

# Notes on Breathing and Use of Air

by Dr. John Ericson, University of Arizona

**Breathing:** To play a brass instrument, breathing is obviously important, and it is different than our normal, everyday breathing in several respects.

The most important single difference between our normal breathing and breathing to play a brass instrument is that our lungs need to be pretty much full of air. Our lungs need *much* more air in them than we usually take in during normal daily activities to play a brass instrument well, with a full tone. They should (in my opinion) be nearly full whenever you play anything on the horn.

The diaphragm is the large, flat muscle which draws air into the lungs. The diaphragm by itself can only fill the lungs about 75% full. To completely fill the lungs requires the additional use of the muscles which surround the rib cage and cause it to expand.

Taking a large breath is a natural and uncomplicated process. What needs to be practiced by most brass players is deep breathing. I recommend two basic exercises.

1. Breathe in slowly through the mouth for 10 seconds (to the point the lungs are 100% full), hold the breath for 5 seconds, then exhale again slowly for 10 seconds. Repeat several times.
2. Follow this first exercise with a few quicker breaths which really fill the lungs.

The goals of these simple exercises are to practice using the lungs fully, control of the breath, and to practice taking large breaths quickly.

*Do not practice these exercises too long at one time!* You don't want to pass out—and a minute or two of breathing practice is plenty in any one session.

Two final points. Good posture is very necessary for complete use of the lungs—if you lean to one side when you play, for example, the lungs cannot fill completely on that side. A final note is that while your lungs can't get *bigger* through breathing practice, your *effective* lung capacity can increase because you can learn to use your lungs more completely. We want to develop the use of our full lung capacity.

**“Support”:** Another item related to breathing is “support.” A lot of brass players talk about support, but it is a term which is probably impossible to define.

Proper support relates to pushing the air out of the lungs in a way that allows for a full tone, good dynamics, and control. This type of use of the muscles is unnatural, actually—the work of the diaphragm muscle is to pull air into the lungs, and the air flows out naturally when it is relaxed.

In playing the horn the muscles below the lungs (above our waist) contract somewhat in supporting the air column, pushing on everything “down there” and forcing the air out of the lungs from below. Especially in the high range, we want to support the air column well. This is a key as well to using less pressure and lip tension—a well supported air column will allow for a more relaxed embouchure.

However, if “support” is concentrated upon too hard, it can lead to extra tension in the body. Proper support can lead to a better tone and high range; extra tension, on the other hand, can lead to a poor tone and trouble in the high range. Try to support without unnecessary tension.

One of my teachers philosophy of playing the horn was to “strive for tone.” If you have a full, round tone in all registers and dynamics, this is a sign of not only good support but also that many other aspects of your playing are fundamentally correct.

**“Huffing” the Notes—“Twa-Twa”:** Occasionally you will run into performers who have a real problem with, for the lack of a clearer term, “huffing” notes—every note sounds like it has a small crescendo and decrescendo, especially a small crescendo on the beginning of each note. It is heard as a swelling on each note, a “twa-twa” sound that ruins every phrase. This style sounds bad—try to imagine a vocalist singing this way!—but the player often has no idea what they are doing, or why, because they are simply used to it.

What is usually happening is they are playing the beginning of every note softly to be sure that they don't make a loud mistake, but on a subconscious level—they are really unaware of the problem unless it is pointed out.

Often support is reduced at the beginning of each note. The best exercise for simple awareness of the problem is to take your right hand out of the bell, place it on your stomach, and play. It should not move around. If “huffing” is a problem, practice things like slow slurred scales and etudes until you are able to play with an absolutely even dynamic and a firm stomach.

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