

The Secret of Singing is in the Breathing

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Air is Everything

Life

Respiration can be “...*automatic, reflexive, learned, voluntary, and emotional.*”¹

Gas exchange: delivery of oxygen, removal of carbon dioxide.

Air molecules vibrate with sound waves.

Experience

“*Breathe new life into...*”

“*Take a breather...*”

“*Catch my breath...*”

Health

Good breathing creates healthy sound, optimizes performance, and prolongs singing careers.

“...*singing enhances life, and life enhances singing.*” -Barbara Conable²

Spirit

Aristotle considered how the breath interacts with the soul.

The word “Spirit” comes from the Latin *spiritus* - breathing or breath of god/ life. Related to the Latin word *spirare* - to breathe.

Practical Reality

At district choral festivals in Michigan, tone and pitch together account for 85% of the variance in the total score. Breathing/ Support elements make up half of the tone score.

-MSVMA Rubric Study, Chuck Norris, Grand Valley State University (2015)

“*The best way to overcome pre-performance nerves and butterflies is deep, diaphragmatic breathing.*” -Marilyn Horne, in a masterclass at Florida State University (1999)

Good breathing habits improve freedom, intonation, control, agility, articulation, melismas, dynamics, how long one can sing, resonance, steadiness of vibrato, you name it!

¹ Thomas J Hixon, *Respiratory Function in Singing: A Primer for Singers and Singing Teachers* (Tucson: Redingote Brown LLC, 2006), 62.

² Barbara Conable, *The Structures and Movement of Breathing: A Primer for Choirs and Choruses* (Chicago: GIA Publications, Inc., 2000), 14.

Anatomy and Alignment

- Posture/ Alignment- stack your bones; the skeleton bears weight so that muscles are free.
- The respiratory apparatus includes: mouth/ nose, trachea, lungs, diaphragm, ribs, intercostal muscles (between the ribs), abdominal wall, pelvic floor.
- Ribs and sternum are hard, but connective tissue is springy. Ribs connect to vertebrae with planar joints not unlike those found in wrists and ankles.
- Passive Force (natural recoil) vs. Active Force (muscles)
- Excursion of ribs is not unlike the handle of a water pump.
- An elevated rib cage is accomplished with abdominal muscles rather than tension in chest.
- The diaphragm is an involuntary muscle and therefore not under our direct control.
- Breath support is the coordination of your breathing in muscles and your breathing out muscles. This balance is called *appoggio* (in Italian, “to lean upon”).
- Length of phrase is determined by efficiency, not volume of air.
- “Regardless of the specific method used, the goal of breath support...is to provide a stable supply of air at the correct pressure for the desired pitch and loudness.” -Scott McCoy³
- A body map is “information in the brain, used to govern movement.”⁴ Warning! The information in your brain might not be correct.

Body Mapping⁵

- Nose goes all the way back.
- Trachea is in front of the esophagus.
- Thorax contains heart and lungs. Lungs are lower in the back. They go from collar bone to bottom of sternum and reside on either side of the vertebrae (“breathe into your back”).
- Ribcage- too rigid; think of them individually, like fingers.
- Ribs travel, go on an “excursion.”
- Do not confuse rib movement with movement of the thorax/ collar bone/ shoulders.
- Diaphragm is a dome-shaped muscle, oriented horizontally that separates the thoracic cavity from the viscera. It flattens down during inhalation, pressing down on digestive organs, which in turn push down on pelvic floor. Pelvic floor should remain free.
- The diaphragm and pelvic floor move in tandem.
- Breathing is a wave from top to bottom.
- Spine is weight-bearing for all of the breathing apparatus.
- Head is not rigid. Think “up and over”.
- Exterior neck muscles are for moving the head, not singing.

“Tense singers try to control with muscle fibers what they should be controlling with neurons. We should think of singing as brain work, first, muscle work second.” -Barbara Conable⁶

³ James Jordan, *The Musician's Breath: The Role of Breathing in Human Expression*, (Chicago: GIA Publications, Inc., 2001), 162.

⁴ Thomas Carson Mark, *Motion, Emotion, and Love: The Nature of Artistic Performance*, (Chicago, GIA Publications, Inc., 2012), 33.

⁵ Barbara Conable, *The Structures and Movement of Breathing: A Primer for Choirs and Choruses* (Chicago: GIA Publications, Inc., 2000).

⁶ Conable, *The Structures and Movement of Breathing*, 44.

Exercises for Establishing Good Body Position and Breathing Habits

Release of Tension

- Make face really big, really small.
- Stretch
- Shake arms and legs out.
- Roll shoulders.
- Dance to something fun (Happy!).

Establish Alignment

- Imagine you are a marionette puppet with strings that lift and lengthen you.
- Pretend a string is attached to your head and goes up to the ceiling, through a pulley and back down in front of your face. Pull down.
- Stretch arms up and slowly bring to sides without collapsing the chest.
- Bend over like a rag doll, slowly coming back up, one vertebrae at a time. Keep breathing.
- Stand against a wall with shoulder blades and buttocks touching the wall (but not the head).
- Collapsing chest while singing? Stand in the corner with elbows touching walls.

Inhalation

- Place hands on back, on sides, then in front. Breathe in each position to gain awareness of expansion.
- Bend over like a rag doll and breathe to feel back expansion.
- While sitting, bend over and breathe. Feel expansion of ribs.
- Lay on your back, place a heavy book on your upper abdominals and breathe.
- Suspend “empty” lungs for 10 counts, then release to allow air in (low pressure system!)

Breath Energy/ Support/ Appoggio

- Pant like a dog. Pant silently.
- Press in on upper abdominals and cough. Now laugh like Santa. Shout “hey!” What happens?
- Pulse on a hiss, then on fffffff.
- Suspension: breathe in slowly for 5, suspend for 5 (keep everything open), breathe out for 5, recover. Repeat, making suspension shorter each time until onset is well coordinated.
- Place hands on upper abdomen, finger tips touching, breathe to separate fingers and hiss while keeping finger tips from coming together as long as possible.
- Hold beach ball in front of belly while breathing and singing.
- Use exercise resistance bands, pulling outwards left and right, or standing on one end and pulling up with both hands to engage core.
- Breathe in and as you release the air use a different resistor each time. Lips, hiss, then vocal folds by chanting “one, one, one...”
- Hiss softly, then loudly as you feel your upper abdominals. Chant “one, one, one...”
- Hands on waist, lean forward for 8 pulses, lean right for 8, lean left for 8, repeat for 4, 2, 1, and the vocalize on a descending siren.
- Practice quick breaths with gesture of syncopation.

Connecting Breath to Tone

- Lip trills on any melody, sustain until release (also think about resonance while trilling).
- D-S-D slides, reverse to S-D-S slides. Can sing on a hum, lip trill, on “ng”, or any vowel.
- D-M-S-M-D legato arpeggio patterns on different vowels.
- Onset exercise on “ah”: half note, half rest, etc. Pretend to take a tissue out of a box.
- Suspension: breathe in slowly for 5, suspend for 5 (keep everything open), sing D-M-S-M-D legato arpeggio on “Ah,” recover. Repeat, making suspension shorter each time until onset is well coordinated.
- 12345-5-5-5-54321 on vowel.
- Sing through a straw.
- Messa di voce exercises are excellent for practicing breath management.

Breathing Poem (Rao & Perison, 2005, p. 26)

Breathing-in.
Breathing-out.

Breathing-in deeply.
Breathing-out slowly.

Breathing-in calmly.
Breathing-out with ease.

Breathing-in smiling.
Breathing-out release.

“Breathing in-2-3-breathing-out-2-3-breathing-in-2-3-breathing-out-2-3,
Breathing in deeply-2-3-breathing out slowly-2-3...”

Breathing Reminders for Choral Singers

- Posture is not something you set and forget about; posture is something you do all the time!
- Be aware of your weight and feet. The floor supports you. Be rooted like an oak tree.
- Alexander Technique: “Head leads, body follows”
- Good words for body and position of ribs: buoyant, noble, aligned, lengthened, free.
- Keep sternum/ chest comfortably high. Avoid clavicular breathing.
- Lengthen as you sing. Don’t collapse, or else you have to use the breath to get your alignment back (twice the work!).
- Breathe in on the first vowel shape that you sing.
- Inhalation should be silent (noisy breathing indicates airflow is somehow restricted).
- Air travels down into our lungs.
- Grow front to back and side to side. Viscera are pushed down equally in all directions (not just front). Avoid purely “back breathing” as it restricts the diaphragm.
- Breathe low, and also breathe high and breathe middle— fill the torso like a barrel. Avoid purely “belly breathing” as it restricts movement of ribs and diaphragm.
- Get fat! Holding in lower abdominals restricts movement of diaphragm.

- **Big breath** vs. **Good breath**. Breathe for the phrase. Be careful not to stack air. Too much air can cause unnecessary tension.
- Open throat like a stove pipe. “Vomit the anaconda!”- Melanie Helton
- Onset should be free, coordinated, and on the breath.
- Feel as though you are inhaling as you sing the phrase. Stay in the expanded inspiratory position. -Richard Miller⁷ (reason for the pigeon-chested caricature of opera singers)— this results in more efficient breath metering.
- The 3 B’s of phonation: Braced, Balanced, Blown.
- Appoggio can determine the correct, most efficient amount of air needed.
- Stay open at release, allow the air to drop in to your body.
- What does it feel like? Nose, mouth, skin, muscles, all give information about how much air is going in and out. “We don’t imagine our bodies; we perceive them!”- Barbara Conable⁸
- Energize long tones. We do not “hold” notes in singing; we sustain them with life and breath.
- Let the sound ride on a cushion or column of air.
- Flow through legato lines like you are on ice skates.
- How do you stop singing? Inhale! (do not close mouth, throat, etc.)
- “Dynamics are not just a question of volume. They are changes of breath intensity.” -Edith Copley⁹
- Basic Workings of the Voice for Beginners: a.Starter (brain impulse) b.Actuator (breath stream) c.Vibrator (vibrating vocal folds) d.Resonator (throat, mouth, sinuses)— Terry J. Barham¹⁰
- I would rather hear a singer breathe more often and sing well than breathe less often and strain.

Rehearsal and Conducting Gesture

- Breath Circle (arms move OUT to IN to OUT)¹¹ - results in widened pharynx. The OUT can be used to conduct legato line, or singers maintaining the out can achieve *appoggio*.
- Begin with stillness and openness, breathe with musical intent.
- Rainbow arch with arms while singing legato line.
- Singers start with fingertips on shoulders then move arms in forward arch while singing legato.
- Imaginary tug-of-war between conductor and singers.
- Sing with only vowels, leaving out consonants.
- Use consonants to connect the vowels rather than separate them.
- Sing on lip trill.
- Sing with cheeks puffed out.
- When breathing on rests, take just as much care as the initial breath at the beginning of the piece.
- Does your conducting gesture match your musical intent?

⁷ Richard Miller, *The Structure of Singing*, (New York: Schemer Books, 1996), 25.

⁸ Conable, *The Structures and Movement of Breathing*, 27.

⁹ Edith Copley, “Key Concepts in Choral Singing,” in *ChorTeach*, Vol. 4, Issue 4, ed. Barham (ACDA, 2012), 2.

¹⁰ Terry J. Barham, “Quotes and Sayings for Teaching Lessons About Music and Life,” in *ChorTeach*, Vol. 5, Issue 4, ed. Barham (ACDA, 2013), 7.

¹¹ Rao, *Circle of Sound Voice Education*, 28-29.

- Mirror Neurons: the motor cortex activates not only when doing, but also by observing. Our conducting matters! “What they see is what you get!” —Rodney Eichenberger
- Show breath near core. Be careful not to let the plane of conducting get too high.
- Conducting as a “series of preparations” results in better forward motion (airflow) than focusing on rebound from each beat.
- The melded gesture helps air to keep flowing.
- Use more horizontal plane.
- Be aware of unintentional subdividing or unnecessary ticks in beat pattern.
- In 2/2 time, group two measures together in macro 4-beat pattern.
- Abandon the beat pattern sometimes and just show the line- it is ok, I promise!

“Hear it, breathe into THAT, and sing into THAT. Do not take a breath to sing; take a breath that is already the thought.”

—Thomas Hampson¹²

Selected Resources

Barbara Conable, *The Structures and Movement of Breathing: A Primer for Choirs and Choruses* (Chicago: GIA Publications, Inc., 2000).

Julia Davids and Stephen LaTour, *Vocal Technique: A Guide for Conductors, Teachers, and Singers* (Long Grove, Illinois: Waveland Press, Inc., 2012).

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www.voicescienceworks.org

¹² Jordan, *The Musician’s Breath*, 184.