

The Art Of Breathing

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"WHEN THE MIND BECOMES STILL, BREATHING IS CALM AND QUIET. WHEN BREATHING IS CALM AND QUIET, THE MIND BECOMES STILL".

BREATHING A SIGH OF RELIEF

Typically, to breathe is an involuntary, unconscious process. It is one bodily process, however that can be done either automatically or purposefully. You will perform this ritual about 500,000,000 times during your lifetime. When done without attention, for most individuals, breathing is shallow using very little of the capacity of the lungs, about 25%. To breathe deeply requires attention to your posture and concentration on your method of inhalation and exhalation. Knowledge of the anatomy of the respiratory system is also helpful.

From the time of our entry into this world until we exit, we cannot interrupt our breathing but for a few moments. Without a continuous source of oxygen, brain cells begin to die because the body is deprived of its source of energy. Only a brief deprivation of our source of oxygen can shock us from complacency to an urgent demand for air that will completely monopolize your consciousness until it is satisfied. Nothing demands more of your attention than having your supply of air interrupted. On the other hand, it is truly amazing how many benefits can accrue in your body from deep, rhythmic breathing. Breathing to survive can be transmuted into breathing to achieve radiant health; even transcendence.

The circulatory system within our bodies is activated and maintained by our heart pump. The lymphatic system however, has no pump to move the lymph fluids through the body. It had been thought that muscle contractions and body movements were necessary to propel these fluids, but it has been discerned there is a more important system for this to occur. The primary "pump" for the lymphatic fluids involves the interaction of the lungs, diaphragm and the rib cage. The lymphatic system is the body's garbage disposal system and a major player in the functioning of the immune system. Thus, when breathing is intensified, it has powerful effects that enhance the health and vitality of the body.

Breathing practices have been passed down from ancient cultures, taught in esoteric and mystical schools, and entrusted to students by their gurus. They have stood the test of time as proven and valuable technologies, which can reduce stress, improve health, sustain wellness, facilitate endurance, and alter consciousness. Dr. Roger Jahnke states, "The breath is a powerful link to the most profound medicine that we produce within us physically, mentally, and even spiritually." According to Jahnke, deep breathing does not directly increase the amount of oxygen in the blood, which contains more than 95% of oxygen. Nor does deep breathing send oxygen to the other tissues, which receives oxygen from the blood by demand. But when one does take deep breaths, it initiates relaxation causing blood capillaries to expand, allowing a greater volume of oxygen to migrate to sites where healing is needed.

In addition, deep breathing enhances other healing mechanisms. "It pumps the lymphatic fluid, triggers relaxation, and initiates the release of numerous neuropeptides from the breath center in the brain." as stated by Dr. Jahnke.

In his book, "The Healer Within," Jahnke summarizes the importance of breath and healing. "Your breath is always with you; you cannot separate yourself from your breath, except by giving up your life. Our first act when we emerge from the womb is to *inspire*. Our last act in life is to *expire*. These breaths first in and finally out, are like bookends. In between lie the chapters and pages in the books of our lives. It's no surprise that breath is so remarkably linked to the power of healing!!"

By refining and improving the quality of our breathing we can feel its positive benefits throughout our being. Breathing fully and optimally creates the conditions for healing, health, and well-being. According to Donna Farhi, author of "The Breathing Book", science now has proven what the ancients have known for millennia that breathing is the foundation of our being and when incorrectly accomplished causes heart disease, high blood pressure, fatigue, anxiety, headache, even depression.

Most people do not breathe adequately and suffer the effects of shallow, restricted, upper chest, and partial breaths. Nor are they aware of their inadequate breathing and its most unwanted consequences. Yet changing the way a person breathes can have very positive benefits. Farhi reports that using therapeutic methods and/or other practices such as Yoga or Chi Kung "has been found to alleviate (and sometimes cure) migraine headaches, chronic pain conditions, hypertension, epilepsy, asthma, panic attacks...as well as coronary heart disease." She also states that deep breathing alone will reduce menopausal hot flashes by 50%.

By shifting from a state of chronic stress and deeply relaxing, people can improve their immune system, lower blood pressure, normalize cholesterol levels, accelerate some healing and growth, and enjoy psychological well being. Not only that, but individuals who learn to attain a positive, relaxed state appear to alter their reactions to stress. They become calm, more detached, centered, and balanced by deep breathing. Their inner state of peace is outwardly reflected by a youthful, vibrant, radiantly healthy appearance!

Recovering the essential nature of the breath is a most gratifying experience for ultimately, it is you that you discover only more powerful, peaceful, with unlimited potential.

References:

Farhi, Donna The Breathing Book Henry Holt & Co. New York, N.Y. 1996
Jahnke, Roger The Healer Within Harper New York N.Y. 1997

YOUR ANATOMY OF RESPIRATION

According to Donna Farhi, knowing about your body and how it works through self-examination as well as anatomical education is the best health insurance policy you will ever acquire. It is the cells that require the gift of your breathing. After entering your lungs and traveling the long route through your body, oxygen plus nutrients reach your cells. In the capillaries, oxygen is deposited in the cell and exchanged for carbon dioxide. Deoxygenated blood flows through the veins back to the heart, and is pumped out to the lungs to receive new oxygen.

It is the respiratory muscles that actually draw the air back into the body. These respiratory muscles can become short, tight, thick, weak, distorted and operate ineffectively if they are being used incorrectly. These muscles are categorized into two groups: primary (essential for full breathing) and secondary. Quoting from Farhi's *The Breathing Book*, "The primary muscles, which are lower in the torso, [the principle muscle being the diaphragm]...do the bulk of the work and are generally very large and strong...like the heart...the diaphragm also toils relentlessly without fatigue. The secondary muscles tire quickly and easily. The most important thing to remember...is that their roles should never be reversed; the secondary breathing muscles should never be asked to take on the role of prime movers." The Secondary muscles include the scalenes, the pectoralis, the sternocleidomastoid, and the upper trapezius.

The Diaphragm

The diaphragm is the most important muscle in respiration. It helps to visualize what the diaphragm looks like in order to understand how it operates. The diaphragm is shaped like a large double dome that sits in the chest like a parachute with long tendinous attachments extending down to the fourth lumbar vertebra. These *crura* act as stabilizers for the diaphragm. Above the diaphragm lies the heart and lungs; below are the liver, spleen, stomach, intestines, etc...The movement of the diaphragm massages all the inner organs, squeezing them like sponges, bathing them in new blood, fluids, and oxygen revitalizing, and replenishing them with each diaphragmatic movement. That is why full diaphragmatic movement is so very important to your well being. If these movements are restricted, not only are we limiting the flow of oxygen into the body and the elimination of carbon dioxide from it, but we also reduce the beneficial and essential massaging action to our organs.

To summarize the benefits of diaphragmatic breathing according to Roger Jahnke, as the diaphragm compresses the abdominal organs, the pressure in the chest cavity compresses the large lymph duct in the chest, thereby pumping lymph throughout the body. The relaxation that deep breathing engenders dilates blood vessels reducing blood pressure. It also relaxes and expands capillaries so healing blood can penetrate deeper into the system. In addition, the brain-wave frequency is slowed toward the healing and peaceful alpha range. Since stress and tension are relieved, our health is improved both physically and mentally.

Breathing and the heart

Studies have demonstrated a relationship between upper chest breathing and heart disease. Patients who had suffered heart attacks and were taught diaphragmatic breathing significantly reduced their chances of having a second one. Another study revealed all 153 patients on a coronary unit were upper chest breathers. Hypertension can be reduced by diaphragmatic breathing. These positive benefits occur from deep breathing because the heart is attached to the diaphragm by connective tissue. Every breath massages the heart. The fully and correctly operating diaphragm is thus a second heart.

Nasal Breathing

The nose prepares the air for the lungs by warming and filtering it. The air is swirled through nasal hair and mucous that catches dust, bacteria, and other tiny particles. Following this, the air flows through *turbinates* that cause the air to swirl around creating moisture, heating it and raising its humidity. Generally breathing through the nose is preferred to open mouth inhalations.

The Lungs

The lungs are pear shaped. The lower lungs have the higher density of blood capillaries surrounding the “air sacks” called alveoli. The greatest diffusion of oxygen and carbon dioxide takes place there. Because of this, chest breathing is more inefficient resulting in less oxygen exchange than diaphragmatic breathing.

It is also important to realize that in order for the lungs to expand completely, the rib cage in which they are housed must be flexible. That includes muscles between the ribs, or the intercostals muscles, and the spine itself. “Because breathing is a whole body movement every part must act in synchrony with every other part to form the extraordinary movement we call breathing.” Donna Farhi

DIAPHRAGMATIC BREATHING: THE BREATH OF LIFE

Dr. Richard Miller, psychologist and yoga teacher, has articulately described the advantages of diaphragmatic breathing over thoracic or upper chest breathing. Scientific research confirms what Chi Kung masters and Yogis have been teaching for many thousands of years. The speed and quality of our breathing have profound physical and psychological effects. Contrasting diaphragmatic vs. thoracic breathing, it has been learned that abdominal breathing results in deep, regular respiration that completely ventilates the lungs and upper chest. Upper chest breathing however is shallow, rapid, and irregular, with little air exchange.

According to Miller,

“On the physical level, research has shown that diaphragmatic breathing decreases the heart rate, metabolic rate, and blood sugar levels...It lowers pulmonary stress, muscle tension and fatigue, and the perception of pain. Upper chest breathing has the opposite effect...Diaphragmatic breathing helps normalize blood flow in the lungs while improving venous return of blood to the heart; it also dilates the brain and coronary arteries, thereby increasing blood and oxygen. Diaphragmatic breathing increases lymphatic flow and the transfer of oxygen from blood to tissues; thoracic breathing inhibits them. Diaphragmatic breathing decreases cardiovascular risk and is associated with normal blood pressure. Thoracic breathing increases cardiovascular risk and is associated with high blood pressure.

On the psychological level, diaphragmatic breathing increases ego strength, emotional stability, confidence, alertness, and perceived control over one’s environment; thoracic breathing decreases them. Diaphragmatic breathing reduces anxiety, phobic behavior, depression, and psychosomatic problems...”

Chi Kung cultivates abdominal breathing, fostering the smooth operation and integration of all muscles of respiration. It enhances our health and well being by lowering blood pressure and heart rate. “The diaphragm is elastic and mobile and the breath is slow, smooth, steady, and rhythmic.” Miller also points out that the breath helps us to discover the true nature of who we are since breath is linked to the mind.