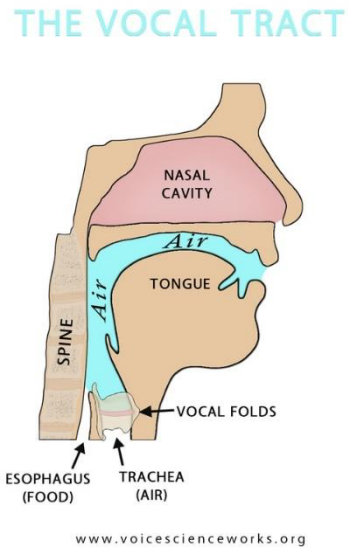
RESONANCE

There are three components for every instrument:

1. a **power source**, something to start the motion (the breathing mechanism, ribs, diaphragm, lungs)
2. an **oscillator,** something that moves (the vocal folds)
3. a **resonator** -- **The Vocal Tract!**



Key Elements about the Vocal Tract

1. It is a **container** of air
2. It is **adjustable** (making it unique among all the other resonators out there)
3. It has an opening to the outside world (the mouth)

A resonator must:

1. Have an opening
2. Have empty space
   (Yep, that's the vocal tract!)

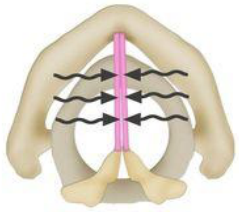
Then what about the nasal cavity? The nasal cavity does have an opening, though it is much smaller than the mouth. It also has much less empty space than the vocal tract and is not adjustable like the vocal tract.

Resonance is key to avoiding vocal fold fatigue! The air inside the vocal tract does not get tired, vocal fold tissue does. Maximizing on resonance to create volume is key to not adding excess collision or pressure to the vocal folds.

What is resonance?
Resonance is when a **harmonic** from the vocal folds lines up with the pitch of the air (**formant**) in the vocal tract. The harmonic is boosted and gains volume. It is re -sounded, or resonated.

Harmonics come from the **vocal folds.**

- They follow a very specific mathematics series created by vibrations of the vocal fold issue.
- Without a filter or resonator to boost them, the upper harmonics would never be heard.



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Resonance: (No Date) Retrieved from: https://www.voicescienceworks.org/resonance.html