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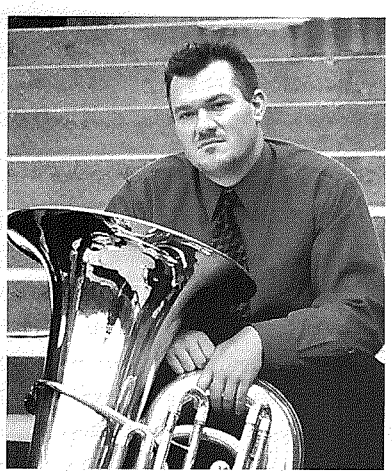
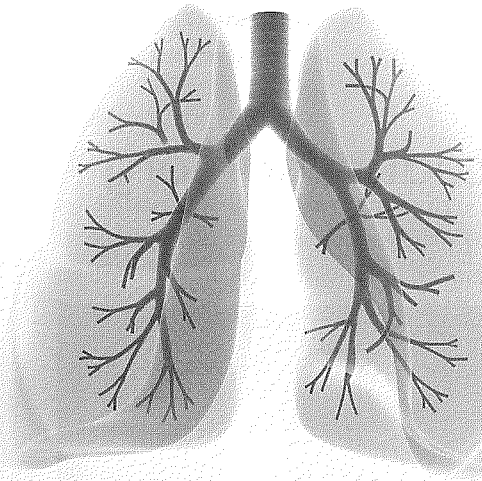
Low Brass Basics



TOM LUKOWICZ

The fundamental building block of performing on any wind instrument is air. To understand the breath, one must break it down into its basic components—**vital capacity** (the amount of air one can inhale), the **speed of inhalation**, and **how one exhales the air**. The following exercises focus on each of these basic components.



Vital Capacity

The first component is vital capacity, or how much air the lungs can hold. While a student at Oberlin, I found an old piece of paper under the couch in the tuba studio. It was a description of a breathing exercise, reportedly used by the Navy SEALS during training. The first time I tried this exercise I nearly passed out, so students should be cautious when attempting this exercise. The exercise consists of the following steps:

1) Stand up with feet shoulder-width apart.
2) Exhale the air from the lungs. Use a hiss for the final bit of air. Do not breathe in.
3) Crouch down and bring knees into chest.
4) Hug the knees.
5) Stand up straight. Resist the urge to inhale. Hold this position as long as possible.

6) Take in a huge breath. Add "sip" breaths at the end for more extension.

7) Hold this position as long as possible.

8) Exhale fully and take some cleansing breaths.

9) Repeat 4–5 times.

Students should keep several things in mind before trying this exercise. During Step #4, hug the knees as tightly as possible; this will compress the ribcage and squeeze out any remaining air in the lungs. Step #5 produces a tight sensation in the chest and throat. Students should experiment with holding this step for only a second or so to experience this feeling. After becoming acclimated with this sensation, students should hold this step as long as possible. At some point in Step #7, dizziness may occur. If this happens, Step #8 should be executed with an exhalation of breath. It is my experience that if this exercise is done repeatedly, with time the volume of air will increase during inhalation. In addition, swimming and moderately paced running are two other activities that improve vital capacity.

Speed of Inhalation

The second component of breathing is the speed of the inhalation. While encouraging students to take a full breath, it is important to also take the breath in as quickly as possible. Two exercises are given here to increase the speed of exhalation. The first will help a student discover the smallest amount of time needed to take a full breath. The premise is simple: fill up completely in four counts. To prepare for this exercise the student should slowly inhale and feel all the expansion that happens in the lower back (floating ribs) and diaphragmatic-costal area. The process of expansion should be very slow and a stretch at the end of the breath should be felt. Once the correct, relaxed feeling of a proper inhalation is established, begin the exercise:

1) Set a metronome for 60 beats per minute (bpm).

2) Inhale for four counts. Maintain the same inhalation technique already established.

3) Exhale for four counts. Expel as much air as possible.

4) Repeat Steps #2 and #3.

5) Add 10 bpm to the metronome.

6) Repeat Steps #2-#5 as many times as desired.

When the exercise becomes more familiar, the expansion stretch will begin to increase the lung capacity. After doing the exercise for one week, increase the goal bpm by ten for the following week. As tempo increases, maintain the relaxed sensation of the slow breath that was used in preparation for this exercise.

The second exercise helps gauge the speed of the inhalation is called "4-3-2-1." The exercise is as follows:

1) Set a metronome to 80 BPM.

2 Inhale for four counts and exhale for eight counts. Repeat four times.

3 Inhale for three counts and exhale for eight counts. Repeat four times.

4) Inhale for two counts and exhale for eight counts. Repeat four times.

5) Inhale for one count and exhale for eight counts. Repeat four times.

6) Increase the bpm on the metronome.

7) Repeat Steps #2-#6 as many times as desired.

This exercise gradually decreases the amount of time to inflate the lungs and maintains an even amount of time to exhale. During the four count inhalation, focus on a constant, relaxed expansion of the lungs. The remaining breaths should have the same relaxed motion, but the process will take less time. The consistent exhalation to eight counts will help determine if the same amount of air enters the lungs as inhalation time shortens.

Exercising the extremes of lung capacity, completely empty and completely full, helps the student develop an awareness of the amount of air needed for a given musical phrase. This exercise should be worked on initially while away from the horn. Only after a high degree of understanding and achievement should this exercise be performed with the horn. When working with the instrument, depress all the valves or extend the trombone slide to seventh position. This will create the longest air column possible for the instrument and will enable the student to begin working on exhalation against maximum backpressure of the horn.

Tempo variations in these breathing exercises will give the performer time to focus on different aspects of the breathing process. Both exercises have a step that recommends an increase of tempo. Maintaining a slower tempo for a few days will help the student focus on the three points: the full expansion inhalation, an even flow of air during exhalation, and completely voiding the lungs of air.

To fully benefit from these exercises, extra time should be spent with the longer inhalation. The student should not move on to the faster inhalations or tempos until control has been established. During exhalation for both of the exercises, it will be helpful to form an embouchure and think of directing an air- stream at a specific spot (the size of a quarter) against a wall.

Exhalation

The final component of the breath is exhaling the air. It is beneficial for a brass player to tie the exhalation directly to buzzing the mouthpiece for two reasons: 1) the student begins to work on correctly forming the embouchure and aperture at the end of the breath, and 2) the student can immediately focus on controlling the air column's speed and pressure.

The end of the breath should be accompanied by setting the aperture for the next attack. This is accomplished by having the student say "up" at the end of the breath. The "up" should be said inward, so that the air going into the oral cavity produces the vowel. The "p" brings the aperture to a close before the attack, and readies the lips to vibrate. Failure to close the aperture will leave a small open area for the air will escape when the student begins to move the air during the buzz.

The speed of exhalation will help determine the pitch level of the buzz. The easiest way to explain how to change notes while buzzing is to examine whistling: Whistle any note in your middle whistling register. Slowly whistle up a major scale and you should notice three things: 1) the air flow remains constantly moving forward, 2) the back of the tongue slightly arches towards the roof of the mouth, and 3) the aperture closes slightly. Now start again with the original note and whistle down a major scale. The tongue should slightly move downward in the oral cavity and the aperture opens up. The same concepts of air motion, tongue placement, and aperture size apply to buzzing the mouthpiece.

The ideas presented within this article come from the culmination of years of study with great teachers. It is my hope you will be able to use some of these exercises and techniques with your brass students.

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—edited by Rick Eakin, TRIAD Editorial Board