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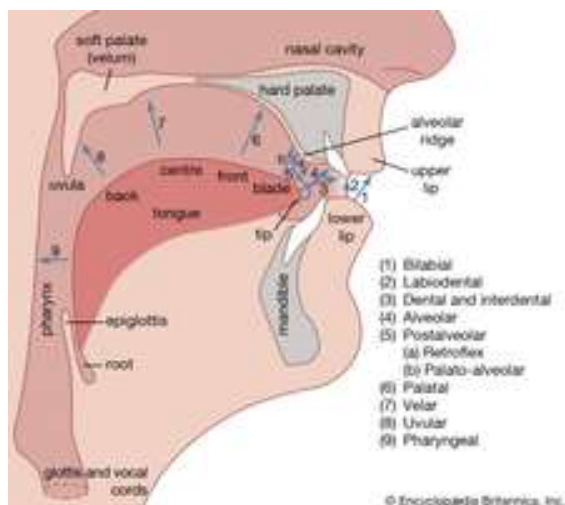
How we make sound — check out the places in our body we form sounds from and through

Places of articulation

Learning about the places of articulation is really a fundamental step in understanding how we make sounds.

When we talk about places of articulation, what we're really talking about is the different parts of your vocal tract and how those parts affect speech sounds. Specifically, we're talking about how **consonants** are formed. Before we really get into the places of articulation, let's look at how a speech sound is formed.

Places of Articulation

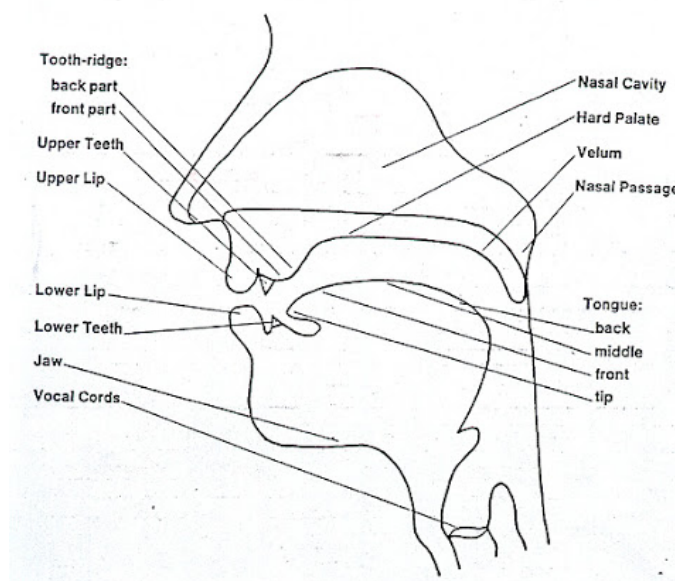


How is human speech formed?

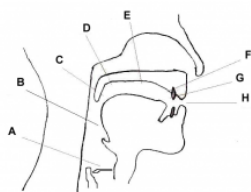
Here are the following steps to how a typical speech sound is formed:

1. Your diaphragm muscle contracts allowing your lungs to fill up with air.
2. Your diaphragm expands and pushes the air up from your lungs through your windpipe, your voice box (often called the larynx in phonetics) and then in your pharynx (the space in the very back of your throat)
3. When the air is passing through your larynx, your vocal folds vibrate.
4. The sound waves continue bouncing around and are affected by different parts of your mouth including your lips, hard and soft palates, tongue, etc... (these are the places of articulation)
5. The sound waves come out of your mouth or nasal cavity in the case of nasal sounds.
6. The sound waves then go into the environment and are picked up by others and interpreted as sound.
7. Right now, we are concerned with **step four – the parts of our vocal tract that affect speech sounds and make them distinct**. Take a look at this picture. We're going to go over each part and see how each part helps with making speech sounds.

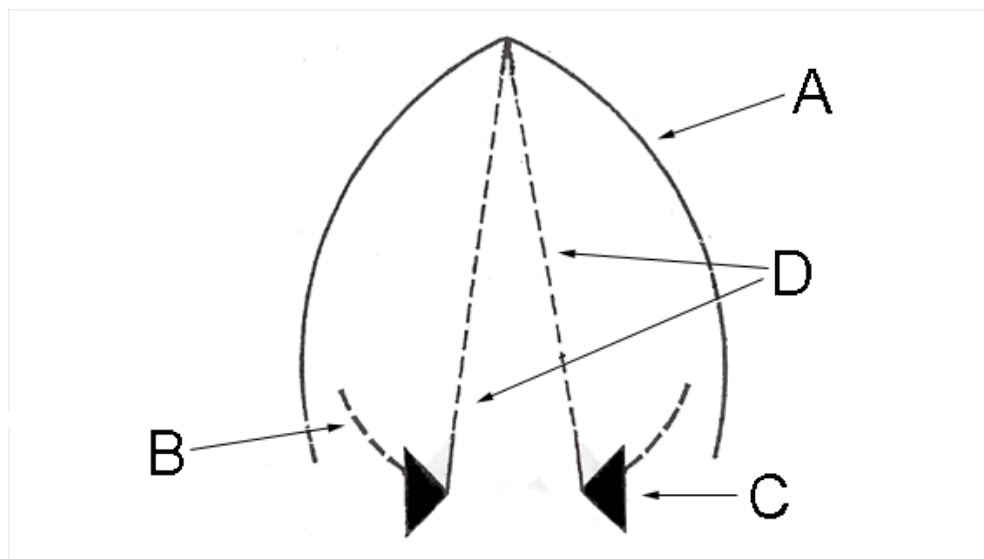
The Organs of Speech



Glottis – A



Let's first look at the A section in the above picture. This is one of the most difficult **places of articulation** to describe. So, let's go ahead and get it over with. Then, all the others will be a piece of cake. Try tilting your head back and swallowing. You should be able to feel your Adam's Apple in your throat. If you feel around that area, you should also be able to feel some bony rings. This area that includes your Adam's Apple and those bony rings (those rings are actually called cricoid cartilage) is called your larynx. Inside your larynx you have your vocal folds. Many people call these "**vocal chords**;" it's just two names for the same thing, but in textbooks "vocal folds" is more common. Here's a picture of your vocal folds.



The top part of this image above, is the front part of your neck. Those two dashed lines are your vocal folds. They can move closer and further apart from each other to affect speech sounds.

The space between your vocal folds is called the **glottis**. This is the **A** label in our vocal tract image above. The glottis is responsible for the **voicing** of sounds.

Voiced and Unvoiced sounds: What the hell? I thought I was just singing....

Let's look at two sounds the *s* sound [s] and the *z* [z] sound. Try saying both of these sounds and going back and forth between them. While doing so, place your hand on your throat. When making the [z] sound, you should feel a lot of buzzing. This is what we mean when we say a **voiced sound**.

When you are making the [z] sound, your vocal folds are coming close together and vibrating which makes the buzzing feeling in your throat.

When you are making the [s] sound, your vocal folds open up and the space between them gets bigger. The buzzing sound [z] is considered *voiced* and **the [s] is considered *unvoiced***.

All sounds in English are voiced or unvoiced.

Our Gunditjmara sounds are both voiced and unvoiced.....and this changes sometimes remember our example with 'b' and 'p'. Try making the 'b' and 'p' sounds now you know about voiced and unvoiced

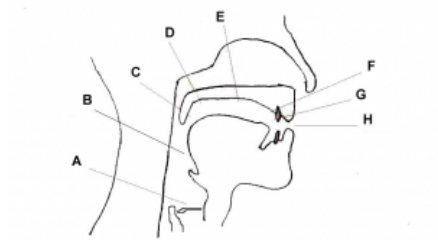
That's a lot of information for just one place of articulation, but we're not done yet! The glottis plays a part in all sounds by making them voiced or unvoiced, but it also has two other sounds that's it's responsible for: the **glottal stop** and the "h" sound [h].

The glottal stop is a sound made up of stopping the flow of air by closing the glottis. Some British dialects often use a glottal stop. Take the word *butter* for example. In American English we would change the [t] to a flap [ɾ], but Cockney English speaker wouldn't pronounce a [t] sound or a [ɾ] sound. Instead, they would pronounce a glottal stop [ʔ]. You hear the same thing in the word *water* in some British dialects as well. Again, here Americans would pronounce a flap [ɾ] instead.

The *h* sound [h] is also considered a glottal sound in English.

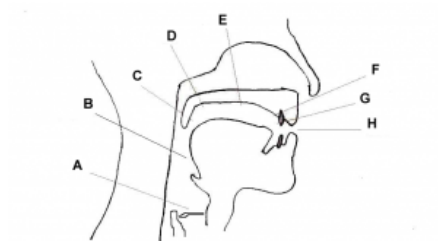
So to sum up, the glottis is responsible for the voicing of a sound, the glottal stop [ʔ] and the [h] sound.

Pharynx B



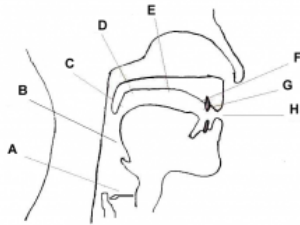
The B label is the pharynx. This is the tube and cavity that is above the glottis. All speech sounds will pass through the pharynx, but besides that, it doesn't play a role in distinguishing between sounds in English.

Uvula C



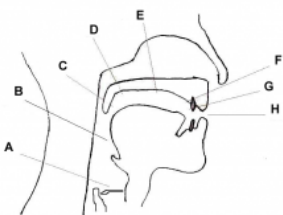
Here we have the Uvula. This is the thing that looks like a punching bag. You can see it when looking in a mirror and opening your mouth. In English, the uvula doesn't play a part in distinguishing between sounds. I'm going to add another image of the vocal tract right here. Hopefully that will keep you from having to scroll up and down.

Velum D



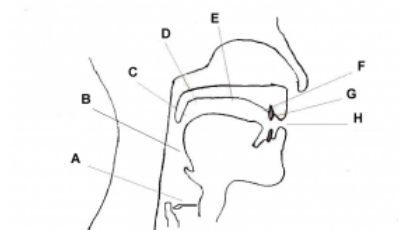
Now we are at the velum. This is also called the soft palate. If you run your tongue across the roof of your mouth, you can feel it towards the back. When you are making a velar consonant, the back part of your tongue touches the velum. Sounds that are made here are [k] and [g]. The “ing” sound in the word *sing*, [ŋ], is also made here, but the difference is that [ŋ] is a nasal sound. The velum plays a major part in nasal sounds. We will talk about manners of articulation in another post, but I think it’s at least worth mentioning for now.

Postalveolar E



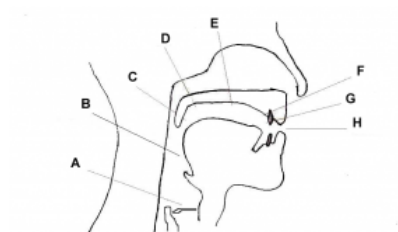
he postalveolar place is directly behind the alveolar ridge; the part directly behind your upper teeth (label **F**). This is your “hard palate.” The sounds that are produced here are: the “sh” [ʃ] in *ship*, the “ch” [tʃ] in *child*, the “s” [ʒ] in *vision* and the “j” [dʒ] in *jump*. These IPA symbols may look a little strange to you now, but hopefully these words help you see the need for them. Don’t spend too much time pondering them right now – we’ll talk about them more in depth in another article.

Alveolar ridge F



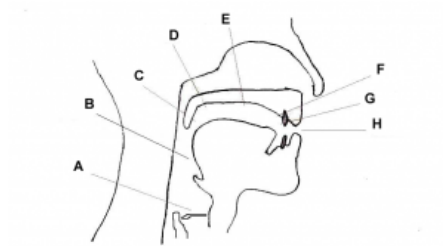
This is the bony section right behind your top teeth. sounds made here are called alveolars. Alveolars are [t], [d], [r], [s], [z], [ʃ] and [ʎ]. We've covered the flap sound [ɹ] before, but one of those may look strange to you. That upside down r [ɻ] is just an r sound in English like at the beginning of the word *rat*. Many textbooks will use the upside down r, but if you're just talking about the sounds in English, sometimes a regular r [r] is used.

Teeth G



This label is just your upper teeth. The sounds made using your teeth are called dentals. The “th” sound in the word *think* is notated with a [θ] while the “th” sound in the word *that* is notated with a [ð]. These two sounds are called interdental because your tongue is between your teeth. The teeth are used in two other sounds in English: [f] and [v]. These sounds are called labiodentals because they use your lips and your teeth.

Lips H



Now we are at your lips. Sounds that are made using your lips are called labials. When you are using your lips and teeth, as with the sounds [f] and [v], the sounds are called labiodentals.

When both lips are used, you are making bilabial sounds. These are the [p], [b], and [m] sounds.

Remembering the Places of articulation

A good way to practice remembering the places of articulation is by just using your tongue and going from your lips, to your teeth, to the top of your mouth and name each part of your mouth while feeling it with your tongue. You can even also practice saying each sound as well.