Breathing, Resonance, and Vowels Basics

Breathing, resonance, and vowels form the foundation of good singing. These are a few of the basics that we talk about early in voice lessons. This is not a comprehensive discussion of these topics and more information and exercises will be given in future lessons.

**Breathing**

- **Inhalation**:
  - Low, deep, relaxed.
  - Shoulders stay down.
  - Expansion occurs in the front, sides, and back.
  - One of these imagery exercises might help you to feel that low breath and the openness we need in the soft palate and nose/cheekbones area. Circle the imagination game that words best for you. Please note: not all of these exercises work for every person. In fact, although they may be helpful for one person, for another person, some of these images might create a higher, tighter breath. If that happens, simply abandon the image.
    - Smell a flower (or your favorite perfume, or favorite food. It just has to be something that smells good so you take a big whiff of it.)
    - Imagine your head is hollow. Fill up the empty space in your head before letting the air descend down for a low breath.
    - Pretend you went to Dairy Queen for your favorite flavor of Blizzard. They ran out of spoons, and now you have to drink your very thick Blizzard through a straw.
    - Yawn.

- **Using the air**
  - Classical
    - Abs come in gently. You will feel this more at the end of the phrase. There is no reason to force them in. Let it happen.
    - Sides of the rib cage stay as expanded as possible. Some collapse will occur, but we want to delay it as long as possible.
    - Back expands further.
    - Push against the wall to feel how your body naturally creates this. Once you’ve found it, you can also simply push into your palm.
Resonance

- Resonance in its simplest scientific definition is what happens when something is vibrating and causes something else to vibrate sympathetically.
  - Here’s a cool trick you can show your friends to illustrate resonance. Play the piano without using your hands: Using an acoustic piano, hold down the sustaining pedal (the pedal on the right) while you do a loud, energized, siren sound. The sound waves you create, hit the strings of similar frequencies, causing them to vibrate.
  - Yes, it is possible for a singer to break glass by singing the right frequencies with enough intensity. Myth Busters even did a show about it.
  - In terms of singing, it is the process by which the very tiny sound produced at the vocal folds is changed into the sound we hear when you speak or singing.
    - Everyone already has some resonance because we can hear you.
    - When we speak of resonance for singing, we are really talking about optimal resonance that allows the volume and color of sound needed for the type of singing you are doing.
    - By changing the size, shape, and rigidity of the vocal tract (throat, mouth, nasal and sinus cavities) we can select the overtone frequencies that we want to amplify or dampen.
  - Resonance is very closely related to how we form our vowels (see below.)

Classical

- Imagine or feel the resonance cheekbones and higher.
- Use Harley-Davidson lip buzz (lip trills) or tongue roll to help feel this. If you can’t do either, use an energized zzzz sound.
  - When you do 3 or more repetitions of the buzz or tongue roll, it actually tricks your body creating better resonance when you sing.

Vowels

- The vowel is extremely important in singing because that is the part of the word that we elongate when we sing. How we shape and place that vowel affects the kind of resonances we get.
- Classical vowels are tall, high, open, grand, round, specific.

Breathing, Resonance, and Vowels Part II

Breathing

Darth Vader inhalation

When you sing in performance, we do not want to hear you breathe. However, an audible breath can be helpful in finding the feeling of a good singer breath.

1. First do that obnoxious high breath that your teachers told you not to do. Notice that it is tight and closed. Notice that your shoulders probably lifted. Notice the pitch of the sound you made.
2. Now do a low pitched inhalation. The lower the pitch, the lower the breath goes. How do those two breaths feel different?

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3. Use a Darth Vader inhalation when you have a lot of time to breathe, for example, at the beginning of the song, or when you have a long interlude.

**Shush breathing**
1. Place one hand over your belly button and hold one hand comfortably in front of you, palm up. The hand on the belly button will monitor abdominal movement and the other hand will mimic that movement.
2. As you hiss intensely (either s or sh will work), notice that the abs gently move in. Allow the fingers of the other hand to close.
3. Release the abs and pop the hand open. You do not need to try to inhale. If the abs have tightened during the hiss, the release of those muscles with create and automatic inhalation.
4. If you do not feel expansion of inhalation when you release the muscles, try step 2 again, and this time blow out all the air before you release.
5. This is the kind of breath you want to use when you don’t have much time. If a teacher asks for a catch breath, or lift breath, this is often what they are referring too.

**Resonance and Vowels**
As we talked about before, resonance and vowels are very closely connected. When you form the vowel correctly, you will get the resonance we are after. When you have found the correct resonance space, the vowel color tends to correct itself.

**Classical**
Yes, you do need to drop the jaw for high notes, but no matter how big the mouth opening gets, the space inside your mouth is bigger.
1. The megaphone is now inverted. Imagine yawn space inside. The roof of the mouth is domed.
2. Crazy Lady is a great exercise for feeling the space inside.

**Tai Chi Breathing**
This exercise is adapted from the Open Close movement common in Sun Style Tai Chi. It is fabulous for focusing on breath, alignment, and freedom in the body. It’s also great for building energy and dealing with performance anxiety.

1. Hold your hands in front of your chest at about heart level. Palms should be facing each other and fingers are up. Sometimes it is easiest to find this position by putting the hands in prayer position. Then you separate them to about the width of your head.
2. As you breath in, allow the hands to follow the action of the rib cage and slowly open up, no further than shoulder width. Bigger is not better in this exercise.
3. As you exhale, the palms move together.
4. Practice that inhalation and exhalation a few times.
5. Now add the feeling of moving with resistance. Opening the hands might feel like pulling on a giant rubber band. Closing the hands might feel like pushing two magnets together.

6. Continue the open close breathing for a few more breaths, focusing on this resistance.

7. Add rising and falling through the knees with each breath. Rise as you inhale. Bend your knees as you exhale.

8. After a few breaths, become aware of the crown of your head. You should feel lifted through the crown of your head when you inhale and when you exhale. You can think of Spocking (feeling lifted from the pointy part of your Vulcan ears) if that is easier to remember.

9. Next, become aware of the low back, sacrum, and tail bone. This area should remain relaxed, and when you bend, imagine your tail bone pointing to the ground.

10. Take a few more breaths feeling the lengthening of the spine, lifting from the crown of the head and the tucking the tail bone.

11. Check your feet. Are you staying balanced on the tripod of the foot? Is your weight equally balanced between both feet? (See Body Mapping)

12. Now pay attention to your knees. When you rise, see if you can find the place where the knee is straight, but not locked. This is the position we want to find for singing.

**Trains and Train X 3**

Vowels must be unique, distinct, and specific. That is how we tell them apart and understand the words we are hearing.

For good singing, vowels must also line up in a way that makes them sound similar, as if they are coming from the same place. It is as if each vowel is a car of a train. They can all be different like train cars can carry different cargo, but what makes it a train is that all the cars are hooked together traveling along the same tracks.

In lessons, you heard me demonstrate the nee-nay-nah-noh-noo exercise lined up on the train tracks and with the train derailing.

Practicing lining up your vowels. If one feels or sounds very different from the others, play around with how lifted the vowels are and how much jaw drop you are using. If you still can’t get them to line up, talk to me at lessons.

The train X 3 exercise is a perfect exercise for reinforcing the basics of Breath, Resonance, and Vowels.

1. Hiss (no pitch, just air) intensely, as if you are trying to blow out a candle on the far wall. This reminds you how to use the breath well.

Take a low, silent breath.

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2. Buzz (lip trill), tongue roll, or zzzz with the same energy. This works both breath and resonance.

Take a low, silent breath.

3. Sing nee-nay-nah-noh-noo. (Other consonants can be substituted. Voiced TH also works well.) Use the same energy and intensity as on the previous two steps. Think about keep the sound in the same place that you felt it when you buzzed. Line up the vowels on the train tracks.

**Straws**

Vocal exercises with straws can help both breath and resonance. They also provide a therapeutic effect for tired voices.

**Part I**
This video from Ingo Titze, a voice scientist explains a little about some basic exercises that you can do with the straws. I use both coffee stirrer straws and standard drinking straws allowing students to choose whichever works best for them.

http://www.youtube.com/watch?v=0xYDvwvmB1M

1. Glides (I sometimes call these sirens).
2. Accents (or bumps).
3. Sing a song through the straw. (He uses “The Star-Spangled Banner”. I often use “My Country ’Tis of Thee.” You can also do this with any song you are currently working.

**Part II**
1. Review Part I.
2. Using a small section of your song or a favorite warm-up pattern, transition from the mostly occluded opening of the straw the the full opening of an ah vowel.
   a. Straw, mini-buzz, ee through oo lips, oo, ee, ah (big and open)
3. Straw with water bottle.

Read these articles for more information about the science of how this works and for other ideas for using the straws.

http://www.ncvs.org/e-learning/nats-pdfs/2002_05_06.PDF
www.faqs.org/periodicals/201001/1942916311.html
Cyclops, Unicorn, Dolphin, Paper Trick
These imagery exercises can help students to find better resonance. Make sure the student understands that they are just imagination games and do not necessarily correspond to what is actually happening physically. Also, some students will need one image for medium range notes and another for high notes. They might also benefit from a combination of these. For example, some of my students are good narwhals.
1. Cyclops, (the X-Men character) shoots laser beams out of his eyes. Imagine your sound coming out of your eyes.
2. You are a unicorn. Imagine the sound coming up and out from the horn in the middle of your forehead.
3. You are a dolphin. Imagine the sound coming out of the blow hole in the top of your head.
4. Sing over the top of the paper. Paper can be moved up and down the face to find the best resonance spot.

Spray Paint and Laser Beams
I use a lot of imagery in my teaching. This one is great for keeping the tone energized and free, spinning the tone, and making sure that the phrase is going somewhere.

1. Choose your favorite color for today.
2. Imagine that there are a couple of cans of spray paint just in front of your face. As the sound leaves your body, it is spray painted your favorite color.
3. Now spin the sound to the wall. See that colored sound moving in a circular motion towards the wall.
   a. Your spin can be spiraling (like a drill) or
   b. rolling forward, more like a gerbil wheel.
   c. One student even likes to think of it as a time vortex from Dr. Who.

I tend to use spray paint for classical and colored laser beams for belt. The ideas of color and sending it to the wall still apply, but I take away the circular motion for belt.

Circles, Bubbles, and Force Fields
Like spray paint and laser beams, circles and bubbles help students to imagine filling a larger space.
1. Imagine yourself in the center of a circle.
2. Fill that circle with sound.
3. Gradually increase the size of the circle, still filling the entire circle.
4. Repeat steps 1-3 this time making the circle into a 3 dimensional bubble.
5. To help diction, imagine that the bubble is a force field that sparks when the consonants hit it.

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