

Science AMA Series: We are Dr Gillyanne Kayes and Jeremy Fisher. We work with some of the world’s leading actors, singers and West End artists, helping them to get the best out of their performance. Got a question about your voice? AMA!

*VoiceGurus<sup>1</sup>and/ScienceAMAs<sup>1</sup>*

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### **Abstract**

Ed: Thanks everyone for a fascinating AMA - some really great questions. Time for us to go now but we’ll check back later on to answer any more questions and comments. Did you know that if you use your voice for more than five hours a day you are considered a professional voice user? We are Gillyanne Kayes and Jeremy Fisher. Our expertise in the field of voice coaching saw us appointed behind the scenes to this year’s ‘The Voice’ on ITV and led to singer, Cerys Mathews, nicknaming us the ‘Voice Gurus’ on her Sunday Morning show Our bestselling books are described as must-reads for teachers, singers and students alike and we recently launched our One Minute Voice WarmUp app to help protect professional voice users from repetitive voice injury. We’re on a mission to help people make the most of their voice - not just professionals, but day-to-day voice users including teachers, call centre workers, vicars, receptionists, personal trainers, business coaches and more. Whether you want to know more about the science behind the voice (Gillyanne recently completed her PhD on the subject) or you’re looking for more practical, voice-related advice, we can help. . . we’ll be back at 1pmET to answer your questions, AMA!

[REDDIT](#)

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VOICE\_GURUS [R/SCIENCE](#)

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We're on a mission to help people make the most of their voice - not just professionals, but day-to-day voice users including teachers, call centre workers, vicars, receptionists, personal trainers, business coaches and more.

Whether you want to know more about the science behind the voice (Gillyanne recently completed her PhD on the subject) or you're looking for more practical, voice-related advice, we can help...we'll be back at 1pmET to answer your questions, AMA!

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Is having a bad singing voice actually a thing, or can anyone be taught to sing well?

What is it that gives some people a naturally good singing ability? Is it related to their voice or is it their ability to hear their own voice and adjust?

[Banlam](#)

What a great question Banlam.

You've kind of answered your own question as to how people can develop a good singing ability "naturally". Some of the skill comes from their ability to hear their own voice, or the voice of someone else they admire, and find it in their own vocal physiology.

The only time this doesn't work is if there is a functional issue such as Amusia which affects about 4% of the population. For the rest of us, good singing can be taught, same as any other physical skill.

Everyone's voice has a similar set of parts and by learning to use them efficiently, controlling breathing and shaping the resonance they can improve the sound of their singing voice. Call us!

Singing is also not just about making sound but about communication, and some people are more

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open to communicating with voice than others.

I teach high school science but am also a singer and may be coaching some singers throughout the year. What basics should I know about the development and limitations of the adolescent (14-18yo male) voice to protect and train it well?

[AnOnlyMoose](#)

Thanks AnOnlyMoose for this very important question.

According to Cooksey (Do adolescent voices break or do they transform: 1993) adolescent boys go through five distinct stages of change. They are sequential and largely predictable. The male larynx goes through an exceptional phase of growth during puberty compared with the female. Cooksey made recommendations based on his research as to expected pitch ranges during each stage of change.

As the boy goes through each stage of change their comfortable pitch range will alter – losing the top notes, moving down, shrinking in range (sometimes to just a few notes), then finally extending again. Every newly settled voice should be considered (and treated) as a new baritone.

To track the phases of change, you can do a simple speaking test by asking the boy to count backwards from 20 to 1. Notice the resting pitch of the boy's speaking voice, and start your vocal exercises just below that resting pitch (possibly down to a minor third below). This will help to stabilise the vocal folds in their new length and thickness.

In a nutshell, the larynx grows, the vocal folds lengthen and the layers develop creating a larger thicker fold. Larger, thicker vocal folds vibrate slower, resulting in lower pitches. Keeping boys singing high through adolescent voice change is not a good idea as they have to use more effort to stay "up there".

For further practical advice on this we recommend Dr Jenevora Williams' book Teaching Singing To Children And Young Adults published by Compton.

Since I was young, my mother told me I was speaking too much "with my throat" and that it was ruining my vocal cords because I wasn't speaking "properly" like other people were, which is from the diaphragm (can't remember where exactly she said), and told me I should've gone to speech therapy, even though I don't have any speech impediments or anything. Is there a "right" or "wrong" way to use your voice, (not even singing-wise, just in general-) and is it possible to actually cause permanent damage if im not speaking properly? Thanks!

[axioche](#)

Hi axioche, thanks for your question. We ran it by our colleague Sam Brady (specialist speech and language therapist) and here's her answer:

We all use slightly different voice techniques and style dependent on our personality, anatomy and accent/dialect to name a few. Some people do speak more 'with the throat' and that can be effective for them. Some teachers, sports coaches use this technique effectively without damage.

As long as you are not 'feeling' any throat discomfort then you will not be doing any damage. Its always useful to trial different voice techniques to show what you can do and how different your voice can sound.

Lower breath control is demonstrated in the 1 minute warm up app and may be useful for you to try out how you can use a different technique and hear a different voice quality. Its always worth

experimenting with what is possible as long as you don't feel or hear any strain/discomfort.

Thanks for coming by! I'm a teacher, and seem quite prone to losing my voice when I get sick. I hate cancelling class, so I usually croak through it if I can. Is that bad? Am I hurting myself?

[asbruckman](#)

Hi asbruckman. Thanks for your question. We ran it by our speech therapist colleague Sam Brady and here's her reply: 'Croaking' through will not do any damage to your vocal folds. However, if you find that you are straining your voice and you can either feel this in your throat or hear the strained sound then this can be damaging.

The reason this is damaging is because you larynx may become habituated to straining and using your false vocal folds to get your voice across. This will give your true vocal folds less mobility and you'll have less control over your voice.

If you can, its best to rest/reduce your voice use whilst you have a virus and then use your normal (not croaky) voice when the cold has gone. Simple voice care such as drinking plenty of water, steaming regularly with plain water will help keep your vocal folds healthy.

Fellow PhD here! I've found that when I'm giving talks that last around an hour or so, or doing poster presentations that can last even longer, I have a tendency to get very hoarse and sometimes lose my voice for the next day or two. Is this a sign of previous damage? Do I just have a "weak" voice box?

[onyx\\_jbl](#)

What a useful question onyx\_jbl.

In ordinary conversation we rarely speak continuously and we usually use a fairly gentle volume. Speaking in public for an hour giving a lecture or coordinating a poster session is challenging for the voice. We've seen this as a problem for conference presenters and business people who are highly knowledgeable on their subject but not on their own voice use.

First thing to check is your hydration level. The soft tissue of the vocal folds need to be moist like the inside of your mouth. But swallowing water doesn't reach them as they are specifically designed to close down when you swallow. The recommendation is between 10 and 15 cups of water a day. It takes about 4 hours for the water to reach the soft tissue and hydrate it, so the ideal is to be sipping regularly. You really need to start drinking water a couple of days before to build up extra hydration levels in the body.

We'd also recommend a short warmup at the beginning of the day and just before the presentation. Something to work the breathing, to get the vocal folds vibrating cleanly, and to practise your articulation. The app we launched recently should work for you.

When we give conference presentations, masterclasses or when we teach on our singing Retreats, we might be presenting for up to 11 hours a day. We always do vocal warmups to get the blood flowing to the vocal muscles, to remind the breathing mechanism it's in for some work that day, and to get our pitch range and vocal clarity up to speed. And yes, we really do use the exercises in the books and the app ourselves!

People who do impressions of other people. Is that kind of control available to anyone with serious practice or are they able to do it because of some rare physical setup in their mouths / throats?

[lcanicant34](#)

Terrific question Icanicant34.

We wrote a whole chapter of exercises on how to mimic others in our book *This Is A Voice* (Wellcome Trust).

I (Jeremy) had a fascinating interview with UK impressionist Alistair McGowan on exactly this subject as preparation for writing the exercises. He had a way of taking on the pace, dialect, and even facial "features" or movements of his target which was extraordinary to witness. I think he did over 50 different people in our meeting.

In the book we talk about specific things to identify in each person: their speaking tempo, pitch range and use, rhythm, vocal tics or individualities, the melody of their sentence, pitch contours, apparent emotion, in addition to their pronunciation style, dialect or accent and facial movements or features (such as a jutting jaw).

This looks like a big list, but many impressionists grasp most of these instinctively and then work to refine.

There's a concept in speech science called motor theory of speech perception which hypothesises that we use the mirror neurons in the brain to perceive and mirror the vocal tract positions of a person we are listening to and watching. It's thought this is how we learn to speak in the first place.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3681806/>

So yes, in theory everyone can do this, it's just that some do it better (and with a lot more practice) than others!

I'm a singer who has been smoking cigarettes for about 6 years. I really want to quit, especially for my voice. Can a voice go back to normal after quitting smoking?

[tragicclearancebin](#)

Hi tragicclearancebin (what a great name). Thanks for your question. We ran it by our speech therapist colleague Sam Brady - here's her reply.

"It will depend on the pathology of your vocal folds. After a few years of smoking, you may not have damaged your vocal folds.

However, after many years of smoking, people can develop Reinke's oedema. In Reinke's oedema there is excess fluid in the second layer of the vocal folds and sometimes surgery is necessary to remove the excess fluid and help improve voice quality.

If you want to find out about the pathology of your vocal folds you will need to have an ENT (Ear, Nose and Throat) examination to examine them." Hope that helps

I am in no way a great singer (except when im in my car, then im a rock star) but sometimes when I sing I start to cough. What is causing this? It doesn't always seem to happen.

[peaphive](#)

Hi peaphive

Thanks for your question. The most likely cause of your coughing is that you've triggered false vocal fold constriction.

You have two sets of vocal folds in your larynx – the true vocal folds vibrate to make the sound and the

false vocal folds (which we use to protect the airways when we swallow). Sometimes if we make inappropriate effort during singing (maybe an awkward, high or loud note), the false vocal folds start to join in on the act and can cause you to cough. We've come across this so often that we recently launched an app with an exercise to address this exact problem.

What is the difference and the pros/cons of using thoracic breathing versus diaphragmatic breathing in the field of professional speaking and singing?

[randjordan](#)

That's a really interesting question randjordan.

First of all "the diaphragm is always active in inspiration, regardless of the type of inspiration" (Morris and Hutchison, 2017: When in doubt, breathe out).

We're assuming that when you're talking about thoracic breathing you mean raising the ribcage to breathe in and holding it up to breathe out? And when you talk about diaphragmatic breathing that you mean abdominal breathing (ie releasing the abdominal muscles for a deeper inspiration and actively using the abdominals during expiration).

Hixon, who did 20 years research into the kinematics of breathing, suggests that body type influences some aspects of respiratory function. He suggested that endomorphs were more likely to use large movements of the abdominal wall, and ectomorphs tend to use smaller movements.

Physiologically the diaphragm is the primary muscle of inspiration, so whichever version you use you'll be activating the diaphragm. Given our description above, the thoracic versus diaphragmatic/abdominal debate is to do with the effect on air pressure inside the lungs, and by association the airflow up to the vocal folds.

Let's focus on singing as it's a more extended voice use than speaking. Thoracic breathing requires you to lift the ribcage to breathe in, and usually to keep it held up while you vocalise. This has the effect of "holding the air back", maintaining a lowish subglottal pressure. This works really well for classical singing where the vocal folds are thinned, and the supraglottal resonances are used to enhance the sound. Also, in composers such as Bach, Handel and Mozart, the phrases are long, so your aim is to hold the air back and feed it in a very controlled manner to the end of the phrase. In essence you are attempting to keep the "canister" the same size while you breathe the air out, which will decrease the air pressure through the phrase.

Diaphragmatic/abdominal breathing does the opposite. You are decreasing the size of the "canister" as you breathe out. This has the effect of feeding air up to the vocal folds, and will maintain the air pressure. This is useful for contemporary vocalising or stronger singing/speaking where the vocal folds are thicker and need more subglottal pressure to activate. Contemporary musical theatre, pop, rock, world music in general need higher SGP because of the thicker sounds and shorter phrases.

One size does not fit all, so we train our singers to do both (but not at the same time!).

What are some good exercises for transitioning from passaggio to head voice? (I'm a baritone)

[jfacobc](#)

Hi jfacobc thanks for your question.

If you're a classical baritone that passaggio area will be somewhere around E/F above middle C? Basses have a lower passaggio and tenors are higher.

Usually passaggio issues arise when the vocal folds are too thick or not stretching enough to vibrate fast enough, or the breath pressure is too high for the task.

If your passaggio is around E4 (just above middle C), start backing off the air pressure around C#4, or a minor third lower. This will help you to negotiate the stretch point.

Then add some deliberate vocal fold stretching. In our vocal exercises book *This Is A Voice* (Wellcome Trust) we talk about the Whinge setting which adds extra stretch without pressure. Do some medium volume moaning or whinging on notes around that C/C#4 area – first in your speaking voice then in your singing voice. This helps to reset the vocal fold thickness and length and should make the entry into head voice much easier.

I have a naturally low voice that doesn't carry, and in a noisy environment can't be heard. Is there anything that can be done to make my voice louder when talking normally?

[varodan](#)

Hi varodan, this is a good question.

You have worked out that there is a relationship between the pitch of the voice and volume. Pitch and volume co-vary so you low-voiced folk are at a potential disadvantage. What you don't want to do is to try and raise your pitch level to something uncomfortable as that might lead to voice strain.

The best plan is to change your vocal timbre so that it can be heard in the noisy environment. Use an edgy-bright or twangy tone which carries more easily to the listener's ear anyway and which also gives you a +6dB advantage.

Check out the exercises in the *This is a Voice* book: look for the 'edgy-bright' archetype in the chapter on mimicry.

Why are voices genetic? I sound exactly like my mom (people can't tell us apart on the phone), as does my mom's cousin and mother. My cousin has a similar laugh to me.

How does that happen?

[CaughtInDireWood](#)

Hi CaughtInDireWood. We suspect that there are two factors here – genetic and cultural. You may have a vocal tract (the area inside from your lips down to your larynx) that has the same or similar dimensions to your mom. Similar shapes will produce similar sounds.

When Jeremy's mother was younger, his sister and mother sounded very similar on the phone as their pitch range, vocal tone and speed of talking was almost identical.

When we grow up our cultural surroundings have an effect (either we fit the tribe or we stick out!). So your cousin's similar laugh could be a reflection of the family laugh – your cousin heard and liked it so consciously or unconsciously matched it.

Please talk about tone of voice. How do we do it, fake it, hear it, misunderstand it, etc.? Thanks!

[ThuviaofMars](#)

Hi ThuviaofMars. That's a great question. Tone of voice is partly to do with your individual

characteristics (size, gender, age etc) and partly to do with how you use your voice. We each have a personal vocal “set” that we use as a default tone in our everyday speaking voice. The “set” is the shape and position we hold in our vocal tract. The “voice quality” or tone is the sound that comes out as a result of that shape. This is considered to be a paralinguistic feature of human communication. In other words, we’re conveying more than the semantic meaning of the words. It’s possible for tone of voice to be misinterpreted by the listener depending on their cultural and personal history. According to Titze (1994) six core emotions are known to be expressed through the voice – Fear, Anger, Joy, Sadness, Surprise and Disgust. So the same set of words could be used to convey a different underlying meaning. So we have a default tone but it’s possible to change it. It’s easy to experience this – say “oh no” as if really crying, then go to say the same sentence but stop before you make the sound and notice what position you are holding inside your throat/mouth. Professional actors and public speakers learn to consciously change their vocal quality to match their intention. Sometimes as singing coaches we use “tone of voice” in speaking to train people to find different singing sounds – so saying a sentence using an angry, sad or moany tone of voice, then maintaining that vocal setting in a sung note will produce a particular vocal tone.

As an actor who can't sing (At least not very well), I've always struggled with not wanting to go out for musicals. I feel like I'm only hindering myself by not trying out, and that if I could sing, I'd be that much more complete of an actor.

Are there any tips you could give to an amateur actor to become more confident with their voice and help overcome that fear of singing in front of others?

[SkittleWittz](#)

Hi SkittleWittz. The biggest differences between singing and speaking are sustaining tone and an extended pitch range. As an actor you'll be used to doing projected speaking, but when you sustain a sound on a note the tone colour you are using becomes more apparent (and is easier to judge).

Also as an actor moving from moment to moment in a script, it can feel odd to move to singing simply because the pace of the lyrics is usually slower and more extended.

The simplest exercise for moving from speaking to singing is to “intone” the words using longer vowels and a much slower pace. The more you intone, the easier it becomes to sustain pitch.

As a musical theatre coach in London’s West End for almost 30 years, I can say with some conviction that in musicals you are expected to sing in the way your character speaks – it’s not about having a “beautiful” singing sound. So say the lyrics of a song in the voice of your character, elongate the vowels and then begin to sustain.

(amateur/recreational singer here)

So, vibrato or no vibrato? I use it and it sounds amazing, but my voice coach goes ballistic and tells me to STOP THAT RIGHT NOW! I don't use it and I sometimes sing flat (and my voice coach doesn't seem to have a problem with that.)

[Celery Stick Figure](#)

Hey Celery\_stick\_figure (great name). We wondered if the vibrato question would come up. TBH it depends on the style you sing, so it's contextual.

Vibrato is actually about pitch fluctuation. Each semitone in music can be divided into 100 cents. In voice research the word is a fluctuation of about 6 cents is considered acceptable by listeners. We

think that depends on context of course.

We've noticed that you can vibrato around the target pitch (for example 3cents above, 3cents below), or above or below the target pitch. If you run your favourite artist through a slow-downer app you can hear what type of vibrato they use.

In classical singing (opera etc) vibrato is considered an essential part of the sound throughout the song. In contemporary commercial music (CCM) it's used as a colour occasionally.

So we're guessing that your vibrato is either too wide for your vocal coach's taste, or that it's not stylistic to the genre you sing in. Hope that helps.

What is the most interesting uncommonly known fact you know about the voice? What about common but well debunked myths about the voice?

[myexguessesmyuser](#)

Hi myexguessesmyuser, what a great couple of questions.

Interesting fact? Humans are the only mammals with slow-twitch AND fast-twitch muscle fibres in their vocal folds (vocalis and muscularis). Slow-twitch muscles are useful for stamina and fast-twitch muscles are useful for rapid movements and changes. This might explain why the human voice has such great flexibility, fine control and stamina.

The most common myth? Sing from your diaphragm. Your diaphragm is a muscle of INspiration (it activates when you breathe in and releases when you breathe out) so you can't sing from it.

What advice do you have for those of us who are on the low-end of voice usage? I am a writer who enjoys karaoke in the car and at a bar every few months. Are there really simple, minimal things to do for those who aren't going to be doing "heavy lifting" to promote vocal health?

[Gophurkey](#)

Hi Gophurkey. There are a lot of people in your situation.

Because you're not a "heavy lifter" in the singing department it's even more important that you do a vocal warmup beforehand. It doesn't have to be long or complex – five minutes of targeted exercises would be enough.

The idea is to get blood flow to the vocal fold muscles, to get the breath flow going for singing tasks, and to remind the vocal folds that they're going to be stretching in singing more than you would normally do in speaking. We've got all of those exercises on the 1 Minute Voice Warmup app. You can either do the warmup in the car, or you could do it regularly every morning to build some more stamina and stretch your vocal comfort zone a little.

What is the benefit of getting your voice professionally trained, as opposed to just casually doing vocal warmups by yourself?

[FeebTube](#)

Hi FeebTube. Doing vocal warmups by yourself is an excellent way of maintaining healthy voice. The biggest benefit of working with a professional voice teacher is having someone with an educated ear working with you. You can't hear yourself as others hear you (see the answer to IrelandNo1 above).

A knowledgeable singing teacher or vocal coach will also know shortcuts to help you improve your voice or shape it towards how you want to sing/speak. Even in one session, a good voice teacher can analyse your personal voice use and give you the precise exercises or exercise sequences that will help you improve faster.

What can I do when I am or (have been) sick to try to keep myself from losing/straining my voice?

It seems like no matter what I do, I end up feeling super-strained if I've had any sort of sinus drainage or sore throat symptoms.

I've tried everything, steamy showers, DGL, constant warm water drinking, not talking for days on end, chewing sugar-free gum, menthol tablets, etc, etc. I had a doctor recommend a cortisone shot at one point, but that just sounded insane.

Thanks!

[amishphysicist](#)

Hi amishphysicist When you have any throat virus/infection you must rest your voice as much as possible and not strain your voice. Easier said than done, we know.

When talking, use a 'confidential voice' which is the quietest voice you can use without starting to whisper.

Steaming your vocal folds for 10 minutes twice a day will definitely help to hydrate your vocal folds and reduce any inflammation. You can do this over a bowl of plain water or by using a facial steamer.

How do you train to have a more professional speaking voice? Especially with better enunciation. Sometimes people have a hard time understanding me because I have a slight lisp and sometimes my words run together.

[obsttttorte](#)

Hi obsttttorte thanks for your question. This sounds like both an articulation and a prosody thing.

Articulation is how you pronounce the words (consonants and vowels) and prosody is the pattern you use to say the sentence – including the speed and the pitch pattern.

Running words together is quite normal in conversation (it's called "running speech" in linguistic circles), but the difficulties in your listener's understanding might happen if you run too many words together.

When we listen to people speaking we're analysing the consonant cues they're giving. So in the word "word" we have the sounds "w" "er" "d". Miss out the final consonant cue (d) and the word changes to "were".

One of the quickest ways to make sure you are giving all the consonant cues your audience needs is to elongate them – that's going to slow your speech down while you practise, but once you've worked the technique into your muscle memory it becomes automatic. There's a version of the exercise on the app which will help you with both articulation and prosody.

How can you train somebody to sing and sound a certain way accents etc when inside your own head you sound totally different than when you play it back?

### [IRELANDNO1](#)

This is such a good question Irelandno1 and it's one we're asked regularly.

When you sing you are hearing two versions of the sound you make – the one your ears hear in the outside world, and the one your inner ears hear inside your head.

There's a tube that runs from the middle ear to the nasopharynx (in simple terms that's the area at the back of your nose above your soft palate). So you hear your own voice from outside via your ears, from inside via this tube, and also via bone conduction. People listening to you from outside will hear your sound differently because it's conducted only through the air to their ears. Also remember that your ears are behind your mouth so you'll hear yourself less clearly than others in front of you.

So training a singer to sound "appropriate" whatever genre or style they're singing in really needs an outside ear. That's one of the main jobs of a singing teacher or vocal coach, to act as an educated ear. In practical terms it means finding a teacher you can trust who has knowledge of your singing style. The rest is practise!

For my job, I dictate for hard of hearing and deaf people, using my voice and Dragon, Naturally Speaking software. I love to sing, but have found that my voice cracks and is weaker now that I'm speaking so much every day. Is there something I can do to get my singing voice back? It's just not fun anymore!

### [SnakeoilSales](#)

Hi SnakeoilSales – that's a shame re the singing.

How many hours a day are you doing the dictation? That might be a factor. Speaking for more than 5 hours a day is heavy voice use so you need to be aware of this. Perhaps you can schedule in short breaks in your dictation during a working day.

Here are our top tips:

1. Check your hydration levels – drink between 10 and 15 cups of water a day while you're working and take sips at regular intervals.
2. Improve your consonant articulation – consonants are important cues for speech recognition
3. Pay attention to your posture. For example, jutting your head forwards to use the microphone will put pressure on your vocal folds and make them work harder.
4. Are you warming up your voice BEFORE you do your dictation work? We devised a series of useful exercises for warming up the speaking voice on our App, The 1 Minute Voice Warmup

I might be repeating another question , but are there any good tips for teachers : keeping attention, class management ?

### [idipafhtp](#)

Hello idipafhtp, we're sure others will have this question too.

There are a number of ways you can call attention using your voice. One is to raise your pitch momentarily and to use a word that starts with a vowel so that you can use a natural 'call to attention' using a glottal onset. We use a glottal onset when we say "uh-oh". For example you could say – "everybody listen up" or "OK I need your attention". Ideally you should put a short pause after the first

word so that you get everyone's attention, and then get quieter with each successive word in the sentence.

Another way is to use a calling out voice. Most of us do this naturally when we call the family to a meal. For the calling out voice, you will again raise your pitch at first. Higher = louder in the voice anyway, so this gives you a volume advantage. Then choose a syllable to extend, rather as if you are singing. For example at home you might call out say "Dinneeeers ready" using a higher note for the word dinner and a lower note for the word ready.

Are there any good exercises that you recommend, that could help improving punctuation or clarity of the voice?

[Untun](#)

Hi Untun, thanks for your question.

Assuming you mean diction or articulation, the answer is YES.

When you speak words, you make vowel and consonant shapes that the listener hears and understands. Good articulation depends on having the tongue in the correct position for the vowels and using the tongue, jaw and lips efficiently for the consonants.

There is some leeway when you make the consonant and vowel shapes (which is why we can usually understand people speaking in our language), but for really clear speaking you need to know where your tongue, teeth, lips and jaw are and where they need to be.

Clarity of voice can be about freeing up the tongue and finding an open throat (so not constricting your throat). We created a series of exercises around exactly these topics on our app so you might like to check these out.

I'm a middle school teacher and almost thirty year old Man child. My students, friends and family think I have too loud of a voice, especially when I'm animated and excited. How do I temper my volume and control my tone so I'm less of a blaring, runaway train but still get the confidence I have when I use my "stentorian" level of voice? Thank you!

[2weird2l1ve2rare2die](#)

Hi 2weird2l1ve2rare2die. It sounds like you need to be able to calibrate your voice. Any scale measurement will do, but if you use 1-10, then 10 is your loudest loud, and all the other numbers are incrementally quieter.

Notice how loudly you speak in general using this scale, then experiment with speaking one number lower. This will feel very odd to begin with, but a few days of noticing and experimenting will give you more fine control over your volume, without losing it when you need it.

How long does it usually take for a male voice to stop changing during/after puberty?

[FeebTube](#)

Hi FeebTube, that's a bit like asking how long is a piece of string, because although the phases of change in the male voice during puberty are sequential and largely predictable it's known that they can take places over shorter or longer periods of time.

Just as there is no set age at which puberty begins and ends, it's the same with the voice. We can say that the most dramatic growth spurt in males takes place usually between ages 11 and 15 and we would normally expect a few years of a 'settling' period after then. It is generally accepted that this phase of change is fully completed in males by age 27.

I tend to slip into speaking with vocal fry if I am talking while tired or have been talking all day (I work at a call center). How will this impact my singing voice? I sing recreationally as a first soprano.

[akay49](#)

Thanks for your question akay49.

Normally we drop into vocal fry when we forget to use enough airflow. Vocal fry is a type of vocal fold vibration in which all the layers of the vocal folds are slack and loose so is not necessarily a bad thing.

You'll use a different type of vocal fold vibration to sing first soprano. Just make sure you give yourself a few minutes warmup to get the breathflow going again and to stretch your vocal folds for the higher notes.

I work as a physical therapist. I also sing. usually I have a 3-4 hour rehearsal right after a 8-10 hour work day. I have learned water and the occasional Ricola (the only lozenge that actually works for me) are my best friends. I usually don't have a sore voice at the end of the day. However, when I'm on long car rides (3+ hours) home with my boyfriend we both get hoarse by the end. We joke that it's because we are "scream talking."

What's the difference? What else should I be doing to protect my voice?

[LovesRainPT](#)

Hi LovesRainPT. Take a look at the answer to onyx\_jbl above on vocal stamina. But you have an extra problem talking in the car - background noise.

The "white noise" of the car engine and road noise means you are working against a competing sound, so will have to use slightly more energy/vocal fold mass/projection/breath pressure than in normal speaking.

We worked with the Premier Field Engineers at Microsoft UK Headquarters who had a similar problem – they were presenting and demonstrating on computer programmes "in the field" and were getting vocally tired. In their case the white noise came from a room full of computers.

We showed them how to use a slightly increased airpressure and controlled flow to support their vocal folds, how to deconstrict their false vocal folds to give the clearest vocal signal and how to use a slightly extended pitch range safely to combat the hum.

Oddly enough it wasn't about volume – they didn't need to speak louder to get over the background noise. They just needed to produce a sound that differed from the noise. Hope this helps!

I've been speaking into microphones for decades and know what my recording (spoken) voice sounds like.

New comers don't have a clue, because it all sounds different so they force their voice and make things worse.

What is the most effective way to teach a new person to hear when their voice sounds natural and when it sounds forced?

[vk6flab](#)

Hi vk6flab. Since when you use a microphone it's centimetres from your mouth, it's like speaking into someone's ear. There is no need for projection, just for clear tone and understandable diction.

It sounds as though you're saying that because the newcomers can hear their voice amplified they think they have to "make" that amplification.

Here's an old "fix" for that - when you speak with one finger in your ear, you hear your own sound more clearly due to bone conduction and are less likely to push.

Ask them also to imagine they are talking gently to someone they know and like. Try it out and keep us posted!

I'm a teacher and amateur singer, and I'm going to be giving birth soon. I'm concerned that I'll overuse my vocal cords during labor. Are there some things I can do while laboring that will protect my voice from getting hoarse?

[knitternutter](#)

Hi knitternutter, this is such an interesting question. We asked our colleague Sam Brady for her thoughts:

"As a speech and Language Therapist specialising in voice disorders for a number of years, I have never met anyone who has overused their vocal folds in labour.

However, if you are concerned, you can practice using a released and open larynx/throat posture to ensure your larynx is released as you make any vocalisations. You may have learnt some of these techniques in your singing lessons. They include a wide smile, blowing down wide straws, yawning with a wide open mouth to ensure you are not putting any additional tension on your vocal folds."

Perhaps a more science-y question: is there a link between vocal health and the ability to whistle melodically? I know not everyone can whistle, but I would love to learn about the mechanics and connections to voice!

[Gophurkey](#)

Hi Gophurkey that's an unusual question!

We'll be honest and say we have no idea if there's a link. You don't use your vocal folds when you whistle – the sound is "unvoiced".

Jeremy thinks that to tune or change pitch while whistling requires a combination of changes in air pressure and changes in the resonating shape you hold in your mouth. When he whistles (and he's terrible at it) he makes most of the different notes by moving his tongue.

Vocal training can improve agility, range, and endurance. (There are physical limits to each of these areas. For example, there is an upper limit on pitch based on the tension of the vocal folds.) What is your experience on the interaction between improvements in these areas? To be more concrete, do certain techniques that improve range negatively effect endurance, or agility?

[sadleonin](#)

Hi Sadleonin, We'd like to check your question if we may.

It sounds like you are asking if there are technical approaches to range extension that might impact on endurance levels or agility. If that is correct, we can answer on endurance levels. Agility could have a number of meanings so we will set that part of the question aside.

Gillyanne's PhD explored the inter-relationship between vocal range, genre and both singer-perceived and listener-perceived levels of comfort. The results of her research indicated that where a singer had a larger 'comfort zone' in terms of range, she was more likely to be rated higher by expert listeners as sounding comfortable during song performance.

Another interesting finding of the research was that all of the professional singers studied indicated that within their full pitch range, they had one or two 'comfortable singing ranges' where their voice worked easily and well on most days. It was clear that the singers who knew their voices chose repertoire that was mostly in their comfortable singing range.

Other studies of singer range capabilities using phonetograms matched to song or role tessiturae also indicate that if singers sing consistently beyond their comfortable singing range, they are likely to get into difficulties.

So, bigger range is not necessarily better and our own advice would be to explore and develop personal range capabilities and work mostly within these.

Is it true that some singers use Guaifenesin as a performance enhancer?

[giltwist](#)

Hi giltwist, none of us have any idea about this or how you'd get any data on it.

What are some of the most damaging ways people use their voices in normal day-to-day speech?

[kafkakerfuffle](#)

Hi kafkakerfuffle. Whispering, shouting for long periods, squeezing, breath flow too low, pushing through with your speaking voice when you have a cold/laryngitis/inflammation, not enough hydration.

Topic: SINGING. Belting has become a very mainstream way to use the voice in singing performance. I understand this has to do with a controlling of muscles to influence the production of sound rather than relying mostly or completely on breath. What muscles should be brought in specifically for a healthy belt? Is belting going to damage the voice no matter how it is done? I'm curious what exactly is going on in the voice during a belt? Also, when going through passagio (the transition of vocal register) what is happening to the muscles around the vocal cords, the vocal cords and the breath?

[Buhsifer](#)

Hi Bushifer These are two separate questions so we will deal just with the first one.

Amongst voice teachers there is no overall agreement as to what Belting is – that's the first thing you should know.

But let's go with the main points of agreement amongst voice researchers, which is that belting is loud

and that is based on a 'chest mechanism' in the vocal folds, taken to relatively high pitches.

Normally when we sing in chest register, or – more properly chest mechanism – then it is used in the lower third of the female voice and the first two-thirds of the male voice. However, this does vary from genre to genre and between singers.

In a chest mechanism, the vocal fold is said to be thick i.e. the muscle is bulked, which means it will resist the breath well. This might be why people say that belting isn't about breath but about the vocal muscles. In fact it's a coordinated action because no sound can be made without breath. But in belting, since the vocal folds are thicker and also move together faster, they will stay together for longer during each cycle of vocal fold vibration. And it's that combination, together with some resonance adjustments, that give us the loud sound of belting.

Typically singers will adjust their vowels for belting to optimise resonance, and it's thought that the more open vowels such as the 'bad' and 'bed' vowels are more favourable to belting than the back vowels 'boo'ed' and 'bored'. From experience we can report as trainers that, if done correctly, belting need not be damaging to the voice.

Here's a link to some articles if you'd like to know more:

<http://www.sciencedirect.com/science/article/pii/S0892199700800272>

<http://search.proquest.com/openview/b24f49dc37b4c415/1?pq-origsite=gscholar&cbl=971>

<http://www.sciandmed.com/mppa/journalviewer.aspx?issue=1145&article=1458&action=1>

Not sure if this is a question better suited for a medical professional because I'm unsure of the cause, but often after I eat, I have a harder time talking. My voice goes in and out, and I feel like I have to clear my throat a lot. My mom was the same way. I am generally a quiet person, both in the amount I talk and the volume. I tend to lose my voice when I try to project it. Could this be a vocal cord problem, and is there anything I could do to prevent this from happening? It's been worse lately and it makes it difficult to converse with people at mealtimes.

[bendelaganza](#)

Hi bendelaganza we passed your question on to Sam Brady, our specialist speech and language therapist colleague.

If you notice any difficulties with your swallowing, such as the ones that you are describing, I would suggest you inform your GP and request/discuss a referral to a Speech and Language Therapist. They will assess your swallow function and be able to determine if you are penetrating any of your food (this happens when food sits on your vocal folds instead of going straight into your oesophagus).

Signs of difficulties at this level may be difficulty talking, changes in voice quality, coughing, immediately after swallowing. The SLT, specialising in voice will also be able to assess your voice fully and decide if an Ear, Nose and Throat (ENT) examination is necessary.

Practical advice is try not to eat and talk at the same time (its impossible) and to concentrate on swallowing so that you can ensure your larynx is in the optimal position for a safe swallow.

Is there such thing as practising too much when you are a singer?

[Juanvds](#)

Hi Juanvds - well yes!

Just as you could work for too long in the gym and end up with aching muscles, or even muscle strain

so it is with your voice if you practice too much. Around 20 minutes at a time is a good guideline. That way you can build endurance for performances. If you need to do a lot of practice, then do 2 X 20 minutes in the same day.

Silent practice of your music is also good for helping with memorising and also 'brain rehearsal' so that give the right messages to your body in performance.

What are the best voice warmups for acting?

[PharaohAce](#)

Hi PharaohAce, thanks for your question.

Our top warmup suggestions would be body balance, breath and voice warm-ups (we don't subscribe to doing breathing exercises without sound as these are not relevant to actors), exercises for resonance and for agility in terms of range and consonant articulation.

There are some excellent books, and CDs on this subject. Check out David and Rebecca Carey's Vocal Arts Workbook

I find that the tone and accent I speak with is very situational. Are there tricks to training yourself to speak a certain way in different situations?

[chemetp](#)

Hi chemetp, Jeremy's sister is past master at this – she modifies her accent and tone colour to the situation, depending on who she is talking to and what she is communicating.

We suspect this is an instinctive way of connecting with people. When we're teaching out of the UK we deliberately alter our syntax, our tonal quality and our speed of delivery for the first 20 minutes of a presentation so that English-As-A-Second-Language people can tune in to what we are saying quicker. It's about creating fast rapport.

The first thing is to notice that you do it, then to notice when and to work out why. If it's a positive result, don't change it!

Do drugs like Ritalin taken at an early age, before puberty, affect the voice when coming of age?

[toph\\_dogg06](#)

Hi toph\_dogg06, this is a medical question, so the best option is to discuss it with your doctor.

Is it possible to extend your vocal range, and if so by how much?

[TheKnableSavage](#)

Hi TheKnableSavage. Yes it possible to extend your range, but this is really a "how long is a piece of string" question. It's entirely dependent on that person's particular voice and also how they want to sound.

Oddly enough unless you include creak (also called vocal fry) we think it's more difficult to extend your range downwards. It's easier to extend upwards, either by stretching the vocal folds so they can vibrate

faster (and produce a higher pitch), or by releasing the muscle inside the vocal fold and going into falsetto, or by using a whistle register (aka Maria Carey).

Opera singers are expected to have a 2.5-octave working range (31 semitones), some R&B singers have 3 or more octaves, some singers have an octave. Ultimately, it's not how big it is, it's how effectively you use it.

why do they use your name in Salad Fingers??

[socialfine](#)

Hi socialfine I have no idea!

My name is the same as the frog character in Beatrix Potter's stories (which made for not-much-fun at school), but I wasn't familiar with Salad Fingers. Perhaps Firth and Pickup are fans?