

# BRASS BASICS BREATHING



Arnold Jacobs devised many ways to effectively improve the way his students used air, using equipment, measuring apparatus, and everyday items. Some people would say descending into his basement was like having a date with a mad doctor. He'd hook you up to some machine, tell you what to focus on, and all of a sudden you could play! Other members of the Chicago Symphony Orchestra brass section at the time were very much in agreement with what Jacobs had to say, and some like Vince Cichowicz, branched out and developed their own methods of teaching essentially the same material. Jack Stamp, a famous trumpet teacher in LA, was also at the time coming up with very practical solutions to reach some of the same goals.

Recently, two of the most outstanding tuba players in world, Pat Sheridan and Sam Pilafian, combined these teachings into a comprehensive, challenging, and relatively straightforward set of exercises called "The Breathing Gym."<sup>1</sup> They developed these in a morning class they run for students at the U. of Arizona where Sam teaches. A majority of our work dealing with air will be straight out of their teaching.

Why is Air so important as a fundamental? As Jacobs realized, air is the foundation of everything we do skill-wise on wind instruments. Our sound is a direct reflection of the buzz we make into our mouthpiece. That buzz is 95% dependent on the **AIR** we put through our embouchure (5%). So essentially...

**Air = Buzz = Sound**

You might ask why embouchure is so unimportant in this equation. Jacobs and his colleagues discovered over time, that if a player's air skills were developed properly, the embouchure would naturally, over time, adjust to the most efficient position. They found this approach much more effective than trying to coach extremely minute positioning of the lips. Besides, with the physical differences between individuals, they found that each person really has a unique embouchure that works best for them. As Bud Herseth, the Principal Trumpet of the CSO, put it, "You have to start with a very precise sense of how something should sound [Song]. Then, *instinctively*, you modify your lip and your breathing and the pressure of the horn to obtain that sound."

## **Preparing the Body for Excellent Breathing**

Proper breathing requires that the body be prepared for it. Tension in our muscles joints and other tissues not only make it difficult to breath deep, it also stifles the resonance in our sound...

**TENSION KILLS SOUND!!!**

<sup>1</sup> The Breathing Gym. Pilafian, Sam and Patrick Sheridan. DVD and book. Fort Wayne: Focus on Excellence, 2003. Available through WindSong Press. Calgary distributor Paul Beauchesne, 277-3575.

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We can **combat tension** (create relaxation and flexibility) in several ways.

1. Stretching – Daily stretches should include ones that specifically address the muscles and joints that are involved in breathing: head/neck, arms/shoulders, ribcage, abdomen.
2. Isometric exercise – in the 1970s the Chicago Symphony Orchestra’s players committee had a series of guest clinicians develop a set of stretches to combat their players growing playing tensions. This included isometrics (opposing muscle groups flexed at the same time). These help get blood flowing to needed areas.
  - Example: Start by taking a deep, slow breath and flexing your arms and shoulders. Hold firmly for 5 seconds. Then is one swift motion, release the air and the flex.
3. Yoga – although similar to stretching, the discipline of yoga focuses on breathing in conjunction, and many of the basic poses are designed to relieve tension in the breathing system. I do yoga pretty much everyday, as I have found the benefits to my playing to be great.
  - a. One branch of yoga is used to help open up the nasal cavity. It promotes good health of the sinuses, makes it easier to breathe, and for our purposes will help resonance. This stuff is a bit funky, but it’s great. A wonderful way to help you feel better if you have a cold! We’ll go over these techniques.
    - Massage the acupressure points around your head
    - Use air pressure to internally open up sinuses
    - Humming with your nose pinched to “massage” the sinuses
    - Buzzing lips to “massage” inner ear
4. The “Sigh” – simply enough this is an exaggerated sigh. It is our body’s natural way of relieving tension. My personal favorite!
  - Start by taking a very deep breath and raising your arms over your head
  - When you are full of air, release it and let your arms drop as you vocally sigh
  - Let your arms dangle loosely at your sides.

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The other major aspect of preparing the body to breathe well is **posture**. We all know some basics about posture: stand tall, make sure your body is aligned, weight evenly distributed over your feet. These are all good ideas. Sometimes in marching band I will see attempts at posture that include standing in a rigid fashion – when I see this, my spine cringes!!! No way can you take a proper breath and play your instrument well like that. You need to find ways to stand tall, and with great alignment, without flexing your whole body so you do not hinder your breathing. Seated posture should aim to maintain as much of the correct standing posture as possible!

Two quick suggestions regarding posture from Ashtang Yoga that can help align your breathing apparatus, an aspect of posture that is often overlooked.

1. Start by standing tall with the best, *relaxed*, posture you can. Often times in this position our **hips** tend to be rotated to the back a little. To fix this, think about pushing your pelvis forward slightly, and ever so slightly turning your thighs out. You can even think of pressing the small of your back out. This slight change in position will not only free up some of your breathing muscles; it will also help your step-offs by improving your center of gravity. Plus it's good for your spinal health.
2. To more properly align your head and throat, first imagine a string that ascends from the top of your head near the back of your head. This will help you stand tall. Next think of pushing the small of your neck (backside) back so that you create a straight line over your spine. Next make sure your chin is not pushed out forward...it needs to stay down and slightly tucked towards your neck.

### The Misconception about the Diaphragm

Have you ever heard the phrase “support with your diaphragm?” That is inherently false: as we’ll see in a moment the diaphragm is involved actively only in inhalation. Even the term air support itself is often misleading. Most people when told to “support” the air stream or sound, create some sort of compression (tension) that really doesn’t solve the problem. Air support simply means providing the proper speed and quantity of air for a given note.

The diaphragm is a convex muscle attached to our ribcage that when contracted, creates a negative pressure inside us. This causes air to rush in to balance the pressure. In athletic breathing (brass playing included) other muscles including the intercostals (rib muscles) assist in creating this internal vacuum thus increasing the breathing capacity. During exhalation, the diaphragm relaxes allowing for a natural release of air. However, during athletic breathing, the intercostals as well as the abdomen and lower back muscles will engage to assist in literally pushing the air out.

Tension in other nearby muscle groups can slow the breathing apparatus’ ability to move air in and out. You will have to exert to move the air required to play a brass instrument, but you must remain as relaxed as possible while you play to optimize your ability to move air. For more details on a “complete” breath, visit this website.

<http://abel.hive.no/trumpet/exercise/yoga.html>

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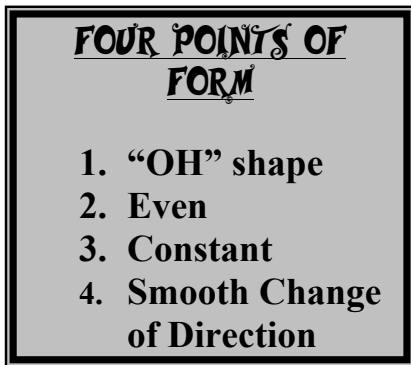
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## **Breathing Technique – 4 Points of Form**

*The Breathing Gym* highlights four points of form to focus on in order to achieve a healthy, correct breath.

### 1. **Oral Shape** -

The proper shape should be a very open “OH,” as if you were saying the end of the word, ”WHOA.” Not only does this allow the freest passage of air, it also puts the mouth in a shape that is most conducive to resonance.



- One way to **monitor** this is to make a flat palm with your hand. Place the third knuckle of your index finger in front of your mouth, perpendicular to the ground. When you inhale you should hear a very open, dark rush of air past your hand. If you are doing an exercise on the horn, listen carefully to the quality of air sound that is coming out of your horn... it should be dark and full, never whistling or fuzzy.

- Using a *Breathing Buddy* can also create this proper shape and sensation of breathing. When a breathing buddy is in place, it creates an extremely free passage of air. This will give you a sense of how free the air should be flowing whenever you breathe.

### 2. **Air is Even** –

Just as we strive to move between dots on the marching field at an even pace, our breathing needs to occur at an even pace at all times. So for example, you may be asked to breath in for four counts; during that time the air should be moving at a consistent speed, never slowing or speeding. One of the most common tendencies is to slow the rate of your breath as you reach full capacity. That is not ideal, as it creates tension. Focus on keeping the breath moving in at the same speed all the way to the point where you begin to exhale. The same thing goes for exhalation. When we play our instruments, we really don’t need huge shifts in the rate and volume of the air column. It is challenging and essential that exhalation be at a constant, steady rate, regardless of how long or short. Be sure to pace yourself over long periods of time.

- Use the hand monitor on the inhalation to judge the relative consistency of the air flow

- On the exhalation, blow the air at the palm of your hand, and from that you can get a sense of whether or not the air is even.

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### 3. **Air is Constant** –

This concept is closely related to the last. At no time does your air stop moving. Often players will actually stop their breathing just before they play or even right after. The air does not stop after you inhale before you exhale. When you finish exhaling/playing a note, you begin inhaling as soon as that is done (this is how you release a note).

### 4. **Change of Direction is Smooth and Instantaneous** –

When you reach the end of your inhalation, there is no slowdown or hesitation. The air smoothly and immediately begins going out a steady rate. And it's the same at the end of your exhalation – no slow down or hesitation, just a quick change of direction.

By combining the four elements into our breathing habits, we will be taking very good breaths that will automatically improve your playing. We will also be doing numerous exercises to improve various aspects of breathing. \*\*\*It is very important that you focus on these four points as you work on any breathing exercises.

## **Strengthening the Skill of Breathing – 4 Types of Work**

There are essentially four categories that define the types of exercises that can be done to improve breathing abilities. We will learn these as the year goes by. Most are included in *The Breathing Gym*; others are ones I've picked up along the way.

1. **Flexibility** - we have discussed a lot of the flexibility ideas that can aid in breathing. There are a few other exercises that we will address that stretch the breathing capacity internally. These are fairly strenuous and should be done only once the muscles have had a chance to warm up.
2. **Flow** – these exercises in the main simulate the kind of airflow that occurs when we play. These mainly consist of moving air over various count and concentrating on form. These also include some over training exercises that are lots of “fun” and some quick breathing exercises that work on the ability to breath in to capacity over a very short period of time.
3. **Resistance Therapies** – these are like weightlifting for breathers. We use different techniques to stress either inhalation or exhalation to point where we get a good muscular burn. These are used to strengthen the muscles used in the breathing system.
4. **Brain Breathing** – These are mostly meditative, focusing exercises that are great for improving performance concentration and combating stage anxiety.

These air exercises are not written out in this manual as most are much more easily explained. We will add more and more exercises as the year goes on. Anytime we are doing breathing exercises, really max out the use of your full lung capacity. Clinical studies show that most people use 30-45% of their actual capacity. Whereas the best breathing professional wind players can reach upwards of 95% use. Just make sure you're filling up and expelling as much air as you can each time.