

# The Basics of Breathing

## Compiled by Dr. George Palton

### The Basics of Your Body

- **Functions of the Respiratory System:** Exchange Gasses (O<sub>2</sub>, CO<sub>2</sub>), Isometric Opposition (Muscles become rigid), and Creating Pressure (Muscles bear down, throat closes).
- **The Diaphragm** is a piston that moves up and down. When the diaphragm descends the chest cavity enlarges which lowers air pressure and allows your lungs to fill up. The only nerves in the diaphragm sense pain, not its position.
- **Breath Support** is the blowing of breath. The volume of *wind* provides support, not the contraction of muscles. Breath support can be inhibited by closing the throat or by using pelvic pressure to keep the diaphragm activated. The abdominal muscles are capable of creating far more pressure than is needed to support a full breath.
- The most common cause of a constricted airflow is excess **pressurization**. Most often this is caused by constrictions in the throat or because the tongue is blocking the wind stream.
- You can move muscles throughout your body and get very little or no air in your body. These muscles move **naturally** as a result of filling up your lungs.
- We cannot change our **lung capacity**. It is based on age, height, gender, and health factors. However, we can do the most with what we have and work to improve the elasticity of our lungs.

### Basic Concepts

- With **WIND** there is always adequate air pressure
- An **open throat** is a happy throat
- Adopt a “**WHOA**” **shape** in your mouth when inhaling
- Maintain a **constant and even** flow of wind
- Utilize an **even “cyclic” exchange** of inhalation to exhalation
- Always keep the **air in motion**
- Only **use the first 80%** of your lung capacity
- **Use good posture**, don't raise your shoulders
- Fill your lungs from the **bottom to the top**
- **Breathe to expand**, don't expand to breathe
- Breathe from the **corners of your mouth**, not your nose
- Make your breath as silent as possible, **noise is resistance**
- Lower notes need **twice as much** air, higher notes require air to be **twice as fast**
- **Plan all breaths** for the purpose of survival and to optimize the musical effect
- Allow the music to breathe, **emulate a great vocalist**
- Breathe in time and **maintain a steady tempo** when breathing
- **INHALE=YAWN, EXHALE=BLOW WIND!**

### Basic Exercises (Measure airflow through horizontal arm movement or your “monitor”)

- In 2 Out 2, In 4 Out 4, etc.
- In 2 Out 2, In 2 Out 4, etc.
- In 4 Out 4, In 2 Out 4, In 1 Out 4, In 1/8 Out 4
- Two 8s, Two 4s, Four 2s, Eight 1s
- Wind Pattern Your Music

### Tools Available

- **Homemade:** piece of paper, PVC pipe (breathing tube), toothpick (BERP)
- **For Purchase:** breathing bag, breath builder, respirometer, inpsiron

### Supplemental Resources

- Frederickson, Brian and Taylor, John ed. Arnold Jacobs: Song and Wind. United States: Wind Song Press, Ltd., 1996.
- The Breathing Gym and The Breathing Gym Daily Workout (DVD and Text) by Patrick Sheridan and Sam Pilafian