

Human Vocal Sound

RT-HVS1-3

In order to inhale, the mushroom-stems, crura, of the diaphragm contract toward the tail. In order to exhale, the crura relax. In order to sound, the crura relax very slowly, allowing the escaping air to vibrate the vocal cords.

Your vocal cords are folds of tissue, very similar to the tissue that lines your mouth, stretched horizontally from front to back through the trachea, inside your larynx, or Adam's apple.

In the front of the larynx, the two folds or cords are right next to each other. In the back of the larynx, each cord is attached to a separate, movable, arytenoid cartilage. Tiny muscles attached to the arytenoid cartilages move the two vocal cords apart so air can pass unhindered when you breathe. They move the two vocal cords close together so that they can vibrate, without touching, when you intend to make a sound. Other tiny muscles of the arytenoid cartilages can pull on the vocal cords, making them longer, thinner and more tense or shorter, thicker and less tense according to what pitch you choose to sing or speak.

The vocal cords and the small muscles that move the arytenoid cartilages, like the diaphragm, have very few sensory nerves in them, so there is little sensation when they work. Like breathing, singing is best when it feels as if you're doing nothing. If you feel effort or strain as you sing, it is unnecessary. Take a moment to breathe into the area that feels effortful or strained and allow it to relax.

Exploration Four: Audible Breath

Lie on your back in the constructive rest position.

Let your breath become effortless. Imagine your whole throat easily wide open, as if you are just about to yawn a delicious yawn. Imagine your vocal cords also easily wide open, letting the air rush by without vibrating.

Continuing to feel easy, wide and open in your throat, begin to play gently with making your breath audible, just a little bit. Play with making wind sounds or surf sounds. Let your throat stay open and relaxed.

Still feeling easy, wide and open in your throat, begin to play gently with vowel sounds. Experiment to find ways to sing vowels (AHHHH, OHHH, EEEE, EHHHH, OOOO) without using lips and jaw. Notice the small movements inside your throat that make vowels. Find ways to let all your air turn into vowel sound.

•When your exploration is complete, rest for a moment and notice how your whole body responds to your sounding. Then roll over on your side and roll up to sitting.



Pitch

The human musical instrument that we live in is very different from the instruments we make out of wood and metal. Sometimes we confuse our bodies with instruments that require great pressure or effort to be played. Sounding our body-instruments is best when it's effortless, almost as if the sound were singing us.

There are three components that come together in a variety of ways to make different pitches when we sound: 1) the closeness of the vocal cords, 2) the tension of the vocal cords, and 3) the pressure of the air as it flows between the vocal cords. The first two components are not controlled consciously. Instead, they are reflexive. Just trust them. If you can speak, your body already knows perfectly how to adjust the closeness and tension of the vocal cords unconsciously.

It is easy to imagine, when one watches a horn player blowing hard to hit a high pitch, that one must work hard and produce a lot of air pressure to sing high or loud. The truth is one of the delightful paradoxes of singing. Since our vocal cords are only about a 1/2-inch long, it takes very little air pressure to vibrate them. And since exhaling is a relaxation of the diaphragm muscle, all we need to do to control air pressure is to regulate the speed at which the diaphragm relaxes.

When the mushroom-stem crura of the diaphragm contract during inhalation, you can feel their effect in the expansion of your abdominal organs as the diaphragm pushes down on them. It is easy to gently learn skillful relaxation of your diaphragm crura, then, by continuing to feel expansion in your abdomen as you exhale.

Exploration Five: Expansive Breath Support

Lie on your back in constructive rest position.

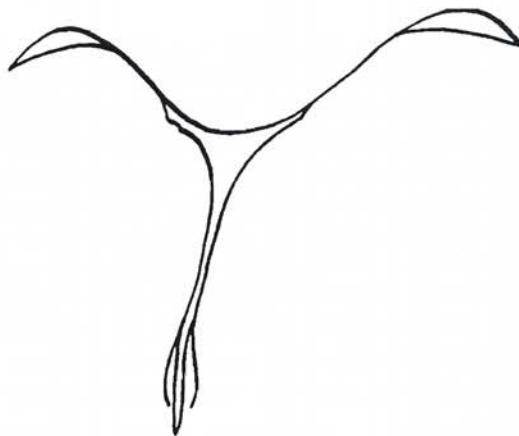
Notice your breathing. Experiment to find how slowly you can breathe. How long can you take to fill with air? How long can you take to exhale? Notice that as you exhale very slowly, your abdomen stays expanded until almost the end of the breath.

Lay your hands gently on your abdomen as you breathe. Let your hands help you sense the expansion in your abdomen as you exhale. Be patient with this new skill.

Begin to let your breath turn into vowel sounds, still exhaling as slowly as possible. Play with very quiet sounds at first.

Now begin to play with different pitches and different vowels. Breathe in slowly. Letting your lips and jaw stay soft, start an EEEE sound on a comfortably high pitch and let it fall like a siren to a low pitch. Exhale as slowly as you can, staying gently expanded in your abdomen until almost the end of the sound. Play with other vowels too.

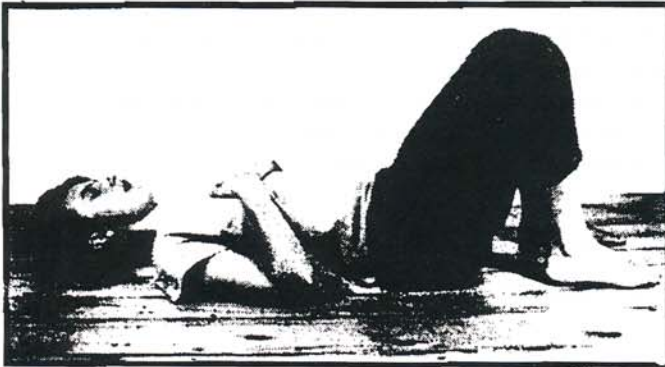
• When your exploration is complete, rest for a moment and notice how your body responds to your sounding. Then roll yourself over on your side and roll up to sitting.



Resonators

When a musician plays a cello, the sound is produced by friction of the bow on a string. That sound by itself is quiet. However, the cello has a large hollow wooden box behind the strings. The sound of the bow on the string resonates, bounces around and is amplified, inside the cello body. The wood of the cello body also vibrates as it resonates the strings' sound, adding the wood's own mellow quality to the total sound.

Your body is a wonderfully varied and complex instrument that has many different kinds of resonators. Once you have produced a tone with your diaphragm and vocal cords, you can resonate it in one or many resonators—cavities, spaces, volumes, tissues, organs, fluids, bones. As you add resonators, your sound will become effortlessly louder. You can also choose which resonators will give the tone the particular timbre, "color" or "flavor," you wish.



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Exploration Six: Playing with Resonators

Lie on your back in constructive rest position.

Breathe, letting your throat be wide and open, letting your exhale be long and expansive.

Begin to make quiet, easy vowel sounds as you exhale expansively.

Notice where you feel the vibration of your sound in your body—probably in your throat or upper chest. Notice any other places where you can feel your tone resonating. Spread your hands gently on your chest. Experiment to find ways to let your sound resonate under your fingers. It might help to imagine yawning inside in the areas just under your hands. Resonance is accomplished with intention, not with force.

Play with finding ways to resonate all the way through your body so you can feel vibration under your hands and also feel vibration in your back against the floor.

As the sensation of resonance in your chest becomes more familiar, notice what happens to the volume of your voice when you vibrate only under one hand, compared to when you vibrate under both hands or both hands and your back. Volume in sounding depends on how many resonators you fill with sound, not on how much effort you use. Practice letting your attention do the work for you.

After you're familiar and comfortable with resonating in your chest, play with resonating in your abdomen, in your head. Notice which pitches and which vowels are easiest in different areas. Play with starting a sound as high as you are comfortable and letting it fall through the resonators of your body from head to tail.

•When your exploration is complete, rest for a moment and notice how your body responds to the attention you have been giving it with your sounds. When you feel ready, roll over on your side, and then roll up to sitting.