

*some things to remember about our voices:*

→there are many, many methods of voice instruction. it is good to learn & empower yourself with knowledge about the way your voice works

→voices are complex, and there are a lot of ways to use them

→it's fun to use our voices! we get to play and get to know them.

### HOW WE MAKE SOUND

*Sound is a type of energy made by vibrations. When any object vibrates, it causes movement in the air particles. These particles bump into the particles close to them, which makes them vibrate too, causing them to bump into more air particles. This movement, called sound waves, keeps going until they run out of energy. If your ear is within range of the vibrations, you hear the sound.*

—[www.sciencekidsathome.com](http://www.sciencekidsathome.com)

Needed for most sounds	Function	In our singing
power source	inspires vibration	ribs, diaphragm, abdominals
oscillator	a thing that vibrates	vocal folds
resonator	a cavity of air that resonates in sympathy with parts of the original sound & makes them louder	vocal tract
transmitter	something the sound waves move through	air
receiver	something that interprets the sound	ear & brain

### VOCAL ANATOMY AND TECHNIQUE

#### THE LARYNX

Also known as the voice box. Holds our vocal folds.

Usually we can see the instruments we play. Not the larynx!

*We cannot control or feel the muscles in our larynx, but understanding their function helps clarify what we do when we are singing.*

The primary function of the vocal folds is to keep unwanted things out of our windpipe.

The secondary function is to make sounds!

There are muscles that **close** the vocal folds (to keep unwanted things out).

There are muscles that **open** the vocal folds (to let air in or out).

There are muscles that **shorten and thicken** the vocal folds (good for singing lower pitches).

There are muscles that **stretch and thin** the vocal folds (good for singing higher pitches).



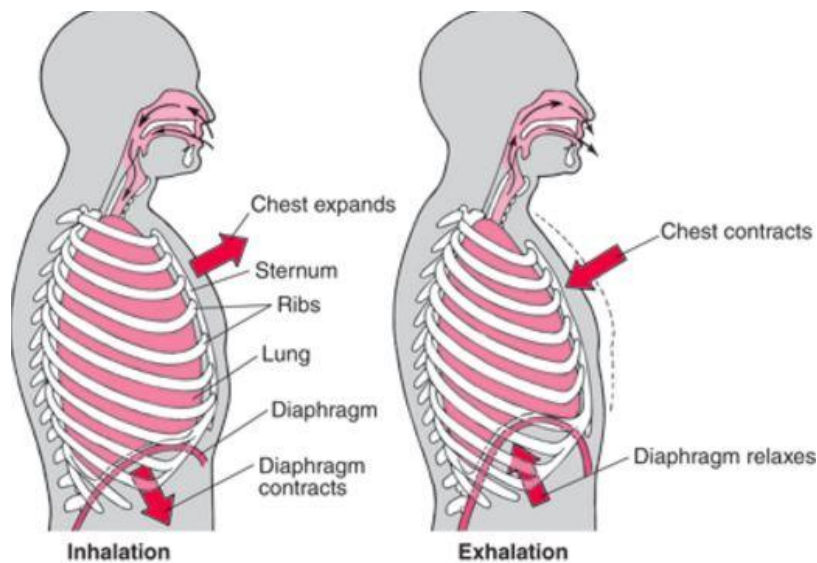
***Singing involves coordination of these muscle groups.***

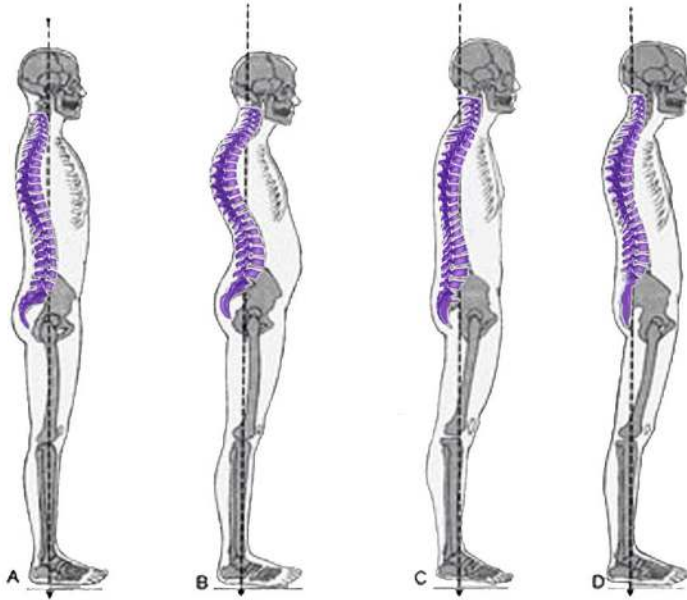
**Exercises:** vocal sighs and slides, lip trills, imagine tiny light sounds

-----  
**THE BREATH**

The vocal folds control air flow, and everything below the larynx contributes to the power necessary to inspire vibration and make sound.

Our bodies know how to breathe: the best thing we can do is to be aware of the muscle groups that support the diaphragm and to keep our bodies centered and aligned.

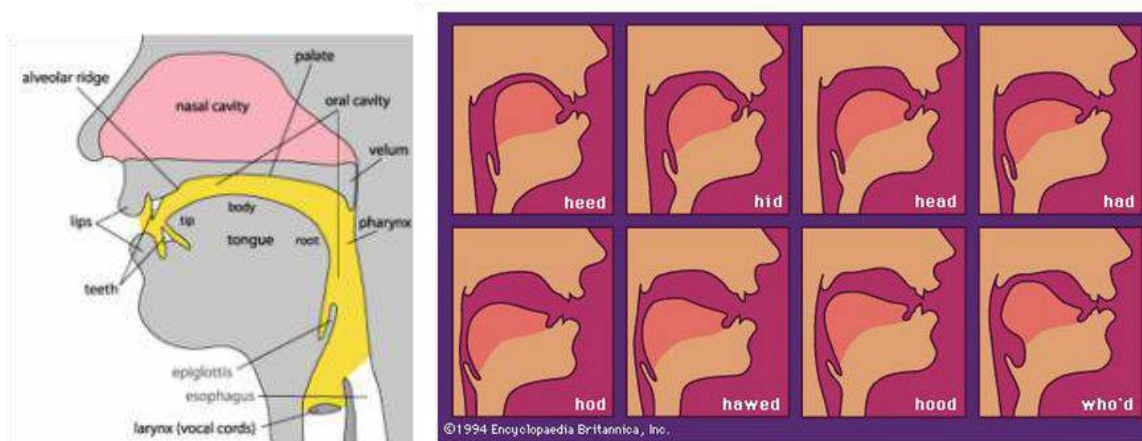




**Exercises:** lung vacuum, breathe in for 4—hold for 4—breathe out for 4.

## THE VOCAL TRACT

The vocal tract is a container of air that serves as the resonator for the voice. Unlike a violin, for example, we can change the shape of the resonating body in our instrument! Let's play.



## RESOURCES

- <http://www.voicescienceworks.org/> is an excellent easy-to-read website about voice science—I drew many images & explanations from them for this source sheet
- [https://www1.columbia.edu/sec/itc/hs/medical/anatomy\\_resources/anatomy/larynx/](https://www1.columbia.edu/sec/itc/hs/medical/anatomy_resources/anatomy/larynx/)—an interactive atlas of the larynx
- a local voice teacher
- your body, your ears, your heart & mind