

## Pranayama – Bellows Breath

### 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
  - Alternate Nostril Breathing (Nadi Shodhan Pranayama)
- Part 4
  - Anuloma Pranayama – Prolonged Exhale
  - Pratiloma Pranayama - Prolonged Inhale
- Part 5
  - Lion's Breath
- **Part 6 today's practice)**
  - **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.



**Benefits, Effects, and Contraindications with Pranayama**

Pranayama Technique	Traditional Effects (testimonial)	Scientific Studies (data)	Contraindications
<p><b>Belly Breath, 4 Part Breath</b></p> <p><b>Pausing Breath (Viloma)</b></p> <p><b>Ujjayi Breathing (sound)</b></p>	<p>Balance mind, weight loss, stress reduction, enhance lung function, enhance mental clarity.</p>	<p>Cardiovascular and Respiratory Effect of Yogic Slow Breathing in the Yoga Beginner: What Is the Best Approach?: Slow deep breathing with equal inhale vs exhale:  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3655580/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3655580/</a></p>	<p>Practically none if used gently – see below.</p>
<p><b>Alternate Nostril (Nadi Shodhan)</b></p>	<p><i>Inhaling through the left nostril triggers the rest/relaxation response (parasympathetic nervous system) and inhaling through the right stimulates the fight/flight response (sympathetic nervous system).</i></p>	<p>Short-term practice of LNB improves vagal tone, Practice of RNB increases sympathetic tone:  <a href="https://www.ncbi.nlm.nih.gov/pubmed/24741554">https://www.ncbi.nlm.nih.gov/pubmed/24741554</a>                      Effect of Alternate Nostril breathing on memory:  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4800515/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4800515/</a>                      Effect of uninostril yoga breathing on brain hemodynamics:  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4728953/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4728953/</a></p>	
<p><b>Prolonged Breath (Anuloma and Pratiloma)</b></p>	<p>Prolonging the inhale = stimulates sympathetic (fight/flight) system. Prolonging the exhale = stimulates parasympathetic (relaxation) system.</p>	<p><b>No specific studies found.</b> During a deep inspiration, there is an increase and during a deep expiration, there is a decrease in the heart rate:  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3681046/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3681046/</a></p>	
<p><b>Lion’s Breath (Simhasana)</b></p>	<p>Relax and tone the facial muscles and reduce stress.</p>	<p><b>No specific studies found.</b></p>	<p>Avoid if pregnant or suffering from high blood pressure or heart issues. Avoid if glaucoma, nasal issues, or other upper respiratory issues. Avoid if recent surgery. Best if not done right after a meal.</p>
<p><b>Bellow’s Breath (Bhasrika), Kapalbhati (Breath of Fire)</b></p>	<p>Increase Prana, energize the body and clear the mind. Helps with weight loss, great for reducing abdominal obesity.</p>	<p>Two months combined practice of Bhasrika Pranayama in obese individuals showed <b>minimal changes</b> in Waist Hip Ratio and BMI.  <a href="http://repository-tnmgrmu.ac.in/10172/">http://repository-tnmgrmu.ac.in/10172/</a></p>	
<p><b>Curled Tongue (Sitali)</b></p>	<p>This practice cools the body.</p>	<p><b>No specific studies found.</b></p>	

## Contraindications to Pranayama Practice

There are practically no negative consequences of practicing breathing techniques when gentle methods are used. Almost anyone can do basic techniques regardless of their physical condition. Yet with anything it is important to start simply and increase duration and exertion during practice gradually. Here are a few things to keep in mind:

- Over-breathing as in breathing too rapidly can induce a state of hyperventilation. The symptoms typically start with mild light-headedness and a tingling around the mouth and progress to anxiety attack levels if a person does not stop over-breathing. Returning to normal breathing will typically stop hyperventilation, but breathing into a paper sack will also return body oxygen levels to normal.
- Holding the breath for prolonged times or holding the breath while creating physical exertion can cause light-headedness and potentially raise blood pressure. Although breath holding techniques do exist in Pranayama it is advisable to avoid these while performing any physical poses.
- Excessive strain of the throat should be avoided in Ujjayi (sound) and Simhasana (lion's breath). The sounds we seek to make in both of these techniques do not require forceful actions.

More advanced forms of pranayama practice should not increase the risk as long as the practitioner is adding to the duration and intensity of the practice slowly and methodically while maintaining a relaxed physical posture. There is no level of pranayama where straining is considered a correct part of the practice.

Practice causes the respiratory muscles to strengthen, the lung capacity to improve and allows the practitioner to learn control over their breathing rate. This all happens with *persistent* practice over the course of weeks to months. Attempting to proceed into advanced breathing techniques without adequate practice will create stress and uncomfortable sensations.

Holding the breath should be merely a pause in breathing in or out. It should not be gripping the throat or pushing the body past normal endurance. When you wish to breathe, allow yourself to breathe in or out.

Pranayama is at its essence a practice of mindfulness. We become aware of our body and of our breathing. We become aware of respiratory muscles, of our heart rate and the tension we feel in our body. With this awareness we create a state of conscious control over unconscious actions.

## Basic Breathing Practice

Creating a sound while we exhale can vibrate the throat and cause feedback into the portion of the vagus nerve located in our throat as well as the portion of that nerve located in our auditory areas.

### ***Bhramari – Humming***

- Come into a comfortable seated position.
  - Place your fingers over your ears.
  - Create a deep inhale.
  - As you exhale, hum for as long as you can.
  - Return to your inhale and create a humming exhale for several cycles.
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### ***Udgeeth Pranayama – Ohm chanting***

- Come into a comfortable seated position.
- Allow your arms to relax and your hands to rest in your lap.
- Create a deep inhale.
- As you exhale, make the sound 'ohm' for as long as you can.
- Return to your inhale and create the ohm exhale for several cycles.

## **Anatomy of Breathing Lung Problems**

### **Asthma**

This is an inflammatory disease of the lung airways involving obstruction to airflow and bronchospasms. The symptoms are wheezing, coughing, chest tightness and shortness of breath. Triggers include pollution and allergies.

### **Bronchitis**

This is an inflammation of the bronchial tubes that carry air into the lungs. We also refer to this as a chest cold. It often follows a cold or flu and can be brought on by pollution, allergies or other irritants. The symptoms are coughing, wheezing, shortness of breath and chest pain.

### **COPD**

This stands for 'chronic obstructive pulmonary disease' and includes emphysema, chronic bronchitis, and chronic asthma. It typically worsens over time and its symptoms include shortness of breath and a productive cough. Smoking is one of the common causes of COPD.

### **Cystic Fibrosis**

This is a genetic disorder that mostly affects the lungs and involves an overproduction of mucus. The symptoms are difficulty breathing and productive cough.

### **Lung Cancer**

This is uncontrolled cell growth in tissues of the lung. It can be primary, meaning the malignancy started in the lung, but also is a common area for metastatic lesions, meaning cancers that traveled from other tissues. The majority of lung cancers are due to long term tobacco smoking. The symptoms include coughing, weight loss, shortness of breath and chest pain.

### **Pleurisy**

This is an inflammation of the membrane tissue that surround the lungs and the chest cavity. It is commonly caused by a viral infection. The symptoms include shortness of breath, cough, fever and weight loss.

### **Pneumonia**

This is an inflammatory condition of the lung that affects the alveoli (air sacs). It is oftenc caused by a viral or bacterial infection and those with COPD, cystic fibrosis, asthma, heart issues or weakened immune systems are more vulnerable. The symptoms include fatigue, coughing, chest pain, fever and difficulty breathing.

## **Pranayama – Breath of Fire and Bellows Breath**

### **Kapalbhati Pranayama – Breath of Fire/Shining Skull**

In this technique, the exhale is active and the inhale is passive. There should be no strain in the body and we should stay relaxed. A beginner should keep the speed of the inhale/exhale cycle comfortably slow.

- Sit with good posture. Stay relaxed throughout this pose. It can be helpful to close your eyes.
- Inhale deeply and fully. Exhale fully and then inhale deeply again.
- Exhale - Pull your abdomen inward toward your spine as you exhale.
- Inhale easily.
- Exhale – pulling in the abdomen.
- Continue for 10 cycles then relax.
- Breathe normally for several deep breaths.

With practice and comfort, the speed of the exhales can be increased.

### **Bhasrika Pranayama - Bellows breath.**

This is a forceful breath which activates the entire body. The practice should be stopped the moment any irritation or strain is felt. This should not be practiced if the sinuses are blocked. This is not recommended for those with weak constitutions, poor lung capacity, high blood pressure, eye or ear conditions.

Performed from a seated position with aligned posture. Your arms will be by your sides with your elbows bent and your hands next to your shoulders.

- Exhale completely.
- Gently close both hands into soft fists.
- Inhaling, lift both arms up, drawing in the breath through your nose.
- Exhaling through the nose as you lower both arms to their starting position.
- Repeat the inhale and exhale actions for ten breaths.
- Relax your arms and lower your hands. Gently tuck your chin and breathe normally.

The cycle can be repeated three or four times.

## Yoga to Enhance the Breath

### Revolved Rabbit



Start in a kneeling position with your hips toward your heels.

- Lengthen your waist and reach your left arm across your body to the outside of your right knee.
- Slowly twist your right shoulder behind your left shoulder.
- Breathe deeply then return to the starting position and repeat on the opposite side.
- If this is comfortable, reach your left elbow across your body to the outside of your right knee and slowly twist with your spine long.
- Breathe deeply and repeat on the opposite side.
- For a greater challenge, reach your left shoulder across your body to the outside of your right knee and slowly twist with your spine long.

Breathe deeply and repeat on the opposite side.