



CHEST BREATHING VS. ABDOMINAL BREATHING – WHICH IS BETTER FOR YOUR HEALTH? UNDOING THE CONFUSION - The way you breathe can be the contributing cause and cure for many ailments and illnesses. This article will help you to understand the anatomy of breathing and to use it in the prevention and healing of health problems, and particularly to undo the common confusion and misunderstanding of the subject of breathing. Improper breathing is just one of the many contributing causes to ailments and illnesses which I have discussed in other articles on my Facebook page (such as, side or stomach sleeping posture, excessive or improper physical activities, repetitive movements, insufficient intake of protein and/or water, etc.).

With the exception of children who naturally breathe in their chest (chest/costal breathing, or 'spontaneous breathing'), the majority of my adult clients breathe in their stomach (stomach/abdominal breathing, or diaphragmatic breathing). Either they have become lazy to breathe and have forgotten to breathe properly, or they have just followed the instructions of their singing, Yoga or meditation teachers, and have maintained the stomach breathing as a new habit. As a result, these clients have

suffered from a variety of dysfunctions including: weakened, hardened, and restrictive muscles in the neck, throat, trunk, thorax (resulting in breathing difficulty, shallow breathing, shortness of breath [dyspnea], wheezing, coughing, tightness in the chest and throat, difficulty swallowing, vocal cord dysfunction and nodules, pressure on the heart, sternum, lungs, and more), and an expanded/bloated abdomen with various levels of abdominal/digestive dysfunctions, including a general descent (ptosis) of the organs in the region of the pelvis.

Here is what you need to know and do:

1. The breathing occurs at the level of the lungs, whether we think that we breathe in the stomach or in the chest. Air enters the body from the outside through the lungs and leaves it again at a rate of about 12 to 15 times per minute. This phenomenon is called “external respiration”. The “internal respiration” phenomenon occurs at the tissue and cellular level. The cells in the tissues need oxygen to function properly. It is brought to them via the arterial blood, which comes from the lungs and the heart. This mechanism is made possible by transforming venous blood into arterial blood, which occurs in the lungs. From the outside, air rich in oxygen enters the lungs. From the tissues, blood rich in carbon dioxide arrives in the lungs. Since oxygen cannot be stored in the body, respiration is required without cease, day and night. The oxygenation aspect of breathing occurs automatically and does not need to be learned. We can engage in physical activities and still maintain “spontaneous breathing”.

2. The act of breathing involves muscles at the level of internal organs, certain parts of the skeleton, and joint articulations, even though the air always enters through the lungs. It can build up volume in different parts of the trunk, for example, in the ribs or in the abdomen. It can also affect other parts of the body that are located far from the trunk. It can be slow or fast, minimal or big, voluntary or involuntary, quiet or loud. The apnea (cessation of breathing in between inhalation and exhalation) can be short or long. The act of breathing can serve other purposes besides the oxygen needs of the body. For example, breathing can change emotions; change the body tension; accompany or modify sensations of pleasure or pain; help the speaking or singing voice carry better; sustain a music note longer; activate or mobilize the organs; forcefully open or close the rib cage; accentuate or moderate the curvature of the spine; perform bodywork or sport activities, etc.

3. Understanding the natural “spontaneous process of breathing” (also called chest breathing or costal breathing). The ‘spontaneous’ process of breathing [see picture] is controlled subconsciously, and involves muscles in the neck, throat, ribcage (intercostal or between the ribs muscles), and the diaphragm (muscular wall separating the thoracic and abdominal cavities). These muscles work together. To breathe in, the intercostal muscles lift the ribs up and forward while the diaphragm moves downwards, thus expanding the lungs and resulting in an inward breath. To breathe out, the intercostal muscles and the diaphragm are relaxed, resulting in an outward breath. Spontaneous breathing (or costal breathing) involves a mixture of mainly costal (80% thoracic cavity) and partially abdominal (10% upper abdominal and 10% lower abdominal) inhalation. In other words, when we breathe in, our chest and rib cage rise and amplify, while the diaphragm descends and the abdomen slightly tightens.

3. Understanding the altered/voluntary “abdominal/stomach or diaphragmatic breathing” technique. The air still enters the lungs but the act of stomach breathing involves the voluntary expansion of the abdominal muscles below the diaphragm (causing the latter to move upwards), instead of the natural expansion of muscles in the neck, throat and rib cage above the diaphragm. In other words, when we breathe in, the diaphragm rises and the abdominal muscles expand while the chest and rib muscles appear to descend and compress. The prolonged act of stomach breathing will eventually result in a distended and bloated abdomen, and an underdeveloped thoracic cage. The muscles in the neck, throat

and thorax will become rigid, attached and restrictive, causing various dysfunctions in the neck, throat, trachea, esophagus, sternum, manubrium, larynx, thyroid, vocal cord, lungs, ribcage, and heart. Clients who increased ab works and core training in an attempt to strengthen their core and reduce the size of their expanded abdomen, had experienced further hardening, tightening and compression of the torso, its muscles and its organs.

4. There exists a wide variety of breathing techniques that teach to alter the spontaneous breathing to achieve various physical and mental goals. This is where we can hurt ourselves if we do not understand the anatomy of breathing properly, and if we adopt the altered technique to be our permanent breathing technique. We can alter the spontaneous breathing to achieve certain short term physical and mental goals such as singing, martial arts, Yoga, Qi Gong training or meditation. However, after the training, we should resume our natural 'spontaneous breathing' as the healthiest, most natural way of breathing to maintain general good health, to prevent body dysfunctions and to help cure illnesses.

5. Practice to regain your natural, spontaneous breathing: (1) Breathe in slowly through your nose to fill up and expand the upper half of your chest with air (neck, throat, upper ribs), hold your breath for 5 seconds, then breathe out slowly through your nose to empty your chest. Repeat 5 times. (2) Breathe in slowly through your nose to fill up and expand the upper half of your chest and continue to fill up and expand the lower part of your chest up to the diaphragm level (before reaching the stomach), hold your breath for 5 seconds, then breathe out slowly through your nose to empty your chest. Repeat 5 times. (3) Repeat the set throughout the day whenever you have the time. Repeat every day until you breathe spontaneously through your chest again.

To verify if your breathing is correct, put one hand on your chest and the other hand on your abdomen. When you breathe in, your chest must rise and expand while the diaphragm/abdomen slightly descends and tightens. When you breathe out, your chest descends and relaxes while the diaphragm/abdomen ascends and relaxes [see picture].

Spontaneous costal breathing is the natural way of breathing to maintain general good health. It mobilizes the organs of both thoracic and abdominal cavities during its process. It opens the thoracic spine and collar bones which have the tendency to bend forward. The costal inspiratory muscles need to be toned, strengthened and mobilized to prevent illnesses in the thoracic cavities. Remember that gentle, slow and regular movements help to mobilize the muscles. Continuous and/or repetitive "harsh" costal breathing brings about very strong contractions on the level of the thorax, which can make the area overly rigid and restrictive. Slow, deep, and regular spontaneous costal breathing is the best type of breathing for meditation and for pain management. Pain is lessened on the long and gentle exhalation through the nose, not through the mouth. Breathing out through the mouth will cause the body to exhaust due to hyperventilation.

Practice the proper spontaneous breathing every day. Gently expand the chest muscles that were rigid and compressed with each inhalation. You will appreciate the clearly noticeable health and posture improvement in areas which have started to bother you. If your ailments are serious or severe, an osteopath can help to mobilize your thoracic cavity, release its attachments, and promote the healthy function of the organs.

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