

Breathe Right! – Part III

Diaphragmatic and Pursed Lip Breathing

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Note: This is not intended as medical advice, but the explanation of techniques for improved breathing control with COPD. Always check with your doctor before starting any new techniques or exercises. It is best to learn these techniques under the guidance of a Respiratory Therapist or Physical Therapist in a pulmonary rehabilitation or other clinical setting.

Diaphragmatic Breathing or Lower Ribs Breathing Pursed-Lip Breathing (PLB)

Set a goal to breathe consciously, diaphragmatically, for most part of your waking hours. If you experience any breathing problem or irregularity in your breathing, start practicing PLB. Your continued breath awareness and monitoring will prompt you at the earliest sign of irregular breathing. The moment you notice the first sign, start practicing PLB to regulate your breathing.

How to Do Diaphragmatic Breathing

Many people equate diaphragmatic breathing with abdominal breathing. They assume that as long as they experience abdominal expansion and contraction with inhalation and exhalation, they are doing diaphragmatic breathing. In some cases it may prove to be a false assumption because some people puff their belly without effectively engaging the diaphragm. In order to avoid such a mistake let us identify two components of diaphragmatic breathing:

Abdominal breathing
Lower side ribs breathing

Diaphragmatic breathing involves expansion and contraction of the abdomen as well as expansion and contraction of the lower side ribs.

Simple Test for Diaphragmatic Breathing

The movement of the diaphragm may be weak and limited in the case of many people with COPD. There may be several reasons for that. To name a few, muscles in the side ribs may be weak and shortened; lungs may be over inflated at the bottom, restricting the movement of the diaphragm; the diaphragmatic muscle itself may be weak and may have limited range of movement. Still, some feel the diaphragmatic movement more strongly as it goes up and down in front of the abdomen and some feel more strongly the wing like movement in the lower side ribs.

Where Do You Feel It Most? Can't tell?

Here are three checkpoints to help you feel the movement of the diaphragm:

Place your hands on your lower abdomen in such a way that the middle finger tips touch the navel. The tips of the index fingers are above the navel touching each other and the tips of the ring finger and little finger are below the navel touching each other. Take two or three breaths to feel the movement.

Place your hands between navel and breastbone tip, tips of opposite fingers touching each other across the abdomen. Take two or three breaths to feel the movement.

Some of you may feel the movement in front of the abdomen as well as the side ribs. Let us now discuss the abdominal breathing practice and later we will discuss the lower side ribs breathing.

Abdominal Breathing Practice

Abdominal breathing is a term used for convenience. Breathing is done by the lungs. What the abdomen does is simply expansion and contraction with inhalation and exhalation. When you inhale, your diaphragm pushes down and with that it pushes down the abdominal organs. As a result of this action, the abdomen bulges out. When you exhale, your diaphragm relaxes and goes up. With such diaphragmatic action, the abdomen contracts, the abdominal organs which were pushed down come back up and you see the abdominal wall pulls in towards the back.

Abdominal breathing can be practiced in a seated position or lying down position. When some people with COPD lie down, they experience trouble breathing. They have a hard time mobilizing the diaphragm in lying down position. They should practice breathing technique while seated in a comfortable position.

Those who don't experience any trouble in breathing while lying down may practice diaphragmatic breathing in a supine (lying on your back, looking up) position. In order to do that, lie down and put light weights on your abdomen to engage the diaphragmatic muscle. For light weights, you may use a bag of rice or powdered sugar, beanbag or book on your abdomen. In the beginning, depending on your capacity, place weight on your abdomen anywhere between one to five pounds. Thus, by placing weight on your abdomen, you would be supporting diaphragmatic breathing. Practice diaphragmatic breathing in this manner for 5 to 15 minutes. This should strengthen your diaphragmatic muscle and also promote mental and physical relaxation. Later the weight may be increased from 5 to 10 pounds depending on your capacity. After the weight on the abdomen method is mastered, you can practice diaphragmatic breathing without weights in the sitting and standing positions. Later, as you get more experienced, you may practice diaphragmatic breathing even when walking.

Incidentally, walking is a highly beneficial exercise for people with compromised breathing such as in COPD, and if you can do diaphragmatic breathing while walking, the benefits are likely to be even greater.

Lower Side-Ribs Breathing

Your diaphragm is attached to the lower six ribs, but actually it is the lowest four or five ribs where you can feel the action when you inhale. This action of the lower side ribs is often described informally as the “side ribs flaring out” or “fanning out” when you inhale. In medical circles the side ribs action is called the “bucket handle” movement. In case you are wondering what bucket handle movement is, get hold of a bucket with handle. Lift the bucket handle from the side to the top and bring it down. The lower ribs move in a bucket handle like motion when you inhale.

Practice of lower side-ribs breathing

First, place your hands on your lower side ribs in such a way that you can feel the expansion and relaxation of these ribs as you breathe in and out. For that purpose, cross your elbows in front of your navel and place your hands on lower side-ribs. In this way, your left hand will be on the lower right side ribs and the right hand on the left ones. Breathe in and feel side ribs expanding. Breathe out and feel the side ribs retracting.

If you feel no action in the side ribs during breathing, take a wide belt or a belt worn to protect the low back and wrap it around your lower side ribs. When you exhale, tighten the belt as much as comfortably possible and then release as you inhale. With continued practice, you might start feeling the side ribs action as you breathe in and out.

After practicing the belt technique, you may use your hands to do the squeeze action. For

this purpose, place your right hand on your lower right side ribs and left hand on the left ribs. Now, when you exhale, your hands squeeze the lower ribs and when you inhale, lower ribs push the hands out. In other words, your hands tighten and release the ribs, which the belt was doing for you in the earlier example. To put it succinctly, during exhalation, hands squeeze the lower side ribs and during inhalation, ribs push the hands away.

It is best to learn both techniques of diaphragmatic breathing:

Abdominal breathing — Pull the abdomen in for exhalation and allow the abdomen to expand while inhaling

Side rib breathing — Squeeze the side ribs with hands while exhaling; release them while inhaling.

Pursed-Lip Breathing (PLB) for Shortness of Breath

Pursed -Lip Breathing (PLB) is one of the most helpful things you can do when you are feeling breathless. PLB helps to keep the breathing tubes (bronchi) open and maintain right pressure in those tiny, tiny air sacs. Furthermore, the mouth is closer to lungs than the nose is, so it's easier to blow the breath out through the mouth.

Benefits of PLB

- Reduces breathlessness
- Slows the breathing rate
- Lengthens the exhalation
- Helps to empty the stale air out of the lungs
- Increases the size of your breath volume

Instructions for PLB

- 1.) Relax your shoulders and neck.
- 2.) Breathe in through the nose, if possible, and breathe out through the pursed lips. Imagine smelling a rose.
- 3.) Pucker your lips as if you were going to whistle. Lean slightly forward and s-l-o-w-l-y and softly blow out through pursed lips as if cooling the hot soup in the spoon. Do not force your air out, but blow out softly and gently. Leaning slightly forward and blowing out against pursed lips encourages the contraction of abdominal muscles, thereby forcing the diaphragm upward to empty the lungs more completely.
- 4.) Try to make your exhalation twice as long as your inhalation. Breathe in 1-2, breathe

out, 1-2-3-4. Count in your head as you inhale and exhale so you can keep track. People with COPD tend to cut short exhalation in a hurry and rush to swallow more air, which can make breathlessness even worse. PLB slows down exhalation, assists with the action of emptying the lungs and may also help strengthen the breathing muscles.

*Learn about more techniques for physical and mental relaxation on www.mindpub.com.
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www.breathingbetterlivingwell.com/articles*