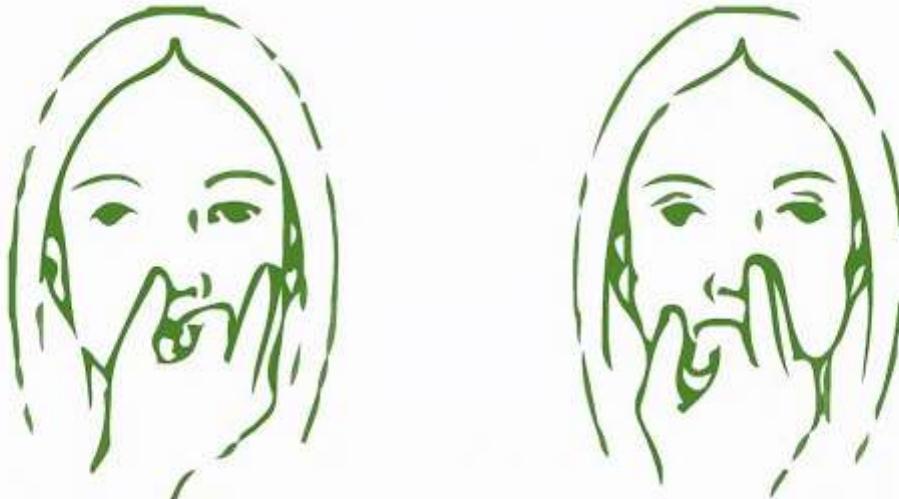


Zen Pranayama : The Healing Embodiment of Breathing



"For breath is life, so if you breathe well you will live long on earth" Sanskrit Proverb

Pranayama, the science and technique of effective breathing is central to our guests' wellness experience. After all, without breath there is no life. It is the first and last thing we do; a constant we all have in common.

Yet the art and importance of proper breathing are far from familiar concepts in today's world. Our hectic lives leave little room to spend time considering their impact, to observe how breathing runs parallel to everyday stress and physical habits to affect our wellbeing. For these reasons, Pranayama - the science and technique of effective breathing - is a central part of our guests' wellness experience.

As well as complimenting Meditation and Yoga, Pranayama exercises have been proven to prevent and treat a range of respiratory, stress-related and psychological conditions, including asthma, high blood pressure, hyperactivity, insomnia and early ageing.

Each morning our Sunrise Zenchi class gives you the opportunity to practice Pranayama sequence of breathing exercises in our Nirvanum Sanctuary.

At Zen Resort you can discover Pranayama and its seven core exercises, leaving with empowering techniques that will change your life for the better.

On average, we repeat this process of breathing in and out, once every five seconds, but it is almost always entirely subconscious. And yet breath is something we take for granted, something so simple and obvious that we never stop to consider how it could be done differently or improved.

The practice of Pranayama teaches techniques of regulated and effective breathing that have the potential to improve physical, mental and spiritual wellbeing.

The literal meaning of Pranayama is the act of taking air - "Prana" in Sanskrit - from the atmosphere and into our lungs. In the ancient Indian philosophy of Ayurveda, air is the most important element as it moves the three doshas – vata, pitta and kapha.



Pranayama is the science and technique of regulated and effective breathing. Breathing is the act where we take air ("prana") from the atmosphere into our lungs, absorb oxygen from it into the blood supply, and exhale the air together with carbon dioxide and water vapour. The act of inhalation and exhalation is repeated about every five seconds. Every time we inhale, we take in some 500 ml of air and thus some 7 litres of air is exhaled and inhaled every minute. Breathing is so simple and obvious that we it is taken for granted. It is ironic we are rarely taught how to breathe air in, to hold the air in, and to breathe out is the basis of life, since without this we cannot survive even for a few minutes.

The practice of Pranayama is critical to maximizing the effective capacity of the lungs, the fundamental purifying engine of our body. Our lungs comprise of some 70 million cells. On average, in normal breathing (i.e. breathing without Pranayama training) only a third of our lung cells get oxygenated. Pranayama can increase the utilization of our lungs' capacities, and has the potential to significantly improve our physical, mental and spiritual well-being.

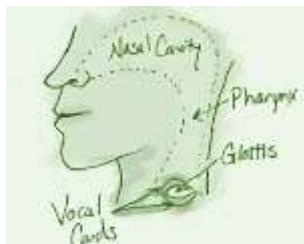
When we work on the freeing the breath through pranayama (breathing exercises) we are also working on letting the life energy flow through the body. It has the effect of energizing, relaxing and healing the body, letting everything fall into place. Literally it is an increase and balance of life energy in your system. On a physical level by using pranayama techniques we can utilize and strengthen the whole range of our respiratory organs. We explore the lower, middle and upper parts of the breath and regulate the inhalation, retention and exhalation of breath.

We know that, as long as one is breathing, one is alive and that, when one's breathing stops, life comes to an end. Hence learning to breathe effectively and efficiently is of critical importance to maintaining and achieving physical, psychological and spiritual health and longevity. At Zen Resort Bali, guests have the opportunity to practice for Sunrise Pranayama at our Nirvanum Sanctuary that overlooks a lush tropical forest and rice fields with wide open views of the Sea of Bali. All out guests receive a Zenchi booklet which presents a 27-minute sequence of take-home exercises and includes a 9-minute Pranayama practice.

A regular pranayama practice can stimulate the parasympathetic system, countering the overstimulation our bodies go through during the Fight or Flight response. Our breathing patterns are also very closely linked to our emotional states. We will breathe in a different way when we are angry, when we are excited, tired or when we are nervous. However, it works the other way too. We can calm or energize ourselves by changing our breathing patterns. Even by just taking time out to consciously become more aware of our breath we can help to start to alter our emotional states.

Pranayama techniques have different effects much like different asanas/yoga poses do. Most kinds of pranayama are practiced sitting down with an upright spine for example in Cross-legged Pose. The idea is for the breath to be smooth and even and not strained even after breath retention

In Ashtanga Yoga, there are eight types of Pranayama as described by Sage Patanjali, as below-



Ujjaiyi Pranayama : You have to inhale through your nostrils while making sound from your throat. Hold the breath for a while and exhale from the left nostril. This is beneficial for thyroid problems and throat related issues



Bhramri Pranayama : You have to close your ear with your thumb and eyes with the help of your fingers. Take a deep breath and while exhaling you have to enchant OM and try to focus on it while mumbling. This pranayama increases the concentration level in students and is beneficial for improving the memory



Suryabhedhi Pranayama : You have to inhale from the right nostril, hold the breath for a while and exhale from the left nostril. You have to maintain the breathing time ratio of 1:2:2 in the beginning which can be increased later with practice. This is beneficial in winters and maintains the heat in the body.



Bhastrika Pranayama : You have to inhale and exhale at a fast rate continuously and after a few rounds you have to hold your breath in the end. This is also beneficial in winters when your body needs to maintain the temperature



Sheetli Pranayama : You have to roll your tongue and inhale through your mouth. Hold your breath and apply jalandhar bandh. After some time, exhale through your nostrils. This is beneficial for summers and reduces the body temperature.



Sheetkari Pranayama : You have to inhale through your mouth with the sound of 'sheetkar' which can be produced when you keep your tongue behind your teeth and inhale. Apply Jalandhar bandh and hold your breath. After a while, exhale from your nostrils. This is also beneficial in summers.

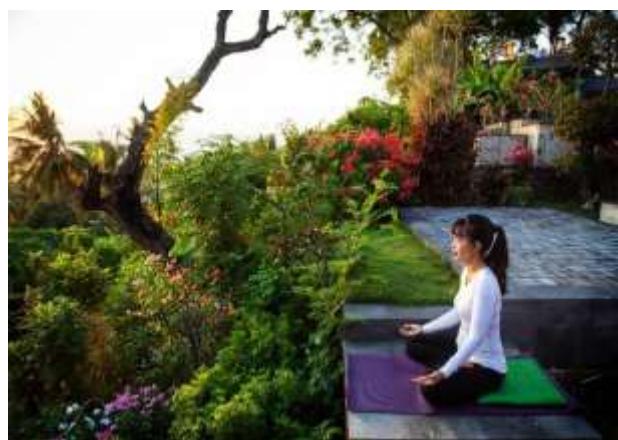


Moorchha Pranayama : You have to keep on exhaling again and again without inhaling. This will increase the concentration of carbon dioxide in your body and after a while you will be unconscious. Your body will regain your consciousness by automatic inhaling while you are asleep.



Palawani Pranayama : This pranayama is done in water. You have to work with your breath so that your body starts floating on the water surface. The moorchha and palawani pranayama are not meant for everybody and should be done by siddha yogis only because they need a fair amount of practice.

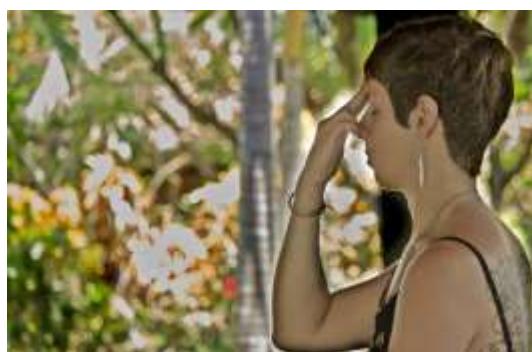
People also consider **Anulom Vilom** and **Kapalbhaati** as pranayama but they are just the kriyas and not the pranayama. Kapal bhaati is one of the '**shat kriyas**' which are done for the cleansing of our body. Whereas anulom vilom is an exercise of our breath. Pranayama includes three stages: purak (to inhale), kumbhak (to hold the breath) and rechak (to exhale). The combination of these three is termed as pranayama, a way of life.



Pranayama is the science and technique of regulated and effective breathing. Breathing is the act where we take air ("prana") from the atmosphere into our lungs, absorb oxygen from it into the blood supply, and exhale the air together with carbon dioxide and water vapour. The act of inhalation and exhalation is repeated about every five seconds. Each time we take in some 500 mil. of air and thus some 7 liters of air per minute are exhaled and inhaled.

Breathing is so simple and obvious that we it is taken for granted. It is ironic we are rarely taught how to breathe air in, to hold the air in, and to breathe out is the basis of life, since without this we cannot survive even for a few minutes.

Air is the most important elements as it moves the three doshas – vata, pitta and kapha- from one part of the body to another and it analyses and separates the body's elements and excretions. Prana provides energy to all the limbs, organs and glands of the body and thus enables effective functioning. It is Pranika energy, which enables eyesight, hearing, nasal smell and vocal speech. Prana lends luster to our faces, makes our minds think and enables alimentary system to digest and assimilate the food we intake.



The practice of Pranayama is critical to maximizing the effective capacity of the lungs, the fundamental purifying engine of our body. Our lungs comprise of some 73 million cells and in normal breathing only a third of the lung cells get oxygenated. Increased and effective utilization of the lung capacity would have a major impact on our physical, mental and spiritual well-being.

The act of inhalation and exhalation is repeated about every five seconds. Each time we breathe, we take in some 500 milliliters of air. Hence, approximately 7 liters of air per minute are exhaled and inhaled. Breathing is so simple and obvious that we take it for granted that we are in fact breathing properly. Despite the centrality of breathing to our existence we are rarely taught how to breathe.



Scientists recognize that one's life span is correlated with the number of times one breathes in a single minute. Amongst animals, the tortoise's breathing frequency is among the lowest: it breathes about five times a minute, which is correlated with it having a life span of approximately 400 years. The tortoise's lifespan contrasts with that of small birds, whose breathing frequency of 60 breaths a minute is correlated with a lifespan of approximately one year.

We humans are hardly aware of the fact that we are breathing except in situations where we find it difficult to breath, for example in situations of panic attacks, anxiety, and stress. At birth, babies naturally breathe deeply and slowly, which is indicative that they are healthy. However, as we grow older, environmental factors and stress lead to changes in our breathing. Most adults become shallow chest breathers, which means they end up using only a third of their lung capacity. Pranayama can help us to regain the natural ability to breathe in a slow, deeper and healthier manner just like babies do.



Effective breathing is important to increase blood oxygen levels that enables a proper and proportional balance of the three doshas, vata, pita and kapha. This balance is essential to improve nutritional metabolism and though this to strengthen resistance against a range of diseases and ailments. Pranayama exercises have been effective in preventing and treating conditions such as asthma, high and low blood pressure, stress-related heart ailments, hyperactivity, insomnia, chronic pain and other physical-psychological disorders.

We know that as long as one is breathing, one is alive and that when breathe stops, life comes to an end. Hence learning to breathe effectively and efficiently is of critical importance in maintaining and achieving physical, psychological and spiritual health and life longevity.

Normal breathing patterns shows marked changes under various conditions. For example, while doing physical exercises and work, walking uphill and rapidly, lifting or carrying heavy loads etc., we automatically begin to breathe more rapidly and more forcefully. At high altitudes, in a rarefied atmosphere our breathing becomes heavier. Breathing patterns also change with emotional excitement and in cases of health disorders such as asthma, bronchitis, and other lung affections. We are generally hardly aware of the fact that we are breathing,

Seven Pranayama exercises for health and beauty

There are three important Pranayama exercises that pertain to controlling and regulating breathing. Ujjayi pranayama, the “sounding” breath involves constricting the back of the throat while breathing to create the “ah” sound. The benefits of this include focusing the mind, increasing mindfulness and generating internal heat and energy. Dirgha pranayama is a deep breathing technique that uses the diaphragmatic or “belly” breathing. It is highly effective in relaxing the mind and the body, oxygenating the blood and purging the lungs of carbon dioxide and other impurities. Nadi Shodhana pranayama comprises alternate nostril breathing, particularly effective towards cleansing the air channels, overcoming anxiety and stress and enabling logic and clarity in thinking.

During the morning yoga class at Zen Resort, you will have the opportunity to learn the seven basic pranayama exercises. In each of the following exercises sit on the floor in a comfortable Yoga Asana position such as for example, lotus position with the back straight. These exercises may also be done sitting in a straight back chair. Rest the back of your hands on your knees and with moderate pressure and connect the tip of your thumb to the tip of your index finger for both hands. Close your eyes and concentrate on the space between your eyebrows and try to empty the mind of all thoughts and think positively of peace and joy. Take a deep breath until lungs are full with air and breathe out slowly. Repeat this five times and you will ready to do the following seven exercises for about 3 minutes each.

It is important to do the following exercises at slow speed to begin with and gradually over time to build up the speed and forcefulness of breathing in and out to moderate and higher

levels. Also depending on your lung capacity and fitness and health, subsequently you may increase the time to about 5 minutes for each of the exercises. Note that if at any time you feel strain and discomfort then stop and rest before continuing any of the exercises.

Prana 1 (Bhasrika Pranayama): Breathe in through both nostrils forcefully until lungs are full, the chest expanded and the diaphragm stretched. Then breathe out forcefully until the lungs are empty. Repeat this for about 3 minutes. Another version of this exercise is to sit with legs folded at the knee and raising and fully stretching both hands up as one breathes in then pull the hands down to shoulder level as one breathes out. **BENEFITS:** This exercise brings about a proper balance of the three doshas, namely Vata, Pitta and Kapha. It is particularly beneficial to treating ailments such as cold, cough, tonsillitis, throat infections, allergy, asthma and other respiratory diseases.

Prana 2 (Kapal-Bhati Pranayama): Repeat Prana 1 except that the breathing in normally and breathing out is with as maximum a force as possible. Repeat this for about 3 minutes. **BENEFITS:** This exercise is highly effective in normalizing blood sugar levels. It improves functioning and efficiency of the abdominal activity of organs such as pancreas, kidney, prostate, spleen etc. It is particularly effective in relieving ailments such as constipation, acidity, artery blockages etc.

Prana 3 (Bahya Pranayama): Breathe out as much as possible and hold your breath to the maximum time feasible. When you desire to breathe in, do it slowly until lungs are full. Repeat this for about 3 minutes. **BENEFITS:** Same as in Prana 3 and particularly effective with regard to improving digestion.

Prana 4 (Anulom-Viloma Pranayama): This exercise involves closing the left and right nostrils alternatively. With the right thumb close the right nostril. Breathe in slowly through the left nostril until lungs are filled and chest expanded. Close the left hand nostril with the second and third fingers. Open the right nostril by releasing the thumb and breathe out very slowly with the right hand nostril until lungs are empty. Repeat this for about 3 minutes. **BENEFITS:** This exercise is effective in dealing with Vata dosha imbalances which affects ailments such as rheumatism, gout, urinary infections etc. and also improve blood circulation and is effective in reducing cholesterol levels. .

Prana 5 (Bhramari Pranayama): Close your mouth. Breathe in through both nostrils until lungs are filled. Close your left and right eyes with the two middle fingers of the left and right hands. Similarly close your ears with the left and right thumbs. Press the forehead with the left and right hand index fingers lightly. Breathe out slowly, making a humming sound of a bee while reciting "Om" mentally. Repeat for about 3 minutes. **BENEFITS:** This exercise, ideal for meditation, is effective in relieving stress and other related symptoms such as high blood pressure

Prana 6 (Omkar Japa): Close your eyes and breathe in through both nostrils slowly with the "OM" sound. Hold your breath to the maximum time possible. Breathe out slowly with the "OM" sound. Repeat for 3 minutes. **BENEFITS:** This exercise improves concentration and mental agility and when practiced at bedtime is highly effective in inducing deep and peaceful sleep

Prana 7 (Nadi Shodhan Pranayama): As in Prana 5, close the right-hand nostril and inhale slowly through the left-hand nostril as deeply as possible. Hold your breath to the maximum time possible and exhale through the right hand nostril until lungs are empty. Now breathe in slowly through the rights hand nostril. Hold your breath for maximum time

possible and next breathe out through the left hand nostril and again breathe in through the left hand nostril. Repeat this exercise for about 3 minutes. BENEFITS: As in the case of Prana 5.

A daily practice of some 20 minutes of the seven Pranayama exercises discussed above would be beneficial to strengthening the lungs, increasing breathing capacity and regaining the natural ability to breathe in a slow, deeper and healthier manner

Pranayama Research and Modern Lifestyles



The respiratory system is one of the few internal regulatory systems of the body that we can consciously control—and doing so can have tremendous impact on our health and well-being. While emotion almost always affects the breath—for example, it becomes shallow and rapid when we're anxious, fearful, or excited—this can go the other way as well. Slowing the breath rate can catalyze calmness, relaxation, and greater mental clarity. Research around the effects of yogic breathing practices, or pranayama, explores the significant implications of this breath-body-mind relationship.

The three steps of Pranayama comprise inhalation, retention and exhalation are important to facilitate slow and deep breathing to increase the oxygen intake, followed by retention of the oxygen such that it can enter the body and be acquired by all parts thereof. The final step is exhalation that is done through lungs or abdomen, where the impurities from your body are exhaled out. The effectiveness and efficiency of this process is important for the ailments and diseases of modern lifestyles, especially improving cardiovascular health, reducing risks of hypertension, improving lung function, treating depression and anxiety, stimulating healthy functioning of the organs, detoxification, strengthening the Immune system, curing digestive problems, improving mental concentration and much more.

There is growing modern medical scientific that highlights the body and mind benefits of Pranayama, for example. Whilst as early as 1941 medical researchers discovered that small amounts of fine particles inhaled through the nose can be lodged in the brain by breaching blood-brain-barrier (BBB), this field of research remained dormant until the 1990s when scientists, alarmed by rising environmental pollution, revisited the early research and started discovering the harmful effects of toxin invasion of the brain through

breathing. Today, rapidly growing research shows that a small part of the air we breathe through our nostrils goes directly to the brain via the olfactory lobe and the rest (major portion) goes to the lungs supplying the necessary oxygen to the blood. Thus, the inhaling breath affects both the mind and the body directly.

Scientists have also found that breathing through one nostril affects the part of the brain on that side, and thus the practice of inhaling through one nostril during Pranayama can stimulate that side of the brain. Similarly, deep slow breathing allows enough time for the nanoparticles or *pran* to pass through the BBB and into the brain. This has alarming implications for modern living since the inhaled pollution from household and automobile smoke, dust and general industrial environment has the ability to directly go to the brain and affect the nervous system. The increasing incidences of cancer and Alzheimer's disease have been attributed partly to the toxin invasion of the brain caused by pollution. This could also be a possible reason why second-hand smoke is more dangerous than smoking actively since the exhaled smoke particles go to the brain directly.

Research has also highlighted that though the pollutants are most of the time flushed out of the lungs by the immune system, the toxic particles in the brain go on. Nevertheless, if Pranayama is practiced in a clean and open-air environment daily then it can negate the problems of modern life. Researchers are finding that the enclosed environment of hospitals and sunlight and fresh air has brought down the incidence of disease drastically. A possible mechanism for this is that UV radiation of sunlight interacts with nanoparticles in air and produces free radicals and these reactive free radicals when inhaled have tremendous therapeutic value. Thus, it is possible that the toxins in the brain can be countered by inhaling free radicals. A good deep sleep helps in flushing out the toxins from the brain. Good deep sleep helps in flushing out the toxins from the brain, thus Pranayama, thus a good sleep and meditation can be the basis of a healthy brain.

One of the most important aspects of breathing is smell. It is perhaps our most memory-evoking sense. The smell signals from the nose go directly to the limbic system - the seat of emotions. Thus, smells evoke deep emotional responses and memories. Research has also shown that fragrance can change moods and influence judgment. That could possibly be the reason why throughout the ages, humans have always had a love affair with flowers and their scent. The use of mood-enhancing incense has been ubiquitous in religious practices all over the world for time immemorial too.

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