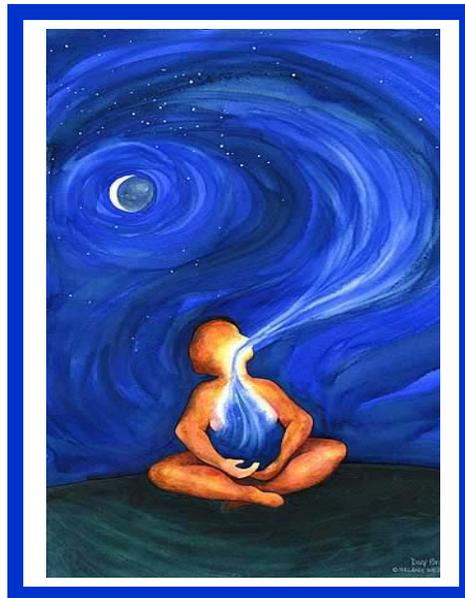


Therapeutic Application of Breathing

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August 2010



“The wise seeker must safeguard his breath from heedlessness, coming in and going out, thereby keeping his heart always in the Divine Presence; and he must revive his breath with love and servitude and dispatch this love to the Divine, for every breath which is inhaled and exhaled with Presence is alive and connected with the Divine Presence. Every breath inhaled and exhaled with heedlessness is dead, disconnected from the Divine Presence.”

Adapted from a quote by Naqshbandi Sufi Master Shaykh Nazim Al-Haqqani

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1. Introduction

“Breathing is the subtle sign of living power. Through breath, we receive all that is- and give all that we are. When our breathing is in harmony with natural rhythm, we find a deep sense of calm power which removes anxiety & stress, strengthens the body, clears the mind, purifies the energy within and enlivens our spirit.” Josh Williams

Breath is one of the most powerful energizing forces we have. It is something we know how to do from the time we are born. It is something that occurs automatically, spontaneously, naturally. Watch a baby breathing and see the natural, deep breath creating a gentle rise and fall in the belly.

When we breathe deeply, we bring oxygen rich air deep into our lungs to be distributed throughout the body. Oxygen is critical to the generation of energy within our cells. Oxygen is the most vital nutrient for our bodies. It is essential for the integrity of the brain, nerves, glands and internal organs. Breath is critical to being alive. Our bodies depend on breath to survive. We can live without food for weeks, without water for days, but without air for only minutes.

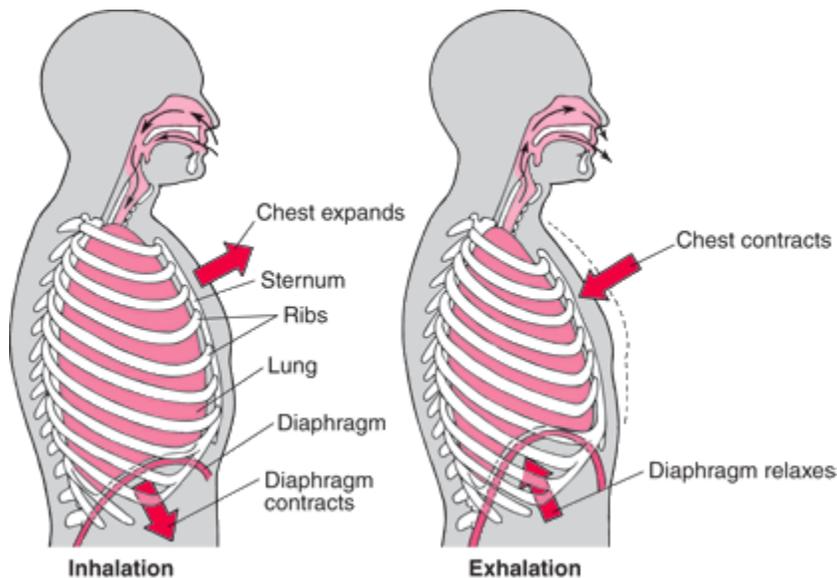
Not only does breath keep us alive in the most fundamental way, but the quality of our breathing begets the quality of our living, our sense of well-being. How we feel physically affects we feel emotionally and because breathing is a key to physical well-being, or lack of it, it has an enormous part to play in determining how we feel emotionally. In Anusara yoga we understand that as we expand and deepen our breath we expand and deepen our connection to the Grace. As we breathe fully we live fully in the flow of Grace.

Given our breath is automatic and imperative to our existence; it seems odd to think that we need to learn how to breathe. Yet, one's breathing becomes modified and restricted in various ways, not just momentarily, but habitually. We develop unhealthy habits without being aware of it. We tend to assume positions (slouched positions), that diminishes lung capacities and force us to take shortened breaths. We also live in social conditions that are not good for the health of our respiratory system. Diseases and conditions of the body can cause a shortened, shallow breath.

A therapeutic application of breathing teaches us how re-learn the natural breathing process. Bringing us back to natural breathing re-connects us to the vital benefits of this deep breath; oxygenating the body bringing nourishment, support and healing, reducing emotional stress by cultivating a sense of well-being and connecting us to the Grace. In the words of Rudolph Steiner, *“All healing originally resides in the human breathing system”*.

2. General Definition of Breathing

The breathing process:



The process of breathing involves 2 phases: inhalation and exhalation. Inhalation takes in oxygen from inhaled air and exhalation releases carbon dioxide back out into the air. Breathing brings oxygen-rich air deep into our lungs to be distributed through the body. Oxygen is critical to the generation of energy within the cells.

3. Definition of Natural Breathing and Shallow Breathing

“Breath is perhaps the most important tool in yoga practice”. Timothy McCall, M.D.

Optimal breathing rate is defined as: 10-12 breaths per minute. I shall refer to this as natural breathing. Many people breathe less than optimally at 18-20 breaths/min. This breath is shorter and shallower than natural breathing.

Chronic shallow breathing, (18-20 breaths/min.), reduces working capacity of respiratory system to approx. 1/3 of its potential. Shallow breathing diminishes the exchange of gases and thus the production of energy in the cells. Shallow breathing also decreases vitality and increases potential for disease.

In Taoist meditation practices the natural state of breathing is often called ‘fetal breathing’, because it has the gentle, un-forced nature of a newborn child’s breathing

rhythm. To get an optimal amount of oxygen into the tissues the breath must be slow, rhythmic and deep. Most people are shallow breathers and breath approximately 20 breaths per minute. This shallow breath does not allow for the full expansion of the lungs. It is possible to breathe only 8-10 breaths per minutes.

4. Benefits of Natural breathing

“When the breath of life becomes long and deep, you understand who you are. So anytime when you are angry, a deep breath will be an intimate friend. And restoration of life will come through. You will live long. You will have health. There will be a lot of oxygen in the blood. Purification will happen. Organs will work long and fine”. Yogi Bhajan

Natural breathing benefits every area of the body; the respiratory system, the circulatory system, the nervous system, the digestive system, the endocrine system, the skin, the mind, body and spirit.

A sampling of some of the specific benefits follows;

- Releases acute and chronic muscular tensions in the body.
- Helps sufferers of respiratory illnesses such as asthma and emphysema to overcome the fear of shortness of breath. Increases lung capacity.
- Relaxes the mind and body. Slow, deep, rhythmic breathing causes a reflex stimulation of the parasympathetic nervous system which results in a reduction in the heart rate and relaxation of the muscles. In our society we tend towards sympathetic nervous system dominance, constantly experiencing excess stress and over-stimulation. The dominance of the sympathetic nervous systems can cause such common conditions as depression, hypertension and adrenal fatigue.
- Supports mental clarity. When the brain is deprived of oxygen mental abilities decrease. Concentration, mental focus and alertness are dramatically improved by deep breathing.
- Taoist and Vedic mystics believe the movement of the diaphragm ‘fans the fire’ of the lower three chakras. This action ensures life energy stays active and does not become stagnant, leading to greater confidence, personal power, strength, a general sense of calm power within the self.
- Increases lung capacity which increases physical performance. Shallow breathing fills only 1/3 of the lung capacity whereas normal breathing fills 100%

lung capacity. Maximizing the breath to capacity means maximum oxygen intake, increasing energy and endurance levels.

- Improves the quality of the blood due to the increased oxygenation in the lungs. This aids in the elimination of toxins from the system. The respiratory system is responsible for eliminating 70% of your metabolic waste. The remainder is eliminated through defecation 3%, urination 8%, and perspiration 19%.
- Increases digestion and assimilation of food. The digestive organs such as the stomach receive more oxygen, and hence operate more efficiently.
- Improves the health of the nervous system, including the brain, spinal cord, nerve centers and nerves. This is due to the increased oxygenation and hence nourishment of the nervous system. This improves the health of the whole body, since the nervous system communicates to all parts of the body.
- The movements of the diaphragm in deep breathing exercise massage the abdominal organs - the stomach, small intestine, liver and pancreas. The upper movement of the diaphragm also massages the heart. This stimulates the blood circulation in these organs.
- Resistance to disease increases, since oxygen is essential for healthy cells. This means we catch fewer colds and develop other ailments less readily. Shallow breathing created a lack of sufficient oxygen to the cells and is a major contributing factor in cancer, heart disease and strokes.
- Deep breathing releases endorphins into the system, our bodies natural painkillers. This can help relieve general aches and pains, as well as help ease problems with sleeplessness. Deep breathing also relaxes muscles, a major cause of neck, back and stomach pains.

5. Causation of Shallow Breathing

"Improper breathing is a common cause of ill health." Dr. Andrew Weil

There are many conditions that cause us to lose our natural breathing and to become shallow breathers;

- Muscle tension from stress or holding on to emotions is often the biggest factor.
- Poor posture can create shallow breathing.
- Being overweight makes it harder for the diaphragm to move down on an inhale.
- Air pollution, including using 'air fresheners' in the home, other household chemicals, and smoke and/or paint fumes can cause us to instinctively restrict our breathing.

- Shallow breathing almost always accompanies distressed emotional states.
- Sedentary living, Modern technology and automation reduce our need for physical activity. There is less need to breathe deeply.
- Breathing disorders including asthma, rhinitis, emphysema, bronchitis, cystic fibrosis, and lung cancer.
- Increased stress and pace of modern living creates a faster, shallow breath.
- Working indoors more and more increases our exposure to pollution. As a result, the body instinctively inhales less air to protect itself from pollution.

6. Process of Learning, (or re-learning), Natural Breathing

"Practicing regular, mindful breathing can be calming and energizing and can even help with stress-related health problems ranging from panic attacks to digestive disorders." Andrew Weil, M.D.

Step 1: Abdominal breathing

- First, lie down on your back. Gently close your eyes and relax. Observe the breath. Feel gratitude for the intelligence, power and Grace that lives in your breath. Create an intention to be open to receiving this intelligence, power and Grace.
- Place your hands on your abdomen. As you inhale allow the abdomen to rise and as you exhale allow the abdomen to fall. Begin to deepen, lengthen and extend the movement. That is, while inhaling, let the abdomen rise to its limit and at exhalation let it fall completely. Continue for 20 breaths.

Step 2: Thoracic (chest) breathing

- Place your hands on your chest. Observe the breath, this time focusing your attention on the chest. Notice the chest moving slightly up at inhalation and down with exhalation. Begin to deepen, lengthen and extend that movement. This time, on inhalation expand and lift the rib cage, filling the lungs completely. Then on exhalation, let the lungs collapse fully, sinking to the limits. Do this for 20 breath cycles and then stop

Step 3: Full, Natural Breathing

- Inhale and fill the abdomen. Continue inhaling as you expand and fill the chest. Exhale first from the chest as it empties and falls continue exhaling from the abdomen as it draws inwards completely. This is one round of natural breathing. The movement is slow and easy creating a maximum capacity with minimal effort. Repeat natural breathing for 20 rounds.

7. Therapeutic Application of Breathing

"The simplest and most important technique for protecting your health is breathing. I have seen breath control alone achieve remarkable results: lowering blood pressure, ending heart arrhythmias, improving long-standing patterns of poor digestion, increasing blood circulation throughout the body, decreasing anxiety and allowing people to get off addictive anti-anxiety drugs and improving sleep and energy cycles." Andrew Weil, M.D.

Medical science is studying and verifying the effectiveness of natural breathing as a therapeutic application for many conditions and diseases with very favourable results. I offer a small selection of some studies and their findings here.

CHF Congenital Heart Failure

1998 Lancet, Luciano Bernardi, MD; Cesare Porta, MD; Lucia Spicuzza, MD; Jerzy Bellwon, MD; Giammario Spadacini, MD; Axel W. Frey, MD; Leata Y.C. Yeung, MD; John E. Sanderson, MD; Roberto Pedretti, MD; Roberto Tramarin, MD. Study done with people suffering breathing problems due to congestive heart failure. After 1 month of practicing complete breathing, (complete breathing uses the abdominal muscles to exhale as fully as possible, allowing larger inhalation), patients in the study dropped from an average of 13.4 breaths per minute to 7.6 breaths per minute, increasing the oxygen levels in their blood. These data suggest that in patients with CHF, slow breathing, in addition to improving oxygen saturation and exercise tolerance as has been previously shown, may be beneficial by increasing baroreflex sensitivity.

Angina

1948, Dr. Aaron Friedell taught 11 angina patients the mindful breathing technique, (inhaling and exhaling slowly, taking brief pauses between each inhalation and

exhalation). Mindful breathing was applied at the first signs of an angina attack and with the breathing the attack would usually go away. In patients experiencing chest pain and shortness of breath their symptoms markedly improved. Some patients were able to discontinue use of medications.

Anxiety

1991, J.M. Harrigan, study done at Penn State University comparing yoga postures with and without diaphragmatic breathing exercises to breathing exercises alone, When postures were done without attention to breath there was no significant reduction in anxiety as compared to a control group that only heard lectures. The group doing the natural breathing had a significant reduction in anxiety and those who combined the breath with the exercises had the greatest reduction.

High Blood Pressure

Journal of Human Hypertension (2001) **15**, 263-269, E Grossman, A Grossman, M H Schein, R Zimlichman and B Gavish: Study found that 10 minute daily breathing control exercises are an effective non-pharmacological modality to lower blood pressure,

Length of Life

Chest 2000;118(3)656-664. Holger J. Schünemann, MD, PhD, Joan Dorn, PhD, Brydon J. B. Grant, MD, FCCP, Warren Winkelstein Jr., MD, MPH and Maurizio Trevisan, MD, MS. **Study found that** lung function may predict long life or early death Results showed that lung function was a significant predictor of longevity in the whole group for the full 29 years of follow-up. Dr. Schanemann said the fact that a relationship does exist between lung function and risk of death should motivate physicians to screen patients for pulmonary function, even if more research is needed to determine why. These results suggest that pulmonary function is a long-term predictor for overall survival rates in both genders and could be used as a tool in general health assessment.

It is worth mentioning that the therapeutic application of natural breathing is powerful in part due its accessibility to everyone; it is affordable, (free), requires minimal time commitment and is easily learned and applied regardless of age or mental acuity. The effectiveness and accessibility make natural breathing a worthy component in all healing programs.

8. Beyond Natural Breathing- Additional Therapeutic Breathing Techniques

"Breathing is the FIRST place not the LAST place one should investigate when any disordered energy presents itself." Sheldon Saul Hendler, MD Ph.D.

The long deep natural breath is the foundation of therapeutic breathing. There are many other breathing techniques, most offering a variance on natural breathing. Variances range from breath retention, breath suspension to breathing through one nostril at a time, to breathing through various positions of the mouth, to breath rhythm. As the focus of this paper is to explore the therapeutic application of the breath in principle, I will leave the exploration of these variances aside, except to make mention and give recognition to them here. The variances on natural breathing are as extensive as its many benefits; this list is but a small sampling;

Alternate Nostril Breathing

Benefit

We normally breathe in 1-2 hour cycles; first one nostril, then the other is dominant. Prolonged breathing through one side can drain our energy. This breathing technique restores balance to our breathing pattern, equalizing energies and pathways of the nervous system, reducing anxiety.

Instruction

1. Sit comfortably with spine straight Eyes closed if comfortable.
2. Place index finger and middle fingers of right hand on forehead, between the eyebrows. Thumb rests on the right nostril; the ring and baby fingers rest on the left nostril.
3. Inhale and exhale. Close the right nostril with the thumb; inhale through the left nostril for a count of 5.
4. Close both nostrils; hold your breath for a count of 5.
5. Lift the thumb; exhale for a count of 5 through the right nostril.
6. Inhale through the right nostril for a count of 5, hold for a count of 5, close the right nostril and exhale through the left nostril for a count of 5.
7. Repeat #2-5, five times.

Ujjayi Breath

Benefit

Balances the nervous system, slows and quiets the mind, calms the emotions. The sound made by the breath can be compared to the sound of ocean waves, which have a very tranquilizing effect. Can be helpful for insomnia.

Instruction

1. Sit in a comfortable position or lie down, spine straight. Eyes closed if comfortable.
2. Exhale completely

3. Inhale by drawing breath through nose, allow inhale to fill abdomen and lungs.
4. Slightly contract the back of the throat to create a soft, hissing sound as you exhale and inhale slowly through the nose. The sound is audible but not loud.
5. Continue breathing slowly, focusing on the sound as you inhale and exhale.
6. Repeat for 5 breaths, or as long as desired.

Chin Press Breath

Benefit

Stimulates the thyroid, regulating metabolism. Improves concentration. Stretches the muscles at the back of the neck. Promotes a sense of inner peace.

Instruction

1. Sit in a comfortable position with spine extended. Eyes closed if comfortable.
2. Inhale through the nose for a count of 5. Lift the chest, moving the head back slightly as you tuck the chin towards the chest.
3. Hold the breath for a count of 5, (or as long as comfortable).
4. Exhale through the nose for a count of 5.
5. Raise chin so it is level with floor.
6. Repeat #2-5, five times.

Humming Bee Breath

Benefit

The vibration caused by this breathing technique is similar to one created by chanting *Om*, helps release tension and anxiety by calming the body and mind. Helpful in releasing and calming feelings of anger.

Instruction

1. Sit in a comfortable position with spine extended. Eyes closed, if comfortable.
2. Inhale deeply for a count of 7, (or as long as comfortable).
3. Slightly part lips and hum as you exhale for a count of up to 14, (as comfortable).
4. As momentum builds try to get the lips to vibrate with exhale.
5. Repeat #2-4, five times.

Cooling Breath

Benefit

Cools the body and calms the mind while expelling toxins from the system. It is helpful in relieving stomach and lower abdominal ailments.

Instruction

1. Sit in a comfortable position with spine extended. Eyes closed, if comfortable.
2. Curl the sides of the tongue to form a straw between the lips.
3. Inhale through the opening created by the tongue for a count of 7, (or as long as comfortable).

4. Withdraw your tongue, close your mouth, hold your breath for a count of 7.
5. Exhale through the nose for a count of 7.
6. Repeat #2-5, five times.

Sucking Breath

Benefit

Cools the body, removes excess heat. Can improve digestion, lower high blood pressure and purify the blood.

Instruction

1. Sit in a comfortable position with spine extended. Eyes closed, if comfortable.
2. Place tip of the tongue on the roof of the mouth just behind the upper teeth.
3. With the mouth open but keeping the upper and lower teeth together, draw the breath in through the mouth for a count of 7, (or as long as comfortable).
4. Close your mouth and hold for a count of 7.
5. Breath out through the nose for a count of 7.
6. Repeat #2-5, five times.

Sufi's Mother's Breath

Benefit

Promotes a feeling of safety, security and nurturing. As with all deep breathing exercises, the increased flow of oxygen improves the complexion and cleanses the inner organs by helping to remove toxins from the system. While inhaling, on a sense of well-being the enfolds you like a warm, soft blanket or angel's wings and while exhaling to concentrate

Instruction

1. Sit or lie down in a comfortable position with spine extended.
Eyes closed, if comfortable.
2. Breath in through the nose for a slow count of 7, (or as long as is comfortable). Hold breath in for a count of 1. While inhaling concentrate on a sense of well-being enfolding you like a warm soft blanket or angel's wings.
3. Breathe out through the nose for a count of 7. Hold the breath out for a count of 1. While exhaling concentrate on acknowledging someone in your life who has nurtured and cared for you. Feel protected, secure and loved.
4. Repeat #2-3, five times.

Breath of Fire

Benefit

Energizes and purifies the body, tones the abdominal muscles, strengthens diaphragm, increases energy, improves concentration, improves blood circulation.

Instruction

1. Sit in a comfortable position with spine extended. Eyes closed, if comfortable.
2. Inhale
3. Exhale vigorously by pulling back the abdominal muscles. This will cause a short, forceful expulsion of air through the nose.
4. Repeat #2-3 with steady, quick breaths, 20 times.
5. Allow breath to return to normal.
6. Repeat #2-5, three times.

Conclusion

For breath is life, and if you breathe well you will live long on earth. ~Sanskrit Proverb

The importance of breathing naturally cannot be understated. We begin life with a natural, full, deep and nourishing breath but all too quickly circumstances of life around and within us cause a shortening of each precious breath we take. This compromised breathing is shown to reduce both the quality and length of our life. Natural Breathing so easily implemented and so therapeutically beneficial it is wise for everyone, whether healthy or suffering from ill health, to implement a natural breathing practice into their life. It is accessible, affordable and infinitely beneficial.

