

Deep Breathing Techniques

Alternate Nostril Breathing

Breathing Techniques

There are many different breathing techniques. Some are very simple and others are quite complicated. The more we start with the simple actions and begin to practice them routinely, the better prepared we are to use the more complicated breathing techniques. It will take a long time of practice to master any of the techniques so we need not be in a hurry. Taking things slow and easy is the best strategy.

- Part 1
 - *The Belly Breath – breathing with the diaphragm muscle*
 - *The 4 Part Breath – breathing with all the respiratory muscles (a complete breath)*
- Part 2
 - The Pausing Breath (Viloma Pranayama)
 - Ujjayi Breathing (sound breath)
- **Part 3 (today's practice)**
 - **Alternate Nostril Breathing (Nadi Shodhan Pranayama)**
- Part 4
 - Anuloma Pranayama – Prolonged Exhale
 - Pratiloma Pranayama - Prolonged Inhale
- Part 5
 - Lion's Breath
- Part 6
 - Bhasrika Pranayama (Bellows breath)
- Part 7
 - Sitali Breath

Creating the Right Posture

The correct posture is necessary for getting the most out of pranayama. As a beginning measure, it is often best to use a posture lying on the back with the neck, rib cage, lower back, pelvis, arms and legs in an optimal and neutral position. This is especially true if you are prone to neck or shoulder tension. When reclined, the head and shoulders may be elevated on cushions if this is more comfortable.

A seated position can be also be used, but care must be taken to create an aligned posture and maintain an uplifted rib cage and elongated spine. The position of the head may be tipped forward to reduce neck strain. A bolster, chair, or bench may be helpful to reduce discomfort. Be sure that your legs are not uncomfortable or subject to reduced circulation. It is important that the body feel no strain or discomfort while practicing pranayama. Those who wish to sit on the floor may use a wall to help support the body.



Pranayama Traditions

Pranayama consists of exercises designed to allow control of the breath. With these practices a deep breath can be developed, stress can be reduced, respiratory muscles can be strengthened and the body can be better oxygenated.

The 4 Stages of a Yogic Breath

1. The inhale that pulls the air into the lungs (*Puraka*). This is expected to be smooth and continuous. As a student develops his/her technique the duration of the inhale will lengthen and the amount of breath brought into the lungs as well as the lung expansion will increase.
2. A brief pause before the exhale (*Abhyantara Kumbhaka*). A beginner will not deliberately stop the breath after the inhale. A full pause may eventually be developed, but must not be experienced as a stress to the body.
3. The exhale which allows the air to leave the lungs (*Rechaka*). A beginner experiences the exhale as a passive relaxation. With more experience, an active exhale that recruits the abdominal and rib muscles can be developed.
4. A brief pause before the next inhale (*Bahya Kumbhaka*). Here again a beginner will not deliberately hold their breath. With experience, this phase can be prolonged before the next breath is begun.

Basic Breathing Practice *Pursed Lip Breathing*

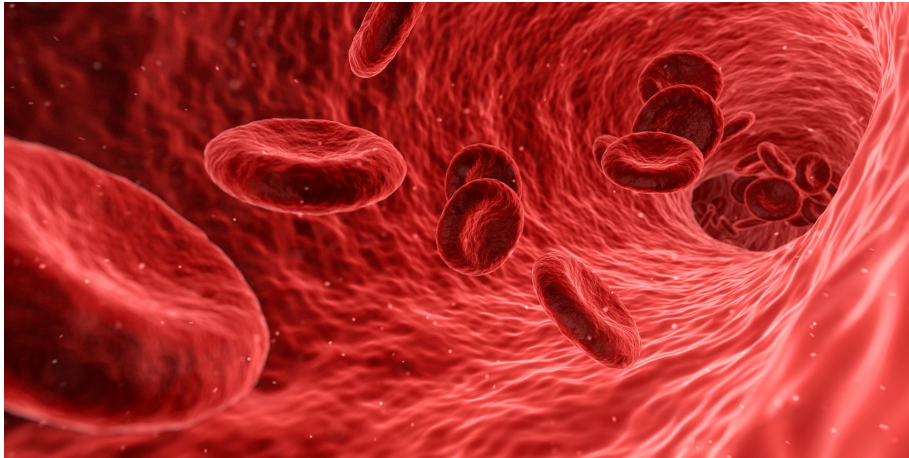
This type of breathing can help you to slow down your breath and create a longer and more full exhale.

- Sit in a comfortable position with good posture.
- Inhale through your nose slowly and deeply.
- Purse your lips as if blowing out a candle.
- Slowly exhale blowing out through your pursed lips.
- Repeat for two to ten minutes.

Another benefit of this type of breathing is when you are wearing a face mask. Those who wear glasses may find that wearing a face mask causes their glasses to fog up. Breathing out through the lips in this manner can reduce the amount of exhale that may travel up toward your glasses and reduce fogging.

Anatomy of Breathing Blood Cells

Red blood cells, also known as erythrocytes are the most common type of blood cell and it is their job to bring oxygen to our tissue cells. The cells are specifically designed to take up oxygen from the capillaries in our lungs and then travel to the various areas of the body where they release the oxygen through the capillaries in our tissues.



Red blood cells contain hemoglobin, an iron containing molecule that lets them bind oxygen and is responsible for their red color. The blood cells are oval biconcave discs which are specially shaped to allow deformation and stability as they travel throughout our circulatory system.

Red blood cells develop in the bone marrow of our flat bones. Approximately 2.4 million new red blood cells are produced per second. The circulation of each blood cell through our circulatory system takes less than a minute. Approximately one quarter of the cells in our body are red blood cells.

An adult human has about 20 – 30 trillion red blood cells at any given time. Those who live at high altitudes will have more blood cells than those living at sea level. It takes about seven days for a blood cell to mature from a stem cell to full maturity, a process called erythropoiesis.

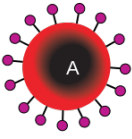
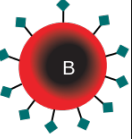
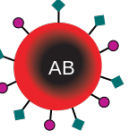



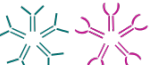



After its life cycle of about 120 days, the aging blood cell has changes in its membrane that allows specialized white blood cells called macrophages to envelope them and remove them from our circulation. This process is called eryptosis and occurs at the same basic rate as blood cells are created, which is about 2 million per second. The body recirculates much of the product of the breakdown of red blood cells.

Diseases involving red blood cells:

- *Sickle-cell disease* – a congenital genetic disorder that alters the blood cell shape allowing them to block blood vessels.
- *Anemias* – diseases characterized by low oxygen transport capacity of the blood either through low red blood cell count or other abnormality of the blood cells or hemoglobin. Iron deficiency is the most common.
 - *Pernicious anemia* – autoimmune disease where the body lacks intrinsic factor required to absorb B12 which is necessary for the production of hemoglobin.
 - *Aplastic anemia* – the inability of the bone marrow to make blood cells.
 - *Hemolytic anemia* – the excessive breakdown of red blood cells.
- *Malaria* – a parasite that spends part of its life cycle in red blood cells, feeding on their hemoglobin and breaking them down which causes fevers.
- *Polycythemia* – diseases characterized by a surplus of red blood cells.

Blood Type

Blood type is essential for blood transfusions or organ transplants because the body's immune system will attack blood cells or tissues that are not the specific blood type of the body.

	Group A	Group B	Group AB	Group O
Red blood cell type				
Antibodies in Plasma	 Anti-B	 Anti-A	None	 Anti-A and Anti-B
Antigens in Red Blood Cell	 A antigen	 B antigen	 A and B antigens	None

Circulation Speed

Blood travels at different speeds in all different types of vessels. Fastest in arteries, slower in arterioles, VERY slow in capillaries, then faster in venules, and faster again in veins. The average blood cell makes a round trip through the body's arteries and veins every 60 seconds, and can hit speeds of up to 10 mph. The heart pumps your five quarts of blood around your body 500 times a day.

Pranayama - Alternate Nostril Technique

The manipulation of the nose is a technique designed to limit air flow to one side of the nostril and enhance air flow through the other nostril. It has been said that in those who have mastered Pranayama, air flow can be controlled by the mind alone. Until then we need to use our fingers.

For those who have blocked sinuses, it is advisable to gently blow your nose before attempting this technique. With a cold or allergies this technique might not be possible and there are some who discover that one side of their sinus is significantly different than the other side.

If you find these techniques too difficult then substitute deep belly breathing. You will receive benefits even if you cannot direct the breath through the nose.

Placing Fingers on the Nose



The following categories of pranayama uses a digital control over the nostrils. Proper placement of the fingers is essential and something that has been compared to the skill of a musician playing a flute.

Traditional Hand Placement

Traditionally the index and middle finger are folded into the palm. The thumb is placed on one side of the nose and the ring and little finger are placed on the

opposite side. The fingers are placed above the nostril and just below the bony aspect of the nose. Gentle pressure is used to close one nostril.



Opening the Nose and Sinus

The opposite side may be opened more by gently pulling the skin away from the center of the nose. It takes time and patience to cultivate finger placement. It also takes clear sinuses to achieve the best effects.

Two Hand Method

If you prefer, you can use the index fingers of both hands to close the nostrils as well as open the other side. There is no greater benefit from using one hand method versus using two and no negative from any method that allows comfortable control.

Basic Alternate Nostril Breathing (Nadi Shodhan Pranayama)

1. Sit in a comfortable position with good posture.
 - a) You may use either one or two hands.
 - b) Pressure will be placed on the part of the nose just above the nostril.
 - c) The other fingers or hand will gently pull the skin away from the center of the nose.
2. Gently close the right nostril and breathe out through the left nostril.
3. Breathe in through the left nostril (use your fingers to gently open the nostril area).
4. Gently close the left nostril.
5. Release the pressure on the right nostril and breathe out through it.
6. Breathe in through the right nostril (use your fingers to gently open the nostril area).
7. Gently close the right nostril and breathe out through the left.
8. Continue inhaling and exhaling alternately through each nostril. You are breathing in through the nostril you just exhaled from.
9. Repeat from 2 – 9 times in a row.


Surya Bhedana Pranayama – Inhale right, Exhale left

1. Sitting with proper posture.
2. Exhale completely and then block the left nostril.
3. Inhale slowly through the right nostril until lungs are full.
4. Block the right nostril and open the left nostril.
5. Exhale slowly through the left nostril until lungs are empty.
6. Repeat for up to ten minutes

Chandra Bhedana Pranayama – Inhale left, Exhale right

1. Sitting with proper posture.
2. Exhale completely and then block the right nostril.
3. Inhale slowly through the right nostril until lungs are full.
4. Block the left nostril and open the right nostril.
5. Exhale slowly through the right nostril until lungs are empty.
6. Repeat for up to ten minutes

Yoga to Enhance the Breath

Simple Twist	<i>Instruction</i>
	<p>- Start in a seated position with your feet and knees wide apart and your feet on the floor. Maintain a slow and deep breath.</p> <ul style="list-style-type: none"> • Lift your chest away from your hips and drop your knees toward the left. <ul style="list-style-type: none"> ◦ The outside of your left leg and the inside of your right leg will touch the floor. <ul style="list-style-type: none"> ▪ Place your left foot so that it touches the top of your right thigh. ◦ Place your hands on the floor and twist slowly toward your left, leaning away from your hips. <ul style="list-style-type: none"> ▪ Keep your hands basically under your shoulders. ▪ Keep your spine long by pulling your chest away from your hips. ◦ Breathe slowly and deeply. ◦ Continue to twist slightly more, repositioning your hands as you need. <p>- Limit your twist to what feels like a comfortable sensation in every part of your body. Do not allow one area to feel too strong of a sensation.</p> <p>-Return to center, then slowly twist in the opposite direction.</p>