

Singer/Songwriter

Vocal Workshop

with Cailin Green

The Mechanics Explained

Most of us don't give a second thought to how we produce sound when we talk and sing. It's a natural thing we do soon after we are born. However, understanding how it works helps the accomplished singer to focus on producing the appropriate sounds to convey their emotions through song with control and precision.

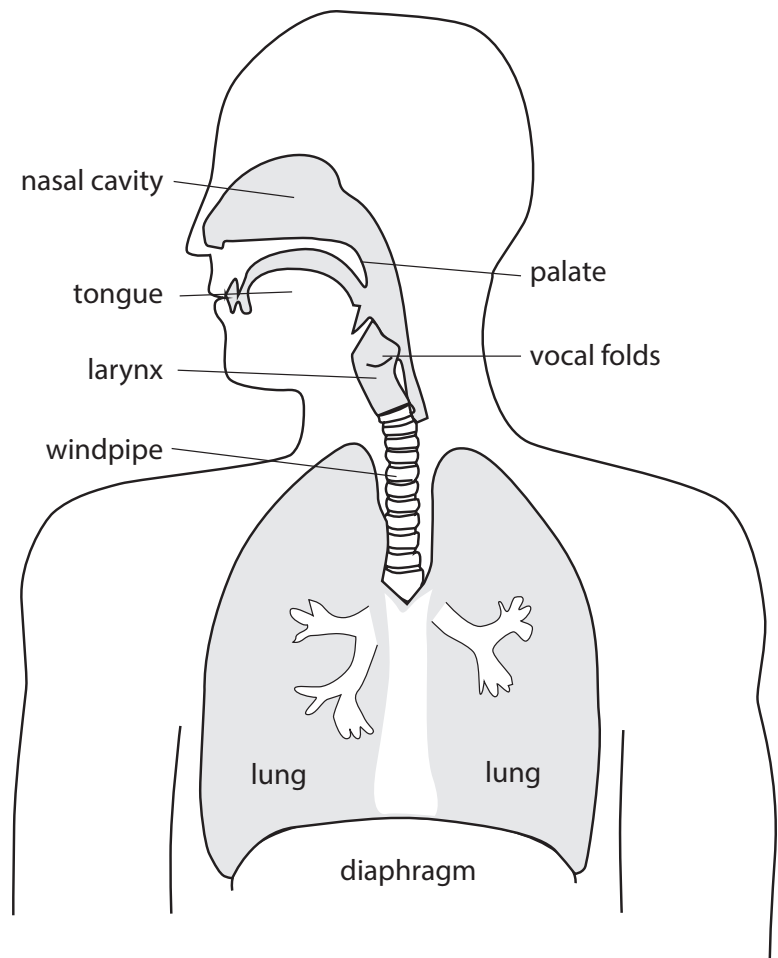
The main parts of voice production are:

- your diaphragm
- your lungs
- your larynx (Voice Box)
- and your resonating cavities:
throat, nose, mouth, and sinuses

Your source of singing power comes from your diaphragm and lungs with the air that you exhale. When we inhale, the diaphragm lowers and the rib cage expands, drawing air into the lungs, like a bellows. When we exhale, the diaphragm presses the air out of the lungs, forcing air up through the windpipe. The air passes over the vocal folds in the voice box which vibrate to produce sound. The stronger the airstream, the stronger the voice.

The larynx (voice box) sits on top of the windpipe. It contains two vocal folds which are also called vocal cords. These folds open when we breathe and close when we swallow, talk or sing. When air passes between these soft folds they are set into vibration by the passing air. They can vibrate from 100 to 1000 times per second, depending on the pitch (note) of the sound we make. Different pitches or notes are determined by the length and tension of the vocal folds, which are controlled by muscles in the larynx.

The vocal folds alone only make a buzzing sound. It's the resonators - the throat, nasal cavity, and mouth - that produce the sounds we recognize as talking or singing. The accomplished singer can control what areas of the resonators to use for different sounds.



Breathing and Posture

Controlling your breath is the key to powerful and controlled singing - in any genre. The diaphragm is the source of power and control. It is a sheet of muscle and tendon that divides your torso in half. Above is your lungs and heart, below are your other organs. It is connected all around by muscular fibers attached to the spine and the bottom edge of the ribcage and sternum.

With proper posture, we allow for maximum movement of the diaphragm and rib cage. Imagine a string running from the floor up through the middle of your body and out the top of the centre of your head attached to the ceiling. Imagine this string pulling you up, lengthening your spine. Your chin should be parallel with the floor, shoulders should be back and down and your chest is up, but don't force it. You should remain as relaxed as possible. Take your hands out of your pockets. Check your knees to see if they are relaxed as well.

Breathing Exercises

The following exercises will strengthen the muscles of the diaphragm.

1. In a group, stand in a circle, or take turns in pairs. Face the back of the person in front of you. Put your hands on their rib cage and have them breath into your hands. Their shoulders should not move.

2. Ha ha's

3. Dog pant

4. S's

Dynamics and Resonator Sounds

What are dynamics? Simply, they are the loud and soft variations of sound we use in music and speech to convey emotion. As singers, we strengthen the muscles of the diaphragm and larynx to have the greatest control over our dynamics.

Resonator sounds (tones) are the different types of sounds we produce using our resonating cavities - throat, nose, mouth and sinuses. An accomplished singer will produce the various tones when they choose to in order to convey a particular emotion. The following vocal exercises will help to develop the ability to use the various sounds when required. Using dynamics and tones in tandem will help make your song come alive!

What is Your Range?

Your range is the group of notes you feel most comfortable singing. The more practiced, the greater your range. Do not, at any time, try to force yourself to sing outside your range as you can damage your vocal chords this way. For reference:

Soprano	C4 - C6	Tenor	C3 - C5
Mezzo Soprano	A3 - A5	Baritone	F2 - F4
Contralto	F3 - F5	Bass	E2 - E4

Dynamic Exercises

1. five note scale - soft to loud to soft
2. five note scale - loud to soft to loud
3. Oh Canada alternating loud and soft

Note: a soft sound does not mean a breathy sound, unless you WANT a breathy sound in your song. :-)

Tonal Exercises

1. sirens, yawning
2. Vee vee vee / Sing ying ying ying ying
3. half tone, two bars of 4, hold last note for count of 7, breath on 8
Note: if you would like to acquire a vibrato, this is a good exercise to help you on your way. Vibrato is a tool to use when you choose to use it. If you have a 'vibrato habit', singing long notes on a scale without vibrato will help to get you accustomed to singing without it. Too often, singers use vibrato as a crutch when unsure of pitch.
4. octaves

Articulation Exercises

1. facial ay, ee, ii, ow, you
2. Moo, mow, maw, may, mee - single note ascending or descending scale - with with open throat
3. The tip of the tongue, the teeth, the lips

Smoothing Your Break

Your break is when you can no longer sing in your chest voice as you ascend a scale and have to switch to your head voice. Head voice and falsetto are not the same - falsetto is breathier with less strength. Transitioning smoothly takes practice. Get to a piano and find where your break is. Here are a couple of exercised to help with transition.

- 1 Decesending an octave scale on the 1, 3, 5, 8 notes, starting at the top of your head voice range, sing goo goo goo goo. Moving down your vocal range, sing goo goo goo gaa. The goo forces the sound up into your head voice. The gaa helps to move you into your chest voice. Descending further, sing goo goo gaa gaa. Then goo gaa gaa gaa.
2. Sirens
3. Lip rolls ascending and descending on an octave scale with your break on the 5th note of the scale.

Ear Training

A quick note on ear training - this type of training is best in a one-on-one situation, however, I recommend the following web site for ear training exercises.

www.musictheory.net

Scroll down to Ear Training and click on the Interval Ear Training to start. Make sure the sound on your computer is turned up.

A wee note on vocal exercises found on the internet

Many of the exercise you find online are excellent, however, be wary. It can be difficult to hear yourself properly and you could damage your vocals if you do them wrong. It is always best to start out with a professional vocal coach to make sure you are doing the exercise properly. A coach will also pinpoint the areas you need more work on and will identify, and help to rectify, any habits you may have developed.

Vocal Phrasing

Now that you know the basics of singing, it's time to put it all together and deliver your song! Before you get up on stage, there are a few things to consider. It's not enough to have great vocal technique - now you need to think about the song itself and what it has to say and translate that for the audience through your performance. Vocal phrasing is a powerful tool to help get the emotion across.

Lyrical and musical phrasing begins in the songwriting stage, however vocal phrasing can add another level and even become a style. Think of Frank Sinatra, who's unique phrasing style has been studied the world over. Bob Dylan. Diana Krall. These singers, and many many more, have developed their own style through phrasing and technique. Let's explore this.

There are two types of phrasing - lyrical and musical. In the dictionary, a phrase is "a sequence of words intended to have meaning". You can also describe a phrase as a complete thought. In music, a phrase is a series of notes, often of four measures, that feel as though they complete a section, whether of a verse, chorus or otherwise.

Phrasing can be of a regular rhythm such as is common in many country songs with 4/4 timing. Or it can be of an irregular rhythm, creating a tension that works well with the message of the song. Pat Pattison, song writing teacher from Berkely University, describes this as 'stable' vs 'unstable'. If a song's message is of a stable nature, then having a more regular rhythm in the phrasing helps to convey the meaning of the song more clearly.

For example: Jingle Bells is a stable song. The message is happy and positive and the lyrics are emphasised on the strong beats.

| - | - | - | -
Jingle Bells, Jingle Bells,
| - | - | -
Jingle all the way
| - | - | - | -
Oh what fun it is to ride
| - | - | - |
On a one-horse open sleigh, hey.

An example of an unstable song would be This Masquerade, by Leon Russell.

| - | - | - | - | - | - | - |
Are we really happy here with this lonely game we play,
| - | - | - |
Looking for words to say?
| - | - | - | - | - | - | - |
Searching but not finding - understanding anyway
| - | - | - | - | - |
We're lost in this masquerade.

Notice how in Jingle Bells, all the down beats have words on them. (Down beat is the 1 of every 4 notes in this case. Notice how in This Masquerade, all the lines begin after the downbeat. This song is about two unhappy people and it's message is one of angst. As a performer, it is important to feel this difference and use the appropriate phrasing to add meaning. To really dig into this in detail, I highly recommend Pat Pattison's book "Writing Better Lyrics" or taking his online songwriting course from Berkely School of Music.

When looking at the phrasing of your song, speak the phrase out as you would normally. Listen to where the stresses are. Listen to where the stresses are.

| | |

Listen to where the stresses are.

If we were to sing this line in 4/4 time, 'Lis' would be on the 1, 'where' on the 2 and 'stress' on the 3 beat. And it would sound natural. If we were to put the stresses on different syllables, it would sound odd.

| | | |

Listen to where the stresses are.

It no longer sounds natural. By the same token, we can change the meaning of a phrase by changing where the stresses are. For example, repeat the following line, three times, each time with a different stressed word.

How are you?

The same applies to phrasing in your singing.

Exercise: Take 15 minutes now to look at your lyrics. Is the message a stable or unstable one. How would you phrase it to emphasize the meaning of the song? Are certain phrases more stable or unstable than others? Are certain words more important than others? Would a pause or break somewhere emphasize an important word? Mark the stresses where you think they should be.

Singing and playing at the same time

Many players have a tendency to hunch over their instruments while playing and singing, especially if they are sitting down. The result is that they compress their ribs and lungs which stop them from getting enough air to sustain notes, or to give them power when they need it. This is one of the reasons most performers choose to stand, not only to give free motion to the rib cage, but to create more energy on stage. Whether sitting or standing, all the same techniques for good posture apply. So, check your posture!

Mic Technique

In this workshop, we'll be dealing with live performance technique only, as studio technique is an entirely different animal. The first thing to know is that not all microphones are created equal. The generally accepted standard is the Sure SM58 as it's said to be good for just about any voice. However, that doesn't always hold true. I, myself, use an Electrovoice 857 because it brings out much more tonal range in my vocals. Unfortunatley, they don't make these any more, but there are plenty of options. If you have a somewhat nasal, or tinny voice,

you may want to try the Sure SM57 with more range in the bass. A good chat with a knowledgeable mic salesperson or sound technician will help you make the best choice for your voice.

Setting up

- Make sure the pole in the middle isn't touching the ground which can pick up unwanted vibrations.
- Be safe about where you put the chord so you don't trip on it in the middle of a performance.
- Make sure you can hear your vocals clearly in the monitor.

Positioning

- The mic should be at chin level and be tilted up towards your mouth and nose so when you're onstage, you sing at a slightly downward angle. If it's pointed straight at you, it'll miss a lot of signal.
- Your mouth should be 1 to 2 inches away from the mic.

Technique

- If you end up in a situation with poor monitoring, DON'T SHOUT to hear yourself. You'll throw all your vocal technique out the window and come off sounding terrible to the audience. This is where your hours of practice will come in handy. If you can't hear yourself, you're going to have to go with muscle memory and trust that you're singing the right note. Also pay attention to your diction. If the sound is bad, pronouncing your words well will go a long way.
- Your resting position of 1 to 2 inches away from the mic should increase when you sing louder and decrease when you sing softer. By how much depends on the strength of your voice. With practice, you'll know how much is the right amount, or people will tell you you're too loud or not loud enough. That may mean the mix out front needs adjustment, but you'll figure it out. Not all microphones are the same either. You'll need to listen to hear which ones are more sensitive than others and should adjust your position accordingly.
- Get closer to the mic when you sing softly, but don't touch it. If you need more vocal volume, sing straight down into the barrel of the mic.
- It all comes down to practice.

Performance

Now it's time to perform. Rule number 1 in performance is to KNOW YOUR SONG. Inside out, upside down and backwards. It's really difficult to deliver a heartfelt performance when you're still thinking about what lyric and chord comes next. When the lyrics and playing come naturally, you can focus on the delivery of the song. The meat and potatoes. The EMOTION.

What is the song about? What is the message going out to the audience? Is it happy and upbeat? Is it dark and moody? How will you portray that to the audience through your performance?

Make eye contact at least some of the time in your performance. If you're in a bigger venue where you can't see the people for the lights, look to the back of the room. Each song tells a story, so tell them that story with the inflections in your voice, the dynamics, the movement of your body, facial expressions. Let your body be part of the story telling. Your audience will be looking at you, so use it for all it's worth. It makes for a much more enjoyable experience for both you and the audience.

Vocal Health

Naturally, keeping healthy overall with regular sleep, a healthy diet and exercise is a good thing, regardless of whether or not you want to perform. However, here are a few tips to keep your vocals in good condition.

1. No smoking!
2. Drink LOTS of water, especially before and when you are performing. Do not put ice in the water, and warm water is preferable before singing. Ice will constrict the vocal chords and you'll have to work a lot harder.
3. No alcohol, dairy products or sugar before performing. All these things dry your throat and change the consistency of your saliva, making it more difficult for your vocal chords to work. Water is best.
4. Gentle warm ups get your vocal chords working more efficiently than shocking them into forceful singing right away. Hum a tune, then gently sing a tune, and you'll be ready to rock.
5. If you get a cold and need to perform, steam inhalants and nasal rinse are excellent to help clear your resonators (throat, nose, mouth and sinuses). And drink lots of water. And drink lots of water. And drink lots of water!

Overcoming Fear

Well, this topic could take up a whole book, but for our purposes, let's focus on what to do when you're on stage and you've got a Vulcan death grip on your instrument and your knees are vibrating. The trick is to will your body to relax, regardless of how nervous you might be feeling.

This is what works best for me. When you realize that you are near paralyzed with fear, shift your focus to your body and what it is doing. Notice where the tension is. This takes will power for sure, when you are in the throes of fear, but in most cases, simply noticing where the tension is causes it to release. Take a deep breath and will your body to let go. And smile. You may need to do this several times before you take the stage.

If you're on stage to begin with, your fear can probably be dealt with over a few tries. If it prevents you from getting on the stage altogether, and you WANT to be on the stage, then it's time to move on to more involved techniques, like bio-feedback, meditation and counselling.

Just remember, it's all about sharing your love of music. Have fun! If you're having fun, so will the audience.

