

The Diaphragm Explained

The diaphragm is a system of muscles that is connected to the lowest ribs on the sides. It is also connected to the sternum and the back, top lumbar region. The diaphragm's primary function is to help you inhale. The diaphragm descends when you inhale, displacing the viscera, upper intestines and stomach.

Short-waisted people will notice that their epigastric area, or the area between the naval and sternum, bulges out when they inhale. Long-waisted people will show little bulging while inhaling because there's more room for expansion.

Exhaling

The diaphragm plays no role in actual exhalation, but does act as a controlling muscle system and controls how quickly you can exhale your breath. Exhalation is controlled by the abdominal system, which is located from your naval to your pelvis. When you exhale quickly, the diaphragm is basically inactive; however, when exhaling slowly, the diaphragm resists the natural exhaling action of the abdomen.

****EXPERIMENT:** Try breathing out very slowly and you'll notice that for the first second or two, you are controlling the exhalation, but after that it happens without effort. Your diaphragm has taken action to ensure proper exhalation. Amazing, huh? When you breathe out quickly, you control the exhalation process. Try it both ways to feel the difference.

Singing and Exhalation

When singing, it's like you are breathing out these long, slow breaths throughout your song. You try to control them, but on long notes, the diaphragm will have to take over - it's only natural! All people have a strong diaphragm no matter what their size or height. The diaphragm doesn't need to be strengthened, but controlled. You must know how and when it works before you can control it.

Vocal Cords and the Diaphragm

Your vocal cords should not be used to hold back excessive pressure from breathing. Instead, they should only have enough breath pressure to help maintain their sound vibrations. If too much pressure falls on the vocal cords, they press together too tightly and cannot freely function as they should.

While singing, your epigastric area should not be sucked in, but should be in the position it is in when full of air after inhaling, immediately after the onset of a tone. This sounds opposite of what it should be, right? Think about it... if you take a good breath and then exhale most of it or all of it before singing the note, you're going to be "out of breath" too quickly because your diaphragm has already collapsed.

So, inhale a deep breath and be sure you are breathing in properly with your gut extending outward slightly, not your chest. Then begin to sing and allow the diaphragm to go to work. Using the diaphragm, you will notice you can hold the notes or sing longer phrases without breathing difficulties.