How to Train Your Voice

By Landon Brown

Foreword:

The following guide is designed to help teach oneself how to sing, from developing a basic understanding of how singing works to addressing various common issues, compiled from a variety of online sources. It was created to keep track of the knowledge I gained throughout my own vocal learning experience, with the intention of making it available for others who may wish to do the same. It covers singing physiology, technique, exercises, as well as other miscellaneous topics. It assumes the reader has a basic understanding of music theory, such as the concepts of melody, sharp and flat notes, etc. however, still defines technical terms which may be found in the glossary.

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HOW SINGING WORKS

OVERVIEW

Singing is the act of making musical sounds with the voice, which augments normal speech by use of tonality and rhythm. When singing is conducted, air is pushed up through the lungs and passed through the **larynx**, or voice box, which shapes the sound before passing it into the oral cavities, where the sound is further amplified and then articulated by the lips, teeth, and tongue. As air passes through the larynx, the vocal cords come together and vibrate, which produces the singing tone or sound. As the tone passes through the vocal tract into the oral/sinus cavities, the way the singer shapes their mouth further determines the **tone**, **resonance**, and amplification of the sound. Lastly, as the note travels out the mouth, the movement of the lips, teeth, and tongue further determine the words or sounds that are heard. Thus, there can be said to be four distinct systems involved with singing which make up 'the voice': the **respiratory**, **phonatory**, **resonantory**, and **articulation** systems (Oren). Additionally the respiratory, phonatory, and resonantory systems are also often referred to as "Power - Source - Filter" respectively ("Head Voice and Chest Voice Explained"). Learning how to sing is largely about strengthening the muscles involved and coordinating each of these systems.

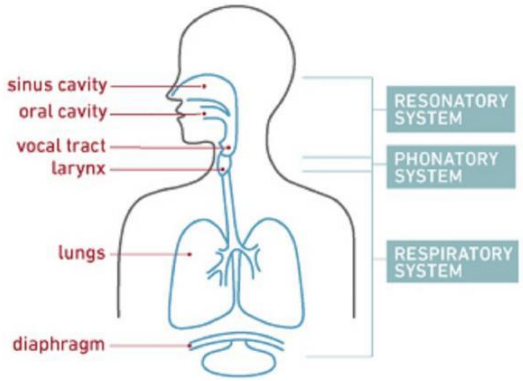

Figure 1

RESPIRATORY SYSTEM

The respiratory system consists of the lungs, the diaphragm, and all of the core muscles that are involved in the expansion and contraction of the abdomen. Control of these muscles allows more room for air to be breathed in by the lungs while also releasing air at an optimal rate. This system is also often referred to as 'breath support' (O'Connor).

The most often referred to muscle in this system is the **diaphragm**, which contracts/lowers as air is sucked in and relaxes/raises as air is pushed out (see Figure 2). This motion often causes the stomach to be pushed out, and is why many vocal teachers may ask their students to inhale into their belly, because the visualization of the expansion of the abdomen encourages the contraction of the diaphragm, and thus more air/power.

There are many other abdominal muscles involved in this system, which if too tense may restrict inhalation, and if too relaxed may prevent the use of all the air in the lungs. This is why it is important to do warm up and body exercises that work out all the core muscles, not just the diaphragm, involved in inhalation and exhalation. See “Breath Control” for more information.

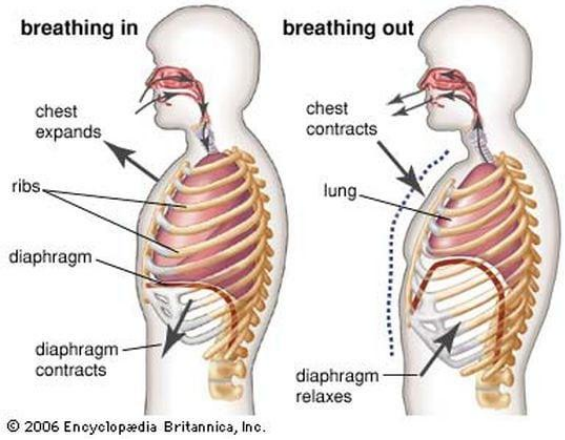

Figure 2

PHONATORY SYSTEM

The phonatory system is responsible for shaping the air that is produced from the respiratory system into a pitch or tone. These tones are produced by air passing through the vocal folds, which causes the cords to vibrate together and produce a note. Different notes are caused by releasing/contracting muscles in the larynx which bring the vocal folds together at different lengths and thicknesses.

As pictured below, each muscle group has a different function, usually differentiated as ‘shorteners’ and ‘lengtheners’. The **thyroarytenoid muscles**, for example, are responsible for shortening the vocal cords, while the **cricothyroid muscles** are responsible for lengthening the vocal cords. Shorter vocal cords create thicker folds between them which produce lower notes, while longer vocal cords create thinner folds between them which produce higher notes (see Figure 7).

However, the same pitch may be sung using varying degrees of these muscle groups, with each ‘configuration’ producing a slightly different tone. For example, an E4 sung using **shortener** dominant muscles will sound strong and full, whereas the same note sung using **lengthener** dominant muscles will sound light and airy (“How does the voice work?”).

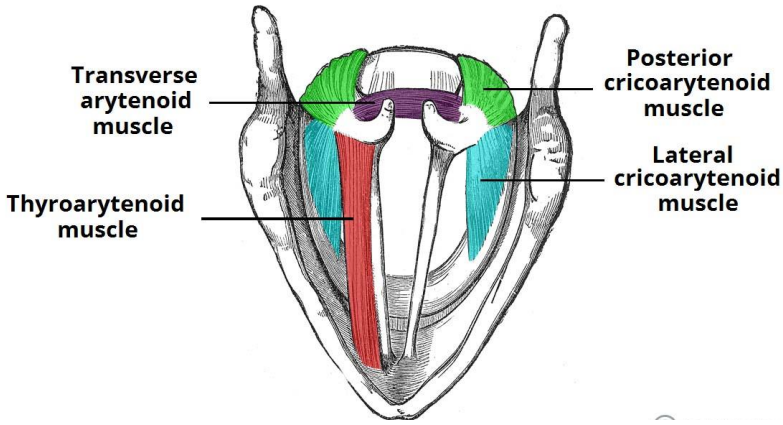

Figure 3

RESONANTORY SYSTEM

The resonantory system consists of all the cavities in the head which allow the tone produced from the larynx to be amplified. When a tone is resonated well, it brings amplification of the sound and ease to the singer ("Resonance"). Different resonances may be produced by shortening/lowering the **pharynx**, raising/lowering the soft palate, relaxing the tongue, etc. which change the shape of the vocal tract and the cavities where the tone resonates.

Different resonances produce different sensations in the body. For example, a resonance in the naval cavity may be felt in the nose or at the top of the head. On the other hand, raising the soft palate (see Figure 4.b) would redirect the sound so that it resonates more in the oral cavity, where the singer may feel the sound on the roof of their mouth.

Figure 4.a

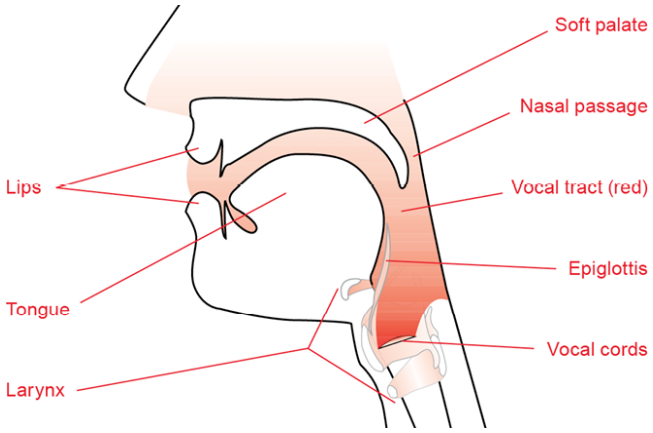

Figure 4.b (Vocalgeek)

ARTICULATION SYSTEM

Articulation is what further sculpts the sound into consonants and audible words. It consists of the tongue, lips, and teeth. It can be thought of as the chisel of the sound, and is essentially the last step in singing before the sound is heard ("How does the voice work").

VOCAL REGISTERS

Vocal registers are modalities of singing which are used over distinct ranges of the voice and are characterized by their unique tones, qualities, and sensations in the body. They are activated by different pitches and utilize different laryngeal muscle groups (see section 'Phonatory System'). There are 2 highly discussed registers, the "chest" and the "head" voice, however there are others as well, such as "mixed", "pulse", and "whistle". The registers are also not mutually exclusive and often overlap, which are called the transitions or '**passagios**' (passages) between them, the most well known being the second one, the "mixed voice". Since these transition registers are not used often in everyday speech, they are often weak points for singers and require a special amount of training and coordination.

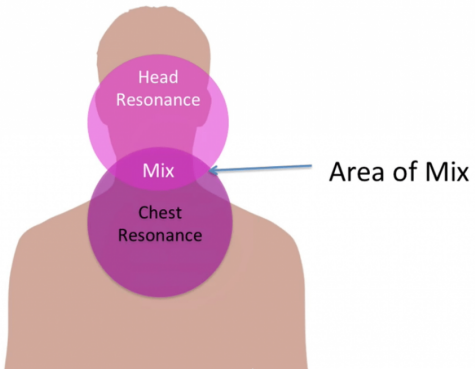

Figure 6

Additionally, each register differs depending on how much of the vocal folds it uses. For example, the chest voice may vibrate the entire vocal fold, whereas the head and whistle registers only vibrate the top layers ("Vocal Registers Explained").

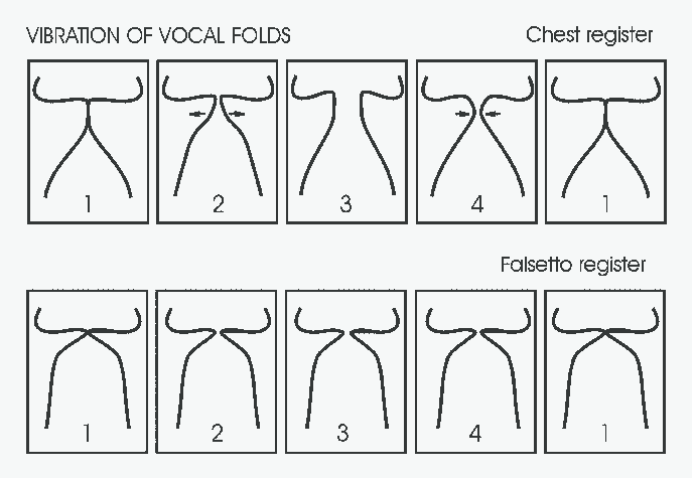

Figure 7

CHEST VOICE

Chest voice is the lower to middle part of the voice, it is the register that is used the most when talking. It is called 'chest' voice because the resonance of the sound is felt in the chest and the mouth. It utilizes the shortner muscles of the larynx, and vibrates all layers of the vocal folds (see Figure 7). It has a rich, full, and dominant quality.

HEAD VOICE

Head voice is the middle to upper part of the voice. It is called 'head' voice because the resonance of the sound is felt primarily in the head. It utilizes the lengthener muscles of the larynx. In this range, only the upper layers of the vocal folds are vibrated (see figure 7). It has a light, airy quality.

Exercise:

- Vocal Fry
- Siren

MIXED VOICE

The mixed voice is the passaggio or bridge between the chest and the head voice, a sort of hybrid between the two. Thus, it is neither shortener nor lengthener dominant, and is often

referred to as the “second passaggio”. It has a mixture of both chest and head voice qualities, and is often where beginners struggle with vocal ‘breaks’ or ‘gaps’ due to the difficulty in balancing both chest and head voice.

Exercise:

- Hooty “Gee”s

WHISTLE REGISTER

The whistle voice is only the upper part of the voice and is entirely lengthener dominant. In this range there is no chest resonance whatsoever, and only the top layers of the vocal folds are vibrated, producing a whistle like tone. The transition between the whistle and head registers may be referred to as the third passaggio.

PULSE REGISTER

The pulse register is the opposite of whistle register, instead of being entirely lengthener dominant it is entirely shorter dominant. It sounds like a low rumbling or even crackling of the vocal folds. Exercises that use this register sometimes refer to it as the ‘**vocal fry**’ or ‘creak’ because of its tonal qualities. The transition between the pulse and chest register may be referred to as the first passaggio.

Exercises:

- Vocal Fry

CONSTRUCTING A VOCAL ROUTINE

OVERVIEW

To improve singing skills it is important to have a structured routine, which helps accelerate progress and track growth. Vocal routines will differ from singer to singer depending on what their needs are, however any routine may be categorized into 3 main steps: warmup, exercise, and application.

WARMUP

The purpose of a vocal warmup is to prepare the body to sing by awakening all the muscles involved. At this time it is important, perhaps more than anything, to warm up the body (that is everything that is below the neck), as the body is the source and the power for the voice. Exercises for this may include breathing exercises, stretching, yawning, etc. Then, to warm up

the voice, easy, gentle exercises such as lip trills and sirens may be performed (see "Exercises"). These warm ups will prepare all registers of the voice to be used before they are exercised. Starting to sing without warming up may cause too much sudden strain to be placed on the voice, resulting in vocal damage.

EXERCISE:

Exercises are meant to target and strengthen distinct areas of the voice. They differ from singer to singer depending on what area of the voice a singer wishes to work on. For example, a singer wishing to strengthen their mixed-voice will do exercises invoking that region of their voice, while another singer wishing to work on bringing power to their voice may do breath-control and belting exercises. It is up to the singer and/or their vocal coach to assess their needs and what areas should be focused on and exercised. More of these areas are addressed in the 'common challenges' section.

APPLICATION:

This is the phase where the techniques exercised in the previous part are put into practice with real songs. A strategy for this may be to pick one to several songs and sing them regularly while recording every so often to evaluate what sounds good and what doesn't, and to determine what part of the voice to work on next. This way a singer can get specific about the areas of their voice that are in the most need and practice singing real songs, which is ultimately where it counts. Moreover, recording yourself singing regularly provides a means of listening back and tracking vocal progress.

COMPONENTS AND THEIR COMMON CHALLENGES

There are many challenges a singer may encounter while training their voice, which may or may not be interrelated with each other. For example, a problem with singing out of tune may actually be a result of improper breath support, and improper breath support may actually be a result of improper posture. Thus, it is important to pay attention, understand, and strengthen all areas of the voice. The following sections discuss the different components/qualities to singing, how they may be affected/affecting other components, and how to strengthen them.

ARTICULATION:

Issues with articulation may result in slurred or unclear pronunciation. There are many reasons a singer may struggle with articulation, such as lack of power in the voice (breath control), lack of confidence, or the belief that singing requires a special sort of articulation or an over articulation that is not necessary. While a unique way of articulating can certainly become

part of a singer's signature style, in general, the suggested way to articulate is the same way one would articulate the words they are singing while speaking. Thus, aside from addressing issues in breath control and self-confidence, one way to improve articulation may be by speaking the words first, and then gradually adding tonality rhythm in until they are being sung (Moomaw).

AGILITY:

Vocal agility is the "ability to sing through sung notes with fluidity and accuracy" (Marie). It is a feature of the voice that requires multiple components, such as pitch accuracy, breath control, tone and range control, and rhythm to be produced. Thus, in order to create vocal agility, it is necessary to have a foundation in these components first. Then, vocal agility may be improved by exercises such as scales, where a scale of notes is sung repeatedly while the speed gradually increases with each repetition.

BREATH CONTROL, LACK OF POWER:

Breath control is all about absorbing, conserving, and spending air wisely, which requires keen coordination between abdominal muscles, the lungs, and the larynx. To have great breath support first it is necessary to take great breaths, which requires learning how to take in as much air as possible. However, singing is also about 'holding' breath back, not just inhaling and releasing it. Depending on how strongly the vocal folds are adducted, more or less air may be needed to sing forcibly. For example, when the vocal folds are clenched firmly together (adducted), greater breath pressure is created, making it easier to sing louder, more 'forward' notes. The garden hose analogy is helpful in understanding this concept.

Figure 8.a

Like water through a hose, when air is pushed through the larynx without any form of resistance (vocal cords) to generate breath pressure, it lops out without force.

Figure 8.b

However, when the vocal folds are adducted, like when the end of a hose is pinched, more breath pressure is created and less air is needed to project the voice.

Exercises:

- ‘Rooting’ the breath
- Pursed lip inhale

Techniques:

- Vocal adduction

CONFIDENCE:

According to vocal coach Madeleine Harvey, confidence is “the ability to freely express oneself fully without any expectations”. Harvey discerns between expectations and standards, where standards are the goals that are within one’s own control, while expectations are the hopes in results outside of one's control. It is expectations, she asserts, that sets singers up for disappointment. Letting go of expectations while sticking to standards may bring a singer more confidence and enable them to express themselves fully (“How to sing with confidence - sing more confidently”).

A lack of confidence may negatively affect all areas of a singer’s performance, including pitch, breath control, tone, etc., even if they have the vocal ability. Although confidence may be thought of as a psychological issue rather than a technical one, it can still be strengthened through physical techniques as if it were a muscle. Some techniques to build confidence include practicing daily vocal routines, singing with the correct posture (see below), and singing in front of other people and gaining feedback before a performance. Each of these techniques may help a singer build experience and self-assuredness that they will be able perform the same as they do in practice, however there is no guarantee that when it comes time to actually perform, there will be no nervousness. Ultimately, when it comes to confidence, experience is the best teacher (“How to become a confident singer”).

PITCH:

The inability to sing on pitch may come from lack of coordination or lack of familiarity with the melody. In the case that the singer is unfamiliar with the melody, singing along to the melody while it's played on another instrument may help improve pitch accuracy and commit the melody to memory. If the singer is still struggling with pitch, then there are distinct exercises that can be performed depending on whether the singer is singing sharp (above the desired pitch) or flat (below it). Singing flat means not enough head voice is being used, while singing sharp means not enough chest voice is being used (Ramsey Voice Studio). Thus, to combat flat singing, its helpful to do exercises which strengthen the head register, and for sharp singing its helpful to do exercises which strengthen the chest register.

Exercises:

- Head voice scales, chest voice scales
- Melody sing along

POSTURE:

Proper posture opens up the body, allows for greater breath control, and brings ease to the singer. In general, proper singing posture is considered to be the following (See Figure 9):

1. Chin is parallel to the floor
2. Shoulders are relaxed, held back and down
3. The chest is held high, but not in a strained position
4. Hands are still at the sides
5. Singer is still, no fidgeting

(“Correct Singing Posture”)

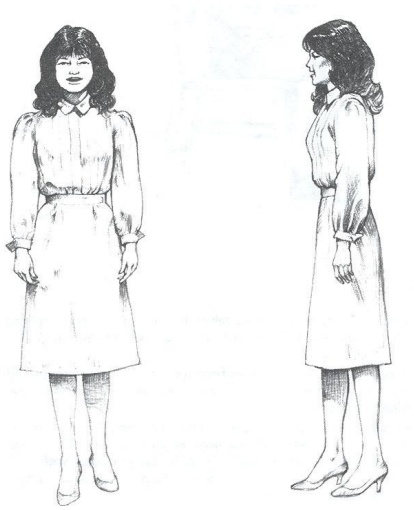

Figure 9

TONE/RESONANCE:

Vocal tone is often referred to as the “color” or “timbre” of a voice and consists of two components: resonance and vocal focus. Resonance depends on how/where the sound reverberates in the singer's mouth, while focus depends on how intense the sound is. Resonance is shaped by factors such as how raised the soft palate is and how relaxed the mouth/larynx is, while focus depends on how adducted the vocal folds are, resulting in either a bright, laser-like or a soft, airy sound. There is not necessarily a ‘correct’ tone and different tones may be preferred in different instances, so it is good to play around with tone and find what works best (“Vocal Tone”).

Techniques:

- Vowel shaping

Exercises:

- ‘Nay’

VIBRATO:

Vibrato is the oscillation between two pitches that are close together. It’s an indicator of vocal strength. It is caused by tension between vocal muscles.

VOCAL BREAKS/GAPS:

Vocal breaks are areas in the voice that ‘give out’, result in weak notes, or cause vocal cracks when a singer attempts to sing in that range. Beginners typically struggle with vocal

breaks within their mixed range. Exercises to help breaks, such as the ‘vocal creak’, sirens, and the lip trill, help to go over the break very slowly until the laryngeal muscles are able to correctly coordinate each pitch. Additionally, training the upper chest and lower head voice may help to bridge the gap between the two registers. A mistake singers may make is to try to force a note, which is sometimes called “pulling chest voice”. This can result in vocal damage.

Exercises:

- Vocal creak
- Sirens
- Lip trill
- Head/chest voice strengthening

VOCAL DAMAGE/MAINTAINING HEALTH

Too much pressure coming through the larynx may create too much friction between vocal folds, which causes them to become injured and swell. Nodes are a common problem amongst singers, which are essentially calluses that build up on the vocal folds (see Figure 10). Thus it is important to pay attention to the warning signs of vocal damage (“How to Prevent and Repair Vocal Damage”):

- Sudden phlegm in the throat
- Feeling the need to cough when singing
- Hoarseness for extended periods of time
- Loss of edge, huskiness

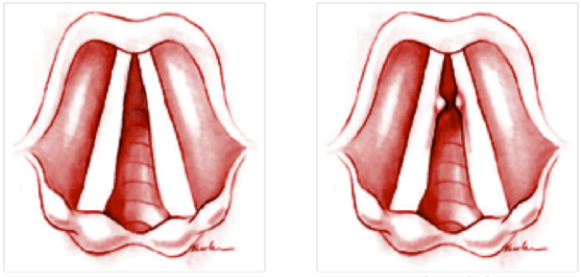

Figure 10

Additionally, there are preemptive exercises that can be done to prevent vocal damage, such as the following (“Vocal Damage: Warning Signs, Prevention, & Recovery”):

- Neck rolls
- Lip trills
- Gentle vocal warmups in general

If a singer has damaged their voice, there are things that they can do to recover, such as the following:

- Taking a break
- Sipping warm drinks
- Surgery (extreme cases)

Lastly, there are ways that one can assess their own vocal health, such as humming easy, sustained notes for 5-10 seconds at a low, barely audible volume. A healthy voice should be able to do this, and if one cannot it is most likely a sign of vocal damage ("Vocal Damage: Warning Signs, Prevention, & Recovery").

EXERCISES

360 breath

- Helps to take deep breaths and harness full power of the voice

1. Take deep breaths while feeling the rib cage, back, stomach, and chest expand, allowing your body to expand in all directions.

Full Body Warmup

- Awakens all vocal systems

1. Do a lip roll while loosely shaking head from side to side (see 'Lip Roll')
2. Tense shoulders as much as possible and then release them into a relaxed position. On release lip roll up from bottom of chest into upper head voice.
3. Repeat step 2 except bend knees while lip rolling upwards, returning to a straight-legged position at the end of each iteration.

Sustained Hum

- Can be used to assess vocal condition, whether the voice is damaged or not. A healthy voice should be able to do this exercise comfortably.

1. Hum an easy, comfortable note for 5-10 seconds. If this is difficult, it is likely there may be vocal damage.

Dopey/Hooty 'gee'

- Strengthens the mixed voice

1. Sing scales over mixed range while singing "gee" (hard 'g'). It should feel similar to a 'crying' sensation, which raises the soft palate and causes the sound to resonate in the oral cavity, making the mixed voice sound more full.

Lip Roll

- Relaxes the larynx and makes it easier to sing difficult in difficult ranges

1. Relaxing the lips while producing a tone, should create a 'motorboat' sound.

"Nay Nay Nay"

- Strengthens resonance and extends upper range. Makes light and airy singing more focused.

1. Sing scales with the word "nay" for each note, while attempting to sound as nasally/whiny as possible. Should feel a buzz in the nose or the mask of the face.

Pursed Lip Inhale

- Encourages the inhalation of as much breath as possible, stimulates all core muscles.

1. Purse lips together and create a small opening.
2. Inhale air slowly, until lungs are as full as possible.

Rooting the breath:

- Encourages the inhalation of as much breath as possible

1. Breathe into as low of the body as possible, to create the most space possible for air.
2. Imagine as if the air were filling the pelvic/groin area.
3. When exhaling, keep muscles tense without collapsing inward. Imagine pushing downward with diaphragm as air is being pushed out.

Scales

- Improves pitch accuracy, vocal agility

1. Pick a melodic scale or pattern (i.e. do-re-mi-fa-sol-la-ti-do)
2. Sing along with a vowel or word of choice
3. To increase vocal agility, increase the speed the scale is played at at the end of each iteration.

Sing Along Lip Roll

- This exercise may be used to strengthen weak areas of the voice, such as vocal passages or transitions.

1. Pick a song which is in a difficult range and sing along to it but with a lip roll. The lip roll will make it easier to sing while also strengthening the coordinations required to reproduce the difficult pitches.

Siren

- Warms up all registers of the voice, bridges vocal gaps

1. Start on an open vowel from the lowest part of your register and gradually increase pitch until you reach the highest pitch you can sing, and then descend slowly back down to the pitch you started from in the same manner.
2. As you reach areas of the voice that are weak and result in vocal breaks, be sure not to strain and force these notes, which may result in vocal damage. Smooth over them by crossing them slowly. Repeating this exercise regularly will help bridge those gaps.

Staccato "Uh"s

- Strengthens breathy singing, reduces the vocal pressure needed to engage diaphragm

1. Sing short "uh"s on scales

Sniffing/Coughing

- Engages singing muscles, helps singer know what muscles to utilize in breath control

1. Do quick sudden sniffs, paying attention to what muscles are activated

Sustained Hiss

- Helps control breath pressure

1. Take in deep breath and let out 'hiss' sound for 30-40 seconds

Vocal Fry

- Strengthens the voice by keeping back of vocal cords together
- Helps vocal cords to relax, makes them very short, thick, and loose

1. Make a low, crackling sound with the voice. It should feel light with no tension.
2. Move the sound up to higher pitches and other areas of the voice without straining to strengthen them.

"Z" replacement

- Helps with breath control and coordinating weak notes
- Engages the epigastrium zone, the zone just below the middle of the rib cage.

1. Sing along to the melody of a difficult song using 'zzzz' as opposed to words

ADDITIONAL TOOLS/TECHNIQUES

ADDUCTION

Adduction is bringing vocal folds together to reduce the airflow while maintaining the velocity of the airflow, which in turn increases vocal pressure and strength. When done properly, it has a 'sucking' or 'inhaling' sensation in the throat, sometimes referred to as 'Inhalaree La Voce'. In reality air is not being inhaled, however the vocal folds are being brought together more firmly, bringing ease and power to the voice (Rolka).

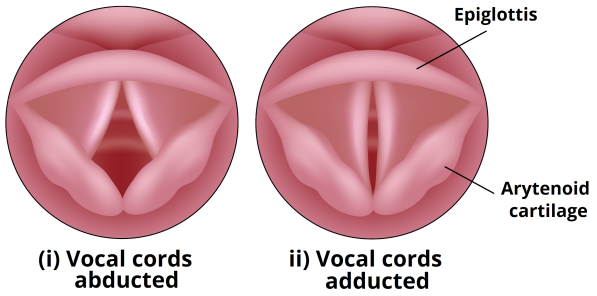

Figure 11

VOWEL MODIFICATION

Vowel modification consists of shaping the vocal tract to resonate notes to their fullest capacity. Depending on the song and ability of the singer, different vocal shapes may need to be used to harness the full power of the voice (Van Niekerk). If a singer is having trouble singing a closed vowel, such as an "aaa" (like the 'a' in 'bat'), for example, then modifying the vowel to something more open, such as an "ah" (like the vowel in "mom") may help the sound to resonate more (O'Connor).

SOVT STRAW

SOVT straws are popular tools used by singers to gain power and coordination in their voices. 'SOVT' stands for Semi-Occluded Vocal Tract. By singing through a straw which provides air resistance, back pressure is generated which causes the vocal cords to fall into place. It's sort of like a dumbbell for the voice.

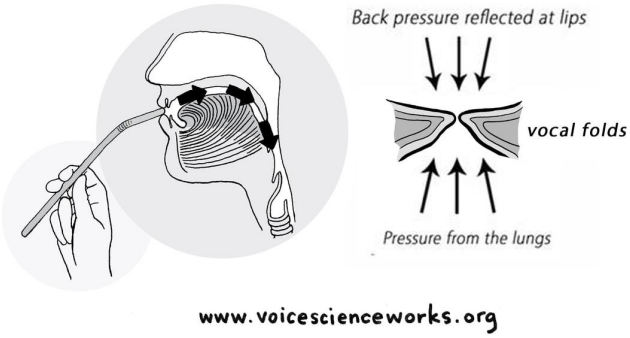

Figure 12

Depending on the type of straw, the resistance level may or may not be configurable. It is important to use a straw that will provide a level of resistance that is challenging enough to strengthen the voice, without straining to the point of damage ("SOVT Exercises").

SCREAMING

Screaming is a technique used all over music, which may be used to add intense emotionality to a song. Although it can be rewarding in that it creates great expression, it also runs the risk of causing severe vocal damage. The scream technique heard throughout metal, punk, and rock music is caused by projecting air into a vocal break, into a vocal cord coordination that is unstable. It is a unique technique in that rather than trying to smooth over or bridge the gaps between vocal registers, it takes advantage of them. There is a difference though, between forcing air through the vocal cords until they break and projecting air through vocal cords that are already unstable and then playing with the tone. The former may cause vocal injury, while the latter is the proper technique that won't cause injury or tire the voice, at least for short periods of time. One strategy for practicing a vocal scream is to start from a vocal fry, a soft, low rumble in the pulse register, and then gradually increase pitch and volume until the desired scream sound is reached. While this is done, the tone should remain light and airy and no strain should be felt in the throat ("How to Scream, Add Distortion, Yell and Sing Aggressively WITHOUT Hurting Your Voice!").

TERMINOLOGY/GLOSSARY

Adduction:

- The action of bringing vocal folds together, increases vocal/breath pressure

Breath Pressure:

- Vocal force created by letting air out of the body and creating resistance via vocal folds.

Cricothyroid Muscles (aka Lengtheners):

- Muscles responsible for lengthening the vocal cords which produce higher pitches

Glottal Stop:

- Hard attack on a note that abruptly brings the vocal folds together.

Diaphragm:

- abdominal muscle which plays an essential role in breathing and breath control.

Larynx:

- The voice box

Passaggio:

- transition area between vocal registers

Thyroarytenoid Muscles (aka Shorteners):

- muscles involved in shortening vocal cords, which creates a thicker fold and produces lower pitches

Vibrato:

- The oscillation between two pitches, indicator of vocal strength

Vocal Fold:

- The overlap between the vocal cords. Lower notes have a thicker fold than higher notes.

Vocal Tract:

- Space between lungs and mouth hole.

WORKS CITED

Correct Singing Posture, https://cmed.ku.edu/gummposture/posture.html. *University of Kansas* Accessed 22 October 2022.

Harvey, Madeleine. "How to sing with confidence - sing more confidently." *YouTube*, 3 November 2015, https://www.youtube.com/watch?v=7VjLv6Yu75E. Accessed 22 October 2022.

"Head Voice and Chest Voice Explained." *Vocal Skills*, https://www.vocalskills.co.uk/What-is-head-chest-voice.html. Accessed 21 May 2022.

"How to Become a Confident Singer." *Musicademy*, https://www.musicademy.com/how-to-become-a-confident-singer/. Accessed 22 October 2022.

"How to do a glottal stop." *Singer's Secret*, 1 December 2013, https://singerssecret.com/glottal-stop/. Accessed 26 October 2022.

"How to Prevent and Repair Vocal Damage | Online Graduate Programs | Baylor." *Baylor University Online Graduate Programs*, 26 March 2020, https://onlinegrad.baylor.edu/resources/how-to-prevent-and-repair-vocal-damage-for-teachers-fitness-instructors-podcast-hosts-more/. Accessed 10 June 2022.

Liepe, Chris. "How to Scream, Add Distortion, Yell and Sing Aggressively WITHOUT Hurting Your Voice!" *YouTube*, https://www.youtube.com/watch?v=wOueNQy6MZk&t=562s. Accessed 22 October 2022.

Moomaw, Randy. "Learn To Sing With The Right Tone And Articulation." *Singing Success*, https://singingsuccess.com/learn-to-sing-with-the-right-tone-and-articulation/. Accessed 22 October 2022.

Marie, Yona "What Does It Mean To Have Vocal Agility?" *Yona Marie Music*, 24 January 2022, https://yonamariemusic.com/yona/blog/215/what-does-it-mean-to-have-vocal-agility. Accessed 22 October 2022.

O'Connor, Karyn. "Correct Breathing and "Support" for Singing — SingWise." *SingWise*, 18 April 2020, https://www.singwise.com/articles/correct-breathing-and-support-for-singing. Accessed 15 May 2022.

O'Connor, Karyn. “Vowels, Vowel Formants and Vowel Modification — SingWise.” *SingWise*, 18 April 2020, https://www.singwise.com/articles/vowels-formants-modifications. Accessed 13 June 2022.

Oren, Linor. “How does the voice work? - Explanation for singers, with videos.” *SingWell*, 26 December 2020, https://singwell.eu/how-does-the-voice-work-11/. Accessed 15 May 2022.

Ramsey, Matt. “Vocal Fry and How to Use It in Your Voice.” *Ramsey Voice Studio*, 2 August 2020, https://ramseyvoice.com/vocal-fry/. Accessed 22 October 2022.

Ramsey Voice Studio. “Sing on Pitch: 3 Exercises to Make It Happen Every Time.” *YouTube*, 28 April 2020, https://www.youtube.com/watch?v=bBKH3sNeikg. Accessed 27 October 2022.

“Resonance.” *VoiceScienceWorks*, https://www.voicescienceworks.org/resonance.html. Accessed 17 May 2022.

Rolka, Jeff. “Cord Closure - Adduction Practice.” *YouTube*, https://www.youtube.com/watch?v=VYDSXkEcDZk&t=83s. Accessed 30 October 2022.

“SOVT Exercises.” *VoiceScienceWorks*, https://www.voicescienceworks.org/sovt-exercises.html. Accessed 13 June 2022.

Van Niekerk, Camille. “30 Day Singer Blog - A Beginner's Guide To Vowel Modification.” *30 Day Singer*, 30 April 2021, https://www.30daysinger.com/blog/a-beginner-s-guide-to-vowel-modification. Accessed 22 October 2022.

“Vocal Registers Explained.” *Vocal Skills*, https://www.vocalskills.co.uk/singing-voice-registers.html. Accessed 21 May 2022.

“Vocal Tone.” *vocal technique*, https://vocaltechnique.co.uk/vocal-tone/. Accessed 22 October 2022.

Vocalgeek. “Choose your own sound – a vocal close up.” *Vocalgeek*, 3 August 2018, http://www.vocalgeek.no/2018/08/03/choose-sound-magical-vocal-close/. Accessed 22 October 2022.