), Kapalbhati (Skull-Shining Breath), a Shatakarma purification), Surya Bhedan (Sun-piercing" Breath) and Soothing Bhramari (buzzing like a bee).

According to a yoga teacher named Theos Bernard, "Breathing is the ultimate purpose of pranayama (kevala kumbhak), "the reason for shaking the mind"<sup>4</sup>.

Swami Yogananda writes, "According to Patanjali, (the founder of yoga philosophy), the real meaning of pranayama is the gradual cessation of breathing, the discontinuance of inhalation and exhalation."<sup>5</sup>

In his book *The Science of Pranayama*, Swami Sivananda writes, "There is an intimate connection between the breath, nerve currents and control of the inner prana or vital forces. Prana appears on the physical plane as motion and action, and on the mental plane as a thought. . Pranayama is the means by which a yogi tries to realize the entire cosmic nature within his personal body, and seeks to attain perfection by attaining all the powers of the universe."<sup>6</sup>

According to Patanjali Yogsutra - Pranayama is the fourth "limb" of the eight limbs of Ashtanga Yoga mentioned in verse 2.29 in the Yoga Sutras of Patanjali. Patanjali discusses his specific approach to pranayama in verses 2.49 through 2.51, and devotes verses 2.52 and 2.53 to explaining the benefits of the practice. Patanjali does not fully elucidate the nature of prana, and the theory and practice of pranayama seem to have undergone significant development after him. He presents pranayama as essentially an exercise that is preliminary to concentration, as do the earlier Buddhist texts.<sup>7</sup>

Yoga teachers B. K. S. Iyengar have advised that pranayama should be part of an overall practice that includes the other limbs of Patanjali's Raja Yoga teachings, especially Yama, Niyama, and Asana.<sup>8</sup>

In Patanjali's "Ashtanga yoga", Pranayama appears at the fourth stage. This means unless one observes Yama-Niyama and does Asanas well, he cannot reach this fourth stage. Even the Asanas discussed here are presented in their preliminary form. Therefore, for doing Pranayama, it is not enough to have done the Asanas as mentioned here. Even after learning these Asanas and having practiced them, one needs some preparation before actually taking up Pranayama. Actual Pranayama means to holding up the process of exhaling and inhaling. Before examining the exercises of breathing it is necessary to understand the process of breathing. The breathing process chiefly involves two activities, viz., inhaling and exhaling. Of these the former is called "Puraka" and the latter "Rechaka" in Yogashastra. These two activities continue non-stop right from the birth to the death of a person. The state when these two activities are made to halt is given the name "Kumbhaka" in Yoga Studies. The halt after inhaling, i.e., Puraka is called "Abhyantara Kumbhaka" and after exhaling, i.e. rechaka. It is called "Bahya Kumbhaka". Two more types of Kumbhaka are mentioned. But instead of talking of them in detail, let us turn to the process of breathing.

#### **Aim of the study**

The present research paper aims on to explore the hidden spirit of pranayama. The practitioners of yoga all over the world just understand and practice pranayama with a little knowledge and cognition. Pranayama is actually a complete science of breathing and if the breathing is running with perfection then the risk of physical and mental sickness gets diminish. Therefore in this research article we propose to present the actual sense and practice with care of pranayama. Moreover we wish to clarify the philosophical understanding of pranayama in details along with the practical aspects.

#### **Four aspects of pranayama**

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

1. Pooraka or inhalation - Controlled inspiration
2. Rechaka or exhalation - Controlled expiration
3. Antar kumbhaka or internal breath retention- Controlled suspension of breath after inhalation.
4. Bahir kumbhaka or external breath retention- Controlled suspension of breath after exhalation

The different practices of pranayama involve different techniques which utilize these four aspects of breathing. There is another mode of pranayama, called kevala kumbhaka or spontaneous breath retention. This is an advanced stage of pranayama that occurs during higher states of meditation. During this state, the movement of prana stops. At this time, the veil that 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 breathing retention. However, to successfully perform the Kumbhak, there must be a gradual development of control over the function of respiration. Therefore, Pranayama practices initially emphasize breathing and exhalation to strengthen the lungs and balance the nervous and pranic systems in preparation for the practice of Kumbhak. These initial exercises affect the flow of prana in the nerves/nadi, purify, control and activate them, thereby creating physical and mental stability.

#### **The practice of pranayama-**

There are basically two approach exist (Hatha Yoga & Patanjali Yog sutra) who define the practice of pranayama. Between them Patanjali Yog sutra defines the best way practice of pranayam. Patanjali Yog sutra states that the practice of pranayama requires a systematic approach. For this reason, individuals are directed to find a teacher who is qualified to instruct them. For millennia, sadhak/yogis have cautioned against practicing without guidance. Otherwise, a sense of scale and purpose is missing. The individual who persists in experimenting on his own may find himself face to face with the inner tiger-prana, untamed, misunderstood, and dangerous.

Patanjali lists pranayama as one of the eight rungs of Ashtanga yoga and summarizes it in five sutras (Yoga Sutra 49-53). He describes it as support for the yogi's effort to attain concentration. While virtually none of the details of practice are provided, Patanjali implies that some aspects of breath training assist in developing concentration while others must wait until a very stable concentration has already been established. It is the role of the teacher to help the student find the right place to begin.

The Patanjali's five yog sutras are following who defined a clear-cut way of pranayams:

*Tasmīnsatīśvāsa-prāśvāsa-yor-gatī-  
vicchedaḥPrāṇāyāma.*<sup>9</sup>

(Asana having completed cessation of inhalation and exhalation (kevala kumbhaka) is called as Pranayama), in other words, Pranayama, often translated as breath-control, should be: energy-

control. Cessation should be: control. In- and expiration should be: in- and outflow.

The entry of pranavayu into the body is inhale and exit is exhale, the stopping of the movement of these two means that the loss of movement of the pranavayu is the general symptom of pranayama. Here Pranayama is completed after the completion of the posture. It appears that those who do the pranayama without practicing the stability of the asana are going wrong path, while practicing the pranayama, the stability of the asana is compulsory.

To understand the differences of the above Pranayama, there are three types of Pranayama-

*Bāhyābhyantara-stambha-vṛttir-deśa-kāla-saṅkhyābhiḥparidṛṣṭodīrgha-sūkṣmaḥ..*<sup>10</sup>

(It is in) external, internal or suppressed modification; is regulated by place, time and number, (and becomes progressively) prolonged and subtle.

Ganganath jha also prescribes the similar meaning of the sutra as follows, "is an external, internal or stationary function,- regulated by place, time and number,-protracted or suitable (long or short)"<sup>11</sup>.

There is an external Kumbhaka, and there is an internal Kumbhaka. The first Kumbhaka is always external, or it could be said: directed toward the outside world. This means that the second Kumbhaka must have in inwardly directed current.

The fourth pranayama is described in the next sutra with the characteristics of pranayama, this proves that this sutra describes three types of pranayama and those three types of pranayama are seen by the seeker through time, place and number to see that to which stage they have reached, In this way, while doing the practice, as they become advanced, as they grow in length and lightness, it proves that in the third pranayama (stambhvrutti) is also related to the place otherwise how that place will be visualized by time and number.

The distinctions among three type of Pranayama should be understood mentioned as follows;

#### **Vahyavriti Pranayama**

Pulling the breath out of the body and staying there for a period of time, and stopping as well as practicing where it has stayed outside, how long it has stayed and how much pace of the natural breath are running at that time. This is Vahyavriti Pranayam, It is also called Rechak.

#### **Abhayantara Pranayama**

Pranavayu can be kept inside for as long as possible and can be stopped at the same time, and also to see how far the breath stays happily in the interior place, how many number of natural motion of breath exist in that time. This is Abhayantara Pranayama, it is also called Poorak.

#### **Stambhvrutti Pranayama**

The natural movement of the breath that travels in and out of the body. By non-practicing but natural alone the entrance or exit of the breath, carrying its content without any extra attempt and then also stopping its movement naturally is this type of pranayama. Where and how long the breath has

stayed happily need to be watched and what is the number of natural movements of breath is called Stambhvrutti Pranayama, it is also called Kumbhak.

*Bāhyābhyantara-viśayākṣepīcatūrthaḥ..*<sup>12</sup>

(Pranayama which goes beyond the sphere of internal and external is the fourth (variety).

By renouncing the thoughts of breath whether it is going in or outside or staying at any place, the pace of one's breathe stops without the knowledge of the person that is the fourth pranayama. It is totally different of first three above mentioned Pranayama. This is a pranayama of uninterrupted Raja Yoga. Due to the calmness of the mind, the movement of breath stops automatically. It is the specialty of this pranayama.

*Tataḥkṣīyateprakāśāvaraṇam..*<sup>13</sup>

(From that is dissolved the covering of light.)

As man practices pranayama, his accumulated doings (Sanchit karma) rituals and ignorance are weakened. And the knowledge illuminated in the person like the Sun. Therefore the seeker must practice Pranayama in everyday life.

*Dhāraṇāsucayogyatāmanasah..*<sup>14</sup>

(And the fitness of the mind for concentration.)

The practice of pranayama also brings the merit of perception into the mind, means it can be stabilized spontaneously wherever it is.

By the practice of Pranayama in general you remove the veil from the light, and as such, it is a wonderful preparation for concentration. Light is nothing else than energies in balance. When energies are in balance, you will be able to concentrate much more effectively. I think that, when the energies are not in balance, you will never, succeed in concentration. You can continue to try until you are blue in the face: it will not work. It will be like swimming upstream.

#### **Precautions for the Practice of Pranayama**

1. Pranayama should be done preferably after the practice of asanas.
2. In Pranayama, breathing should be done through the nose except sheetali and sheetkari.
3. During pranayama, there should not be any stretch of facial muscles, eyes, ears, neck, shoulders or any other part of the body.
4. During pranayama, eyes should remain closed.
5. In the beginning, one should be aware about the natural flow of the breathing. Make inhalation and exhalation prolonged in a gradual manner.
6. While observing breathing, attend to your abdominal activity which bulges a bit during inhalation and goes in a bit during exhalation.
7. In the beginning stage one should learn to maintain in gradual manner the 1:2 ratio of breathing which means exhalation time should be double the inhalation. However, while practicing Pranayama, do not be hasty to resort to any of the above ideal proportions.
8. Kumbhaka (retention of breath) should not be done in the initial phase. After a prolonged practice of the 1:2 ratio, one should learn the retention of breath under the guidance of a competent Guru.

9. According to tradition, the ideal ratio is 1 (poorak): 4 (kumbhak): 2 (rechak). Kumbhak must not be resorted to unless one has undergone sufficient practice of 1: 2 ratios.

#### Prescriptions for the practitioner

In traditional texts, there are innumerable rules and laws related to Pranayama. The main points are to use restraint, balance and common sense in relation to internal and external thinking and life. However, for those who want to take the advanced practices of Pranayama seriously, the guidance of a guru or competent teacher is essential.

#### Seating Position

A comfortable, standing meditation posture is necessary to enable efficient breathing and body stability during exercise. Siddha / Siddha Yoni Asana or Padmasana are the best Asanas for Pranayama. The entire body should be as relaxed as possible with erections of the spine, neck and head. Sit on a folded blanket or cloth of natural fiber to ensure maximum flow of energy during exercise. Those who cannot sit in meditation posture can sit against a wall with feet outward or on a chair with a straight back.

#### Sequence

Pranayama should be done after shatkarma and asanas, and before meditation practice. Nadi shodhan pranayama should be practiced in every pranayama session as its balancing and purifying effects form the basis of successful pranayama. A person practicing Pranayama can lie in Shavasana for a few minutes.

#### Contra-indications

Pranayama should not be practiced during illness, although simple techniques such as breath awareness and abdominal breathing may be performed in Shavasana. Carefully observe the indications given for individual practices.

Try to practice regularly at the same time each day. Regularity in exercise increases strength and willpower as well as provides increased mischief force to the body and brain.

Do not be in a hurry; slow, steady progress is necessary.

#### Empty Stomach

Practice before eating in the morning or wait at least three to four hours after meals before starting pranayama. Food in the stomach puts pressure on the diaphragm and lungs, making full, deep breathing difficult.

#### Breathing

Always breathe through the nose and not through the mouth unless specifically instructed. Both nostrils should be clear and freely flowing. Mucous obstruction can be removed through the practice of Neti or Kapalabhati. If the flow of breath in the nasal is uneven, then this can be balanced by practicing padirassan as a balancing technique.

#### Practice Time

The best time to practice pranayama is in the morning, when the body is fresh and has little effect on the mind. If this is not possible, then another good time after sunset. Tranquilizing pranayama can be done before sleeping.

#### Place of Practice

Practice in a quiet, clean and pleasant room, which is well ventilated, but not rigid. In general, avoid practicing direct sunlight, as the body will be warmer than early in the morning, when the gentle rays of the sun are beneficial. Practicing in draft or wind, in air-conditioning or under the fan can increase body temperature and cause chills.

#### Conclusion

Thus whatever we have studies and whatever we find out, all explores this truth that the pranayama is not a term alone or not theory alone but it is the supreme technique of breathing and fundamentally we all know that this is the breathing alone which causes the good or bad condition of health. Breathing being the fundamental of physical and mental health presupposed to be elaborated in a scientific approach. The Pranayama of Yoga practices claims that scientific approach and after all analysis it does not expose pranayama as the science of breathing but it also certifies the techniques and methods of the practice.

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