

# PHONETIC ALPHABETS REFERENCE

DR. GEMMELL'S HANDOUT/BOOK COMBINED

## IPA EXAMPLES

ʌ	cup, luck
ɑ	arm, father
æ	cat, black
ə	away, cinema
ɛ	met, bed, where
ɜ	turn, learn
ɪ	hit, sitting
i	see, heat
a	hot, rock
ɔ	call
ʊ	put, could
u	blue, food
aɪ	five, eye
aʊ	now, out
o	go, home
e	say, eight
ɪə	near, here
ɔɪ	boy, join
œ	pure, tourist

## IPA EXAMPLES

b	bad, lab
d	did, lady
f	find, if
g	give, flag
h	how, hello, who
j	yes, yellow
k	cat, back
l	leg, little
m	man, lemon
n	no, ten
ŋ	sing, finger
p	pet, map
r	red, try
s	sun, miss
ʃ	she, crash
t	tea, getting
tʃ	check, church
θ	think, both
ð	this, mother
v	voice, five
w	wet, window
z	zoo, lazy
ʒ	pleasure, vision
dʒ	just, large, jelly
ç	human
x	Bach
ɲ	onion (ñ)
ʎ	million (el-yah)
ɾ	caro
β	verlaba

### **Student Discovery: Overtones**

We were running a men's-only sectional on Eric Whitacre's *Lux Aurumque*. For this piece, S & A often double the men's part up an octave. The piece was very familiar to most of the singers. Using solfege, notes were fine-tuned in harmonic context (horizontally and vertically) and vowels were refined. Dynamics were ignored, with everyone singing a healthy *mf*, with a focus on all cylinders firing efficiently. Used analogy of car in garage, working engine to check the idle clean out the engine. This allowed the clusters to ring healthily and crescendos kept things energized and vital. Our continuous work on air flow, open and forward resonance, ringing sounds, focused vowels, etc. had already benefited our ensemble; however, with more emphasis on connecting to low breath energy and compete closure of vocal folds (full vs. airy phonation), the singing became even more intense and impressive. The overtones really blossomed. Since the men were used to hearing the women's parts, their ears were accustomed to listening to the pitches at that frequency and they recognized the overtones immediately! Even though the women were not even in the room, it sounded as though *someone* was singing them. It was easy for them to notice when the overtones were really screaming at them (good intonation), when the overtones faded somewhat (intonation slipping), or when the overtones disappeared completely (wrong notes obliterated the structure). As there is nothing like the satisfaction of success, this process was completely motivating for the men. When the women returned, they were amazed at the men's tuning and motivated to improve as well.

### **Student Discovery: Fully Hooked Up Sound**

With the men boldly phonating and tuning, a foundation was provided to which the women could respond with strength and conviction. After some vocalises to encourage healthy and energized singing (open spaces, fully engaged tone, etc.), it became necessary to emphasize stronger, more intense singing to balance the men's sound. The fact that the coordination of many factors is necessary to produce thrilling intonation again became clear. More air was necessary (flow and pressure!), as was more awareness of singing with the whole body, including high sternum, ribs up and out, relaxed abdominals on inhale, flexible support on exhale, strong foundation to ground (stepping into floor), and constant reminders to be flexible and free, not rigid and staid. Reminders about keeping head ring in middle voice kept tone focused and spinning and improved intonation from those students hanging slightly under the pitch. The women were self-motivated when their communal sound was so full and vibrant, which became even more impressive when they stood in mixed order. While matching pitches and blending voices when standing in their sections helped them to learn notes, it seemed to constrict most of the singers. In mixed order, harmonizing with their neighbor encouraged vocal freedom and feelings of accomplishment.

Other topics:

- solfege for good intonation because of context, good vowels, intellectual definition of pitch sounds, etc.
- movement to encourage good vocal production AND musical attributes.

• M & M Days. -- movement and memorization days to encourage creativity, musical imagination, expressiveness; application of technical learnings to musical performance. Means to end.

### **Programming Forum**

This column will focus on the process of artfully building a successful concert program. While there are endless resources to explore and select choral literature, there are relatively few places where one can research programs that work.

What qualities go into an effective choral presentation? (see former articles)

- selection of songs
- variety of repertoire (styles, genres, forces, accompanying medium, etc.)
- order of selections dependent upon issues below
- thematic connection or some other device to hold program together
- musical elements including key relationships, tempo, mood, overall progression of concert, and others

• some imposed form that may resemble a musical form, i.e., ABA: secular, sacred, secular; Rondo: A (theme), B (non-theme), A (theme), C (non-theme), A (theme); Sonata Allegro: introduction (processional), exposition, development, recapitulation, coda (processional)

- significance of golden proportion for most important piece, in relation to whole concert, or in terms of peaks in groups

Invite members to submit programs that they feel have been most successful, with an emphasis on craftsmanship, originality, imagination, creativity, and innovation. Positive qualities might also include audience appeal, student interest, an inherent motivational quality to inspire participants to fulfill the program's vision. A compilation of outstanding program lists will be a helpful resource to consult when faced with the annual chore of repertoire selection and concert programming. It may also invigorate our profession to stretch traditional ideas of concert presentation, bring us into a future where audiences are more engaged and connected to the music and the performers, and lend a fresh perspective to an age-old art form.

### **Practical Pedagogical Pointers**

Dealing with issues that are of a practical concern to choral conductors, voice teachers, and music educators.

#### Developing a Vibrato

What is a vibrato?

- product of a freely functioning voice
- caused by a variety of factors: myoelastic, aerodynamic, and acoustic
- not a tremolo (too fast) or a wobble (too slow)

• no vibrato, while a stylistic necessity of some styles, signals a voice that is not completely free; something is being held (tense vocal musculature, lack of air flow, faulty air flow/air pressure ratio) or resonators are not complete "in tune" with phonation.

Why is a vibrato important?

- it is a signal that the singing is right (free, well-produced, balanced, expressive)
- improves musical qualities, such as timbre (warmth) and intonation, and allows the voice to find its own best resonance. This results in improved negotiation of register transitions, an even scale from the top to the bottom of one's range, and, usually, extension of range in both directions (high and low).
- ultimately, a voice with a well-produced vibrato serves the music better. Even in styles where a straight tone is required, vibrato is usually employed as an ornamental quality (e.g., early music to produce affect or as cadential ornament and in popular styles on sustained long notes at ends of pieces).

One method to cultivate a vibrato:

(1) Teach good vocal technique (functional unity of posture and alignment, breath management, phonation, resonance, and articulation): If this doesn't produce a vibrato, go to the next step.

(2) Imitate a stereotypical, over-the-top, vibrato-crazed opera singer (fully open voice and let it go; don't worry about what you sound like: be someone else — act!) or try some other playful representation (cowardly lion from *Wizard of Oz*: "I am the king of the for- eh — eh — eh — ehst."). If this doesn't produce a vibrato, go to the next step.

(3) Create vibrato through FULL BODY SHAKE, the complete shaking of the body, which will simultaneously shake the sung tone. Actually, if the singer is committed to a complete, strongly held straight tone, the voice teacher can turn around and listen: this activity will produce a nice vibrato, it just looks kind of funny! This step is necessary to unlock a rigid body, of which the voice is a part and to get some vibrato of tone going. Of course, it's completely silly, but it does blend a kind of vibrato into the singing sound, which the singer will hear on their lesson tape and, hopefully, be receptive to bring about naturally. The goal is for the natural vibrato to magically appear in the singer's normal singing, usually when least expected. Proceeding from the full body shake through the following steps encourages this.

(4) Transfer fully shaking body to only a shaking HAND (or two); make sure voice is still wavering.

(5) Stop shaking hand and put it down, with voice still shaking. May still seem unnatural at this point, and that's ok, but still call this step: NATURAL.

(6) It is possible to run steps (3)-(5) in succession during one vocalise. For example, s-f-m-r-d (sustain d and while holding do "FULL BODY SHAKE"... "HAND"... "NATURAL."); continue for a number of repetitions, and then try the vocalise with a feeling of stillness.

(7) Practice, practice, practice. While there may be immediate results and a rapid transference to naturalness, most likely continued practice and passing of time will be necessary. Eventually, with attention and persistence, a natural vibrato will emerge as the product of a freely functioning. Remember, though, this is a multi-faceted, evolutionary

process requiring the development, balance, and coordination of the entire vocal mechanism.

### Teaching Pitch Matching

Why can't s/he match pitch or sing in tune?

- Usually a matter of inexperience; they just haven't been singing in any organized way where pitch is important.
- Lack the coordination to match what they hear from the outside with what their voice can produce from the inside. They need to learn to hear themselves better and become accustomed to their vocal self-image.

• Have never used their speaking voice in a very flexible way to be expressive. Perhaps they talk rather monotonically and rarely incorporate much pitch variation in their speaking voice. Therefore, the muscles that control these qualities are completely out of shape, perhaps stunted, and definitely under used. The student needs to be introduced to the expressive possibilities of their voice, which may begin with imitating speech patterns that utilize pitch changes (e.g., "How are you today?" ; "I'm fine" ; "Whoa!" or "Wheel!" or "Hey!" (up and down); sirens; sighs; owl "who"; "moaning Merle or Myrtle")

- The process of teaching someone to match pitch must take all of this into consideration, since an inability to do so is probably a combination of the above factors.

A short and simple method for teaching someone to match pitch:

(1) Begin with super-expressive echo speech (see above). Develop awareness of voice and pitch in general. Monitor student for ability to move voice up and down. May use gesture or theatrical games to encourage more pitch flexibility. Freely move spoken pitch through contrasting ranges.

(2) Play m-r-d in comfortable medium (or low) range and have student echo-sing just the first three notes to "Three blind mice." If they don't match, try to go to where they sung it, and repeat it back immediately.

(3) Begin where they are comfortable and *can* match, if possible (you're matching them first!), and proceed from there. Go up or down by half-steps and see if they are able to follow. Best to play it on the piano, you sing, and then they sing. See if they have an easier time following you *or* the piano. Sometimes it makes a difference. For example, often a male can match a singing male voice better than they can the tone of a piano; or sometimes a female can match her head tone better to a male teacher's falsetto; or a male can match the lower tones on a piano better than a female teacher's head (or even chest) tone.

(4) If they are having real trouble with this, it's possible they just can't hear what they're doing too well. Teach them to "cup their ear(s)" with their fingers and bring their palm forward. This usually brings about immediate results. They are now hearing themselves from the outside and will make the necessary adjustments. Run the m-r-d pattern a number of times with ear cupping, and then have them try it w/o cupping. See how this works. They will develop their ability to hear themselves from inside better as they become accustomed to the sensations.

(5) As you continue with the m-r-d pattern, explore their low and high ranges (best to start low where it's comfortable and then go into the top). Keep things comfortable so they only experience success (no need to go to breaking point), if possible.

(6) Next, you may want introduce some basic vocal technique. If they are having trouble, this may help them find their voice; if they are improving, singing better will help to improve their confidence. A descending 5-note pattern (s-f-m-r-d) on "vee" is a good place to start. (Note: the "ee" vowel (bright, high, and forward) is the easiest to hear and feel in the singing mechanism. The pitched-"v" helps to propel the sound forward on a mini-burst of air.) Explore/extend range with this vocalise. Remember gender differences into the extremes (women: modify "ee" to "ah" for transition to top of the head voice, open "ee" to "oo" for descent into chest voice; men: keep the "ee" into the top, open vowel to "ah" into lower register.) This is a good voice focuser.

(7) Another vocalise that is helpful to improve pitch (after matching is better) is one to improve vowel production. Poor pitch is often the result of mistuned resonator (bad vowels). The following vocalise (w/ vowel gestures) is recommended: (s-s-s-s-s-f-m-r-d on "ah"- "eh"- "ee"- "oh"- "oo....")

(8) Now proceed to echo patterns accompanied by the Curwen hand signs and make transition to solfeggio. Begin with familiar patterns (s-m; s-l-s; m-r-d). Encourage excellent pitch, reinforced by quality vowel shapes and good singing, in comfortable range.

(9) With comfort level now established, consider exploration of falsetto. Often, men will match better in falsetto than in head voice! This will give them ringing sensations in the head, a feeling of "up," more animated facial expression, better use of air flow, and a healthy workout for their voice. Developing the falsetto helps the entire instrument to work better (high and low ranges). Bring falsetto down into "light mix" production of chest/head register, with suggestions that tones should have a similar ringing sensation, even if the registers (like gears) are different. Inexperienced singers will have an impossible time with this, but it doesn't hurt to plant the seed!

(10) Practice, practice, practice: *Listen, Think, Hum, Sing*. Hopefully this introduction to voice matching will bring about successful results, however, continued practice is required to fine-tune the coordination of hearing and singing pitches. Students must be given the tools to practice on their own. Here are some suggestions:

a. Bring the student around to the piano keyboard and show them where they are working at matching pitch (notes of their range, etc.).

b. Play a single pitch and have the student: (1) *listen* carefully to pitch; (2) *think* the pitch; (3) *hum* the pitch; (4) *sing* the pitch on "vee" or "vah."

c. Continue this process for single notes throughout the students range

d. Show the student exactly what you are doing and have them do it. Monitor them do it a couple of times. This will allow them to practice effectively on their own. Suggest they do this often: at least three times a day for 5-10 minutes each session.

e. If they are successful at single notes, suggest they sing patterns from a given note using the same process: (1) *play* a pitch; (2) *listen* to the pitch and *think* a pattern: m-r-d; (3) *hum* the first pitch; and (4) *sing* the first pitch followed by the pattern.

(11) Demonstrate how you can do this. Have them play any pitch on the piano and you sing it back. Feel free to use a variety of registers to show how an extended range and fully developed voice works; how quickly the *listen-think-sing* process works.

### Improving Dysfunctional Singing: Negotiating the "Dead Zone"

- Damaged vocal fold function is often signaled by the presence of at least one "dead zone," where particular notes fail to sound. These are found most often at register transition points, particularly at the chest to head voice area in the middle of the staff.
- In the course of singing a scalar passage, for example, there will usually be a complete interruption in vocal fold vibration, resulting in a "break," a rough tone, or even halt to the tone altogether (dead), often followed by a touching of the neck area, throat clearing, or a hacking cough. These physical maneuvers are often accompanied by other body language that signals a familiar frustration, including a look of "what just happened?," a defeated postural stance or even a slight tear in the eye. A disturbance is definitely felt "in the throat" or on the vocal folds.

- This type of dysfunction is different than a break from belting; that is a whole other issue and has involves a different registral-balancing act.

- How to fix?

- (1) Strengthen head tone!
- (2) Improve use of supra-glottal mechanism, e.g., spacious resonance
- (3) Encourage feeling of lift in resonators and facial expression
- (4) Bring head tone down through the middle voice; blend registers
- (5) Cultivate healthy chest tone, not pressed or heavy phonation
- (6) Bring head tone into chest register, enrich head tone with balanced connection to chest register: strive for BALANCE
- (7) Work registers separately at first, with goal to bring them together. This will develop the habits, skills and musculature necessary to coordinate a smooth transition.
- (8) Listen for vibrato as final factor that success is achieved
- (9) Notice look of ease, satisfaction, and accomplishment as singer negotiates a once troubled area with confidence and finesse.

## Repertoire and Standards

### *Building and Maintaining a Middle School Choral Program*

There are a number of factors involved in building and maintaining a quality middle school choral program, such as having recruitment strategies, a variety of ensembles, observable goals for the program and students, enjoyable and appropriate repertoire, positive and honest reinforcement, being an effective vocal model and role model, performances and choral exchanges, and most of all, cultivating independence and ownership of the learning process.



Brian J. Winnie  
R&S Chair, Jr. High & Middle School Choirs

A variety of ensembles, including auditioned and non-auditioned ensembles should be included in the program. Having non-auditioned ensembles provides opportunity for all students to have a place to sing and learn. Auditioned ensembles give students the opportunity to learn more advanced skills with students of similar skill levels. Those skills can then be applied in the non-auditioned ensembles to help lead sections and tutor students. Smaller ensembles, such as gender-based choirs, also provide a greater experience for the learning and application of specific vocal and musical skills, using gender-based songs as an alternative to mixed repertoire. It is a great opportunity to explore the voice and create a positive self-concept among your singers.

Providing these opportunities and expanding the program helped my students learn more effectively. The program now includes a curricular non-auditioned choir for each grade level (6th through 8th), along with five extracurricular ensembles including a non-auditioned treble and boys choir, an auditioned touring choir, a sixth grade select choir, and an eighth grade chamber ensemble. The program has now expanded to over 550 students within a school population of 1100.

Within these ensembles there are very different expectations in place. In the chamber ensemble, students help in the selection and analysis of repertoire and the running of rehearsals, focus on a *cappella* music, participate in online discussions together and with other schools. Moreover, the group is not conducted. In my experience, the sooner a conductor can step away from the en-

semble, the more students can apply their skills and gain musical independence. It also gives students pride, success, a positive self-concept, and a sense of ownership when they realize what they have accomplished.

Another component to building a strong program is incorporating school choral exchanges and public performances. This also promotes positive reinforcement, an application of musical skills, a stronger self-concept, and builds social skills. Examples of some local and inexpensive performance venues include assisted living homes, hospitals, elementary schools in your district, and other schools in your area. Another opportunity that we offer students is an overnight performance tour visiting middle schools and choirs around the east coast, performing in venues with wonderful acoustics even if no audience is present, and performing for the general public. Students work hard each year to prepare pieces that are usually only heard at one concert. They love the experience of performing outside of their hometown. Lastly, the students have the opportunity to host a middle school festival and meet other students from around the state and see performances from those choirs. Hearing other choirs perform is always a great experience for any group.

Appointing choir and section leaders who effectively facilitate learning also helps maintain a strong program. Directors can learn a lot from stepping back and acting as a facilitator. In the spring I work with elected student conductors who conduct a piece performed by one of the 180-member choirs at the end of the year concerts. I began this tradition for students who were extremely involved in the choral program and wanted an extra challenge. It also is a great experience for the choir to have a peer working hard to produce a musical experience, and raises the work ethic of the choir.

As a middle school choral teacher I am always astounded by a student's willingness to exceed expectations. We need to use that willingness to build and maintain choral programs that foster the growth and independence of expressive musicians.

Brian Winnie  
R&S Chair, Jr. High & Middle School Choirs  
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### *Practical Pedagogical Pointers: How to Teach Students to Match Pitch*

At one time or another, every choral conductor has encountered enthusiastic singers who have trouble matching pitch. What is the best way to handle the situation? One could simply label students as "tone deaf," prohibit them from joining the choir, and avoid working with them altogether. However, a more humane, educational approach for the enlightened choral conductor is to teach the students how to acquire pitch-matching skills. Through effective pedagogy, and given time for experience and skill building to take place, the false and unproven "tone deaf" label is discarded and doors open for students to participate in unlimited singing opportunities.



Jeffrey Gemmell,  
R&S Chair for Youth & Student Activities

The first step to teach pitch matching is to understand why people probably have trouble in the first place. It is usually a matter of inexperience. They have not been singing in an organized forum where pitch is important. A lack of coordination exists to match pitches they hear outside of themselves to what their voice can produce from the inside. Inexperienced singers need to learn to hear themselves better and to become accustomed to their own vocal self-image. Often, they have not used much expressive flexibility in their speaking voice either. They may talk monotonically and will rarely incorporate much pitch variation in their speech patterns. The muscles that control these tonal qualities, therefore, are completely out of shape, probably under-developed, and definitely under-used. Since an inability to sing tunelessly is most likely a combination of these factors, the process of teaching someone to match pitch must take all of this into account.

An introductory exercise encourages students to become acquainted with the expressive possibilities of their speaking voices. This is accomplished by having the student imitate speech patterns that utilize obvious pitch changes. The student should echo the teacher with dramatic expressions that emphasize varied ascending and descending inflections, such as "How are you today?" or "I'm fine" or "Whoa!" or "Whee!" or "Hey!" The process then continues with sighs or sirens or an owl "who" or "a moaning Myrtle or Merle." Be spontaneous and fun—like theater games—and have stu-



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dents enjoy the expressive potential of their voices. Such a dramatic activity is a good vocal icebreaker as well, because it leads to initial success, gets the voice moving, and paves the way for more specific pitch matching work to follow.

Once the general concept of pitch variance in the speaking voice has been activated, the student is ready to begin more focused activities to match specific notes. Here is a step-by-step method for teaching someone to match pitch:

Begin with super-expressive echo speech as described above. Develop awareness of voice and pitch in general. Monitor student for ability to move voice up and down. Use gesture or theatrical games to encourage more pitch flexibility. Freely move spoken pitch through contrasting ranges.

Sing or play on the piano *mi-re-do* in comfortable medium (or low) range. Notice three pitches are used within a melodic context to aid comprehension of pitch. Have the student echo-sing just the first three notes to the solfège syllables or use the familiar song *Three Blind Mice*. If they do not match your version, try to find the pitches (or general pitch area) where they do sing it correctly and repeat immediately.

If possible begin where they are comfortable and can match—yes, you are matching them first!—and proceed from there. Move starting pitch up or down by half-steps and see if they are able to follow. If using the piano, it is best for you to play it first, then sing it for them, and then have them sing it back. Observe if they are more successful following you or the piano, as sometimes it makes a difference. For example, often a male can match a singing male voice better than they can the tone of a piano, or sometimes a female can match her head tone better to a male teacher's falsetto; or perhaps a male can match the lower tones on a piano better than a female teacher's head (or even chest) tone. Experiment and aim for success.

If students are having real trouble with this, perhaps they simply cannot "hear" what they are doing. Teach them to "cup their ear(s)" with their fingers and bring their palm(s) forward. This usually produces immediate results. They are now hearing themselves from the outside and will make the necessary adjustments. Run the *mi-re-do* pattern a number of times with the ear cupping, and then have them try it without the cupping. See how this works. They will develop the ability to hear themselves from inside better as they become accustomed to feeling the sensations of success.

As you continue with the *mi-re-do* pattern, explore low and high ranges. It is best to begin where it is comfortable before proceeding to pitches in more extreme ranges. You should also explore head and chest ranges to see if pitch matching improves according to register; this is highly individual and is related to how one uses their speaking voice.

Next, you may want to introduce some basic vocal techniques. If they are having trouble matching, this may help them find their voice. If they are improving, singing better will help them to gain more confidence. A descending 5-note pattern (*s-f-m-r-d*) on "vee" [vi] is a good place to start. (Note, the "ee" [i] vowel (bright, high, and forward) is the easiest to hear and feel in the singing mechanism. The pitched "v" helps to propel the sound forward on a mini-burst of air.) Explore and extend ranges with this vocalise. Remember gender differences as singers move from a more focused vowel to a more open vowel into the extremes.

Female: modify "ee" [i] to "ah" [a] for transition to top of the head voice; change "ee" [i] to "oo" [u] to "oh" [o] to "ah" [a] for descent into chest voice;

Male: keep the "ee" [i] into the top, open vowel to "ah" [a] into lower register.

Another vocalise that is helpful to improve pitch is one that encourages good vowel production. Poor pitch is often the result of mistuned resonators, or simply put: bad vowels create poor pitch. This sustained vocalise is recommended. "ah" [a]—"eh" [E]—"ee" [i]—"oh" [o]—"oo..." [u] on *s-s-s-s-f-m-r-d*

Next, proceed to echo patterns accompanied by the Curwen hand signs and make transition to *solfeggio*. Begin with brief familiar patterns (*s-m; s-l-s; m-r-d*) and expand to longer ones. Encourage excellent pitch, reinforced by quality vowel shapes and good singing, in a comfortable range. The *solfeggio* helps to strictly define the pitches and gives an inexperienced singer a handle to grasp for reference and stability.

With their comfort level now established, explore more extreme ranges. In men, the development of *falsetto* is especially helpful. Often, men will match better in *falsetto* than in the chest/head voice! This will give them ringing sensations in the head, a feeling of "up" to their vocal production, more animated facial expression, better use of air flow, and a healthy workout for their voice. Developing the *falsetto* helps the entire instrument to work better (high and low registers). Bring *falsetto* down into the "light mix" production of chest/head register, with suggestions that tones should have a similar ringing sensation,

even if the registers (like gears) are different. Inexperienced singers will have a difficult time with this, but planting the seed is valuable.

Practice, practice, practice: *Listen, Think, Hum, Sing*. Hopefully this introduction to voice matching will bring about successful results; however, continued practice is required to fine-tune the coordination of hearing and singing pitches. Students must be given the tools to practice on their own. Here are some suggestions:

- Bring the student around to the piano keyboard and show them where they are working at matching pitch (notes of their range, etc.),
- Play a single pitch and have the student: (1) *listen* carefully to the pitch; (2) *think* the pitch; (3) *hum* the pitch; (4) *sing* the pitch on "vee" [vi] or "vah" [va];
- Continue this process for single notes throughout the student's range,
- Show students exactly what you are doing and have them do it. Monitor students as they do it a couple of times. This will allow them to practice effectively on their own. Suggest they do this often: at least three times a day for 5-10 minutes each session.
- If they are successful at single notes, suggest they sing patterns from a given note using the same process: (1) *play* a pitch; (2) *listen* to the pitch and *think* a pattern: *m-r-d*; (3) *hum* the first pitch; and (4) *sing* the first pitch followed by the pattern.

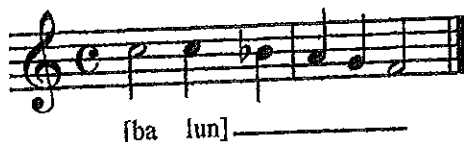
Demonstrate how well an expert (you) can do this. Have students play any pitch on the piano while you sing it back immediately. Use a variety of your own registers to show how an extended range and fully developed voice operates and how quickly the *listen-think-sing* process works.

Encourage the student to practice on their own and schedule regular appointments with them to monitor their progress. Assign them a song to prepare, as the ultimate goal of tuneful singing is the application to a successful performance.

The final step in the process is to have your student audition for a choral ensemble in your program so that you might observe their profound growth and artistic triumph. As choral conductors, we must always keep in mind that we are also voice teachers—perhaps the only one many of your students will ever have—and we must accept the responsibility to teach our students to use their instruments to the best of their ability for a lifetime of participation in the choral art.

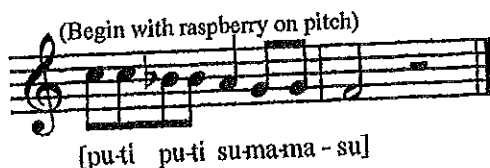
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# Voice Class Vocalises: Resonance



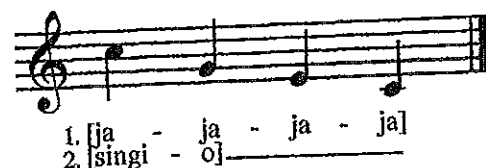
## 1. Opener and Focuser

Note: Create space with the [a] and keep back space spacious as you focus the [u] in front. Sustain pitch with spin (caress) and slide between pitches to sing on breath. Use gestures to reinforce this.



## 2. Female Focuser for Middle Voice

Note: Modify [u] to [ae] or [a] as you ascend. Use lots of middle vault space.



## 3. Opener, Extender, Focuser, Releaser

Note: #1 better for females; #2 better for males. Why? "Ng" releases soft palate.



## 4. For Consistency



## 5. For Consistency



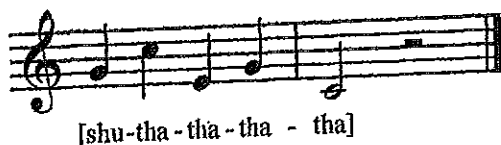
## 6. Male Range Extender (more myoelastic)

Note: modify [e] to [i] as you ascend. Initial [m] creates forward resonance, final [m] releases palate.



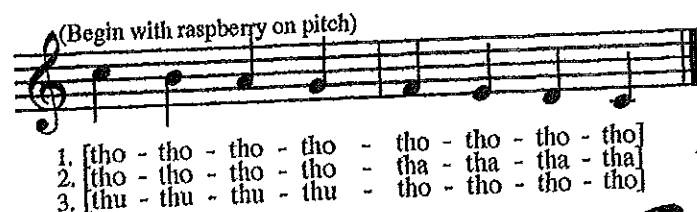
## 7. Male Range Extender, Focuser, Opener (more myoelastic)

Note: modify [e] to [i] as you ascend.



## 8. Female Range Extender with focuser and opener

Note: Eliminate consonants for highest pitches; modify [u].






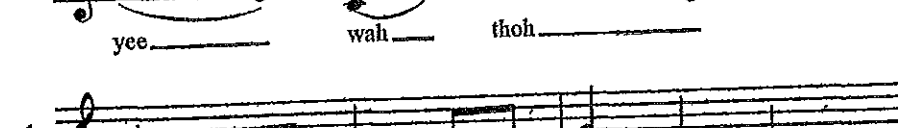
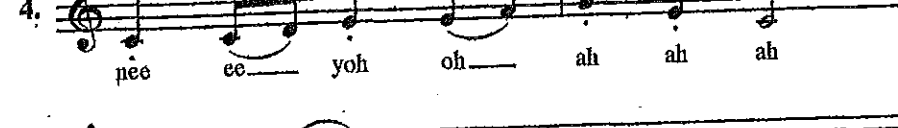



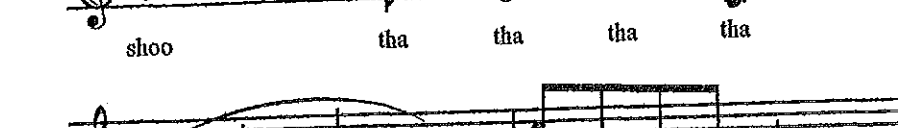
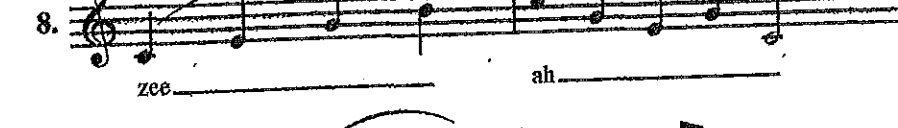
## 9. Male Blender for consistency (more aerodynamic)

Note: Begin in mid-range w/ #1; take #2 into lower range; take #3 into higher range.

# Top 10 Vocalises for the Red Rose City Chorus

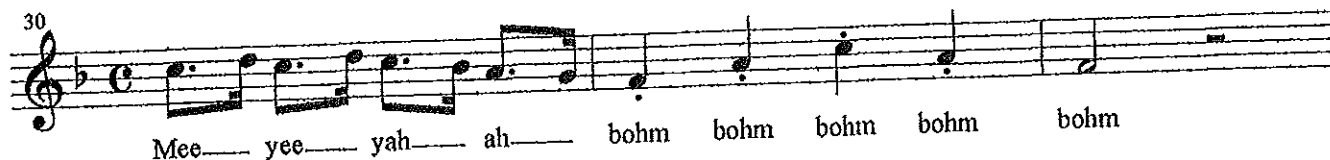
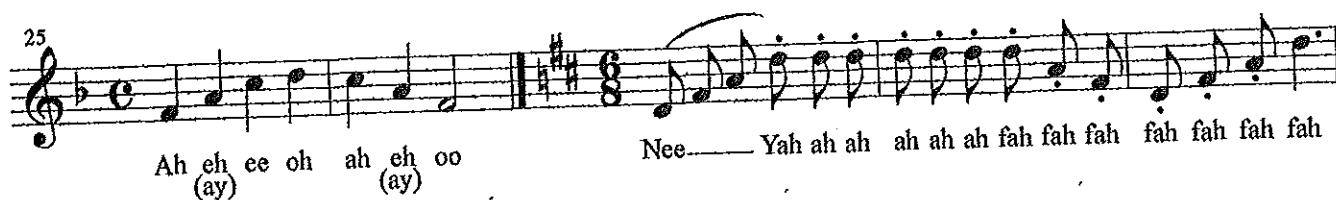
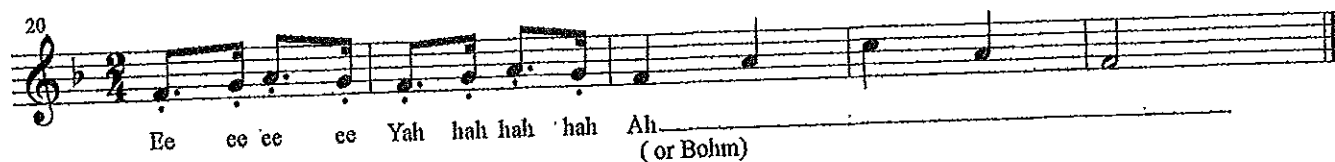
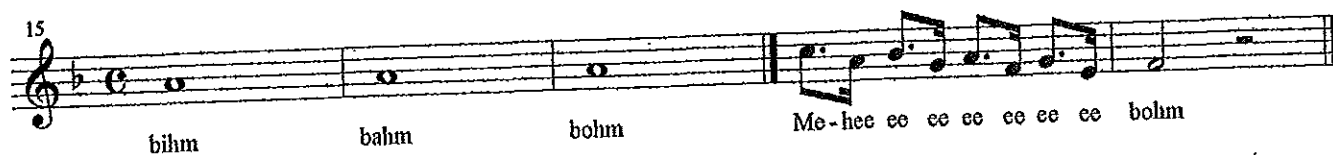
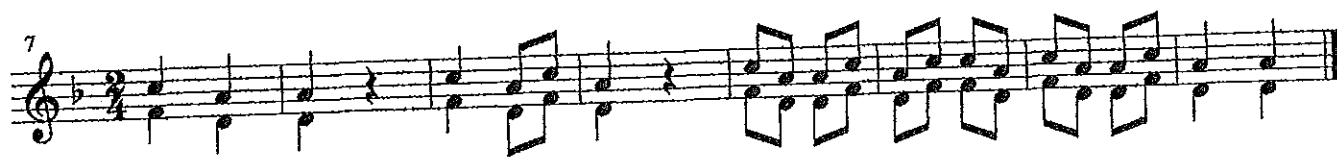
Compiled and explained by Jeffrey S. Gemmell, July 2007

[Source for vocalises: Charlotte Adam's *Daily Workout for a Beautiful Voice* (video), Santa Barbara Music Press, 1992]

1.  Focus resonance: round "oh" with lots of "oo" and keep "ee" tall; sustain breath energy, unify vowels  
[Lift circle by ears, upward movement on descending pitches]
2.  Vowel unification and consistency: purify vowels and make them ring; make vowels tall and avoid spreading  
[Johnson's vowel gestures from "Ready, Set, Sing" video]
3.  Refine resonance, sustain breath energy, relax  
[Right hand ascent on "yee," clockwise circle on "wah," both arms make circle from center of body outward on "thoh"]
4.  Tune vowels (closed to open), coordinate breathing, vary articulation (legato vs. detached)  
[Brush cheeks with thumbs in upward motion; bounce hands at hips for higher notes]
5.  Unify vowels (use closed vowels to focus open ones, and open vowels to open closed ones); careful not to spread "eh" and make sure "ee," "oh," and "oo" retain focus  
[Imagine candy kiss or oreo cookie in mouth to raise middle vault space; paint horizontally to sustain tone and breath]
6. 
7.  Range extension: focus and ring middle voice to open to caress high note and keep tone forward on descent  
[Sustain energy and focus/lengthen vowel on "shoo" to prepare open spaces for "ah;" keep tone forward and bright on descent]
8.  Range extension: focus and ring "ee" vowel up, modifying gradually to "ih" before opening to "ah"  
[Sustain and expand physical energy to blossom on high note with step into floor; keep sternum high and head balanced]
9.  Range extension and flexibility: keep tone forward and bright; adjust vowel space -- begin with focus and modify open into top; keep resonance spaciousness and breath stream moving; vary articulation to encourage buoyant and relaxation.  
[March with lots of arm motion, yet retain balance with connection to strong foundation]
10.  Relaxation, with work to keep consonant articulation light, flexible and crisp; move air!

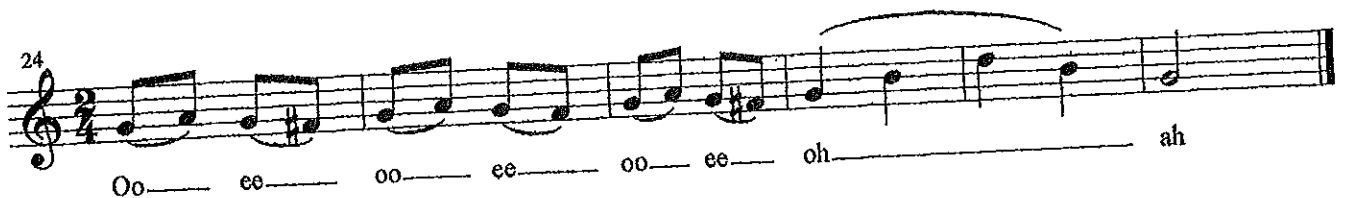
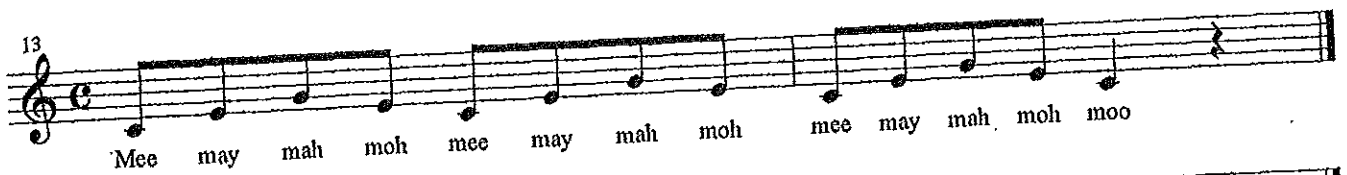
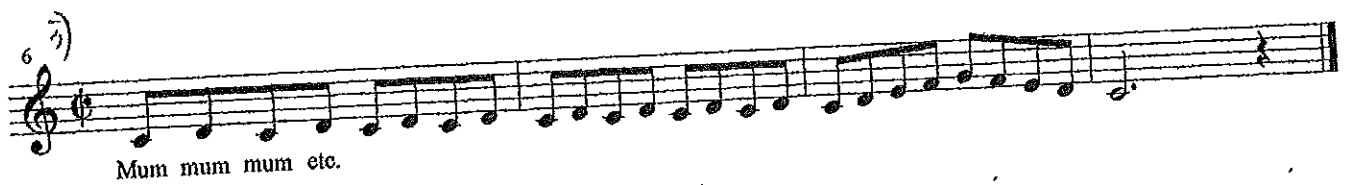
# Various Warm-ups and Vocalises

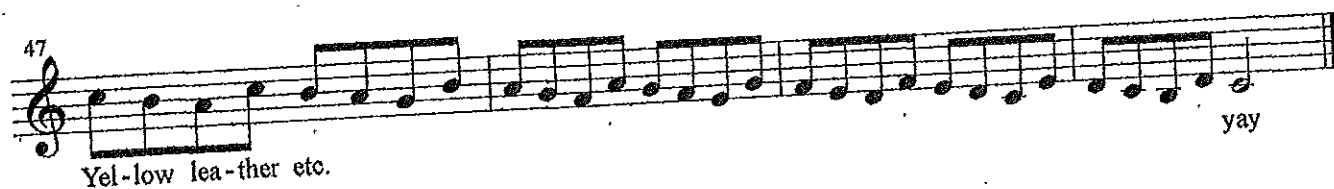
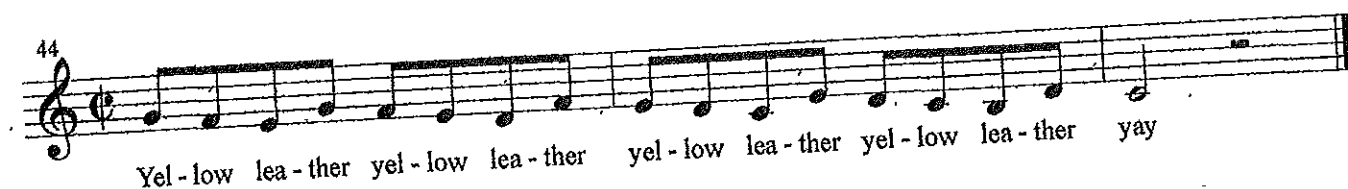
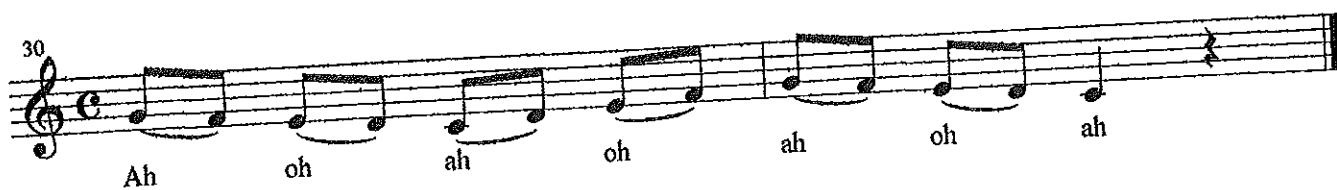
[Composer]





# More Vocalises





## VOCALISES

(vocal compositions using vowel sounds instead of words)

from

the late Barbara Doscher's Voice Studio, University of Colorado at Boulder.

### Barbara E. Doscher

Barbara E. Doscher of Arvada died June 26, 1996, in Arvada. She was 73.

She was born Sept. 20, 1922, in Arlington Heights, Ill., to Cecil E. McWharter and Vera Volz McWharter. She married John H. Doscher on Dec. 23, 1953, in Temple, Texas.

She was a professor emerita of music at the College of Music at the University of Colorado from 1971-1996. She also was a mezzo soprano earlier in her career, appearing with the Dallas Symphony and Denver Symphony in performances of Mendelsohn's "Elijah," the Mozart "Requiem," Bach's "St. Matthew Passion" and other oratorios, as well as giving numerous song recitals.



She also wrote "The Functional Unity of the Singing Voice" (published 1988 and 1994), which is in wide use as a vocal pedagogy textbook. She was the recipient of a university-wide Teaching Excellence Award in 1983, and had conducted workshops and master classes at colleges throughout the country and Canada. She had been featured at several conventions of the National Association of Teachers of Singing, and in 1991 and 1992 she was a master teacher at the first two Internship Programs sponsored by the NATS Foundation.

Articles by Mrs. Doscher have appeared in "The NATS Journal," "The Choral Journal," "American Music Teacher," "Journal of Research in Singing," and "The Quarterly."

She received her BA degree in 1944 from Grinnel College, her BMus in 1965 at CU, her MM in 1967 at CU and her doctorate of music in 1971 from CU. She was a Phi Beta Kappa and became professor emerita in 1993.

Survivors include her husband of Arvada; one sister, Carol Thurston of Austin, Texas; and one brother, Royce McWharter of Pottstown, Pa.

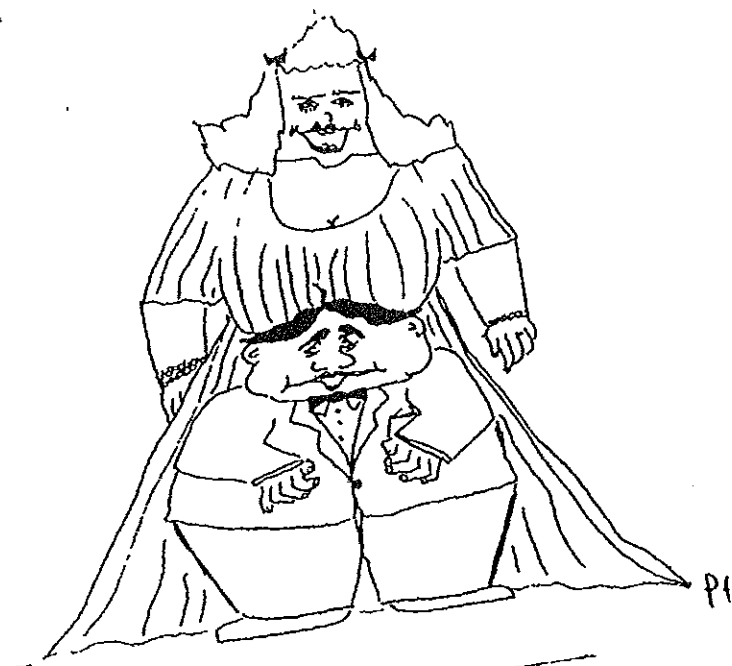
A musical celebration of her life, arranged by her students and academic colleagues, will be held at 1 p.m. Saturday in Grusin Hall in the Imig Music Building on campus, corner of 18th Street and Euclid Avenue.

Memorial contributions may be sent to the Barbara Doscher Memorial Voice Scholarship, College of Music, University of Colorado, Campus Box No. 301, Boulder 80309-0301.

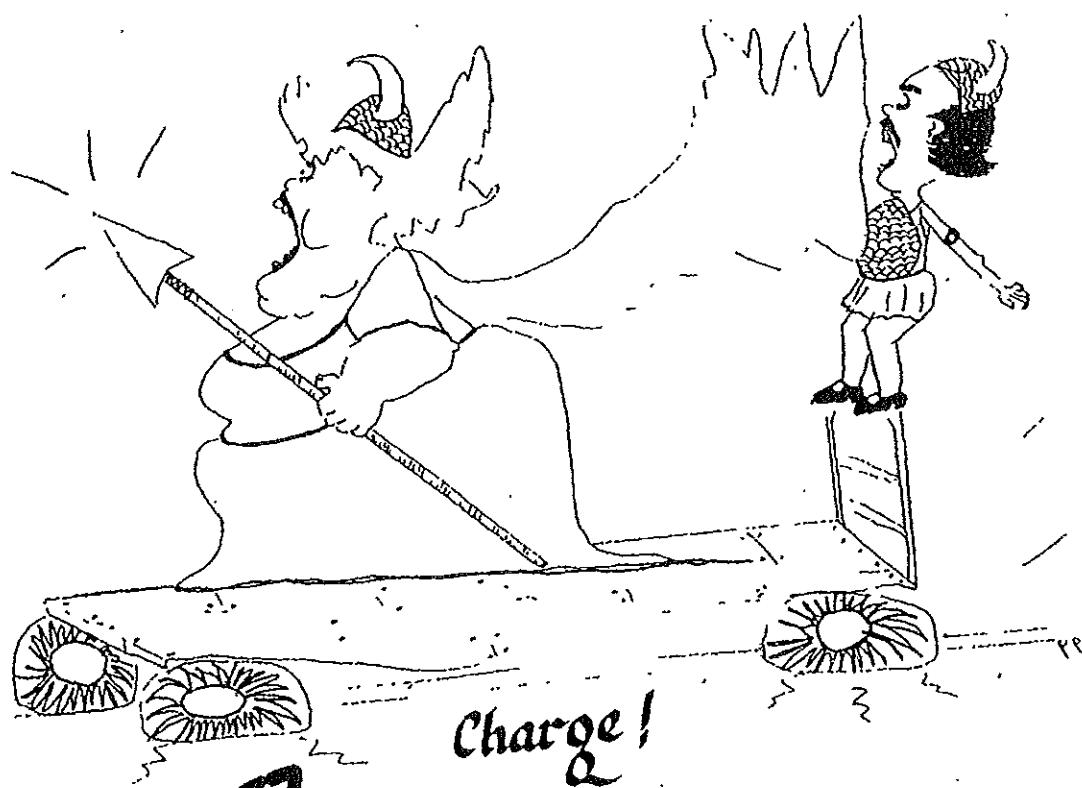




*Eager Beaver*



*Keep your chest up!*



*Charge!*

# MIDDLE VOICE

female ①

Light miserer: focus is more important here than the amount of sound. Also good for establishing postural balance and an easy air flow. Generally do not go lower than Bb3 or higher than Eb5.

syllables can be mixed, e.g. puti, puti, su mama, su.

su mama su mama su  
puti puti puti puti puti

interchange as necessary for each voice

ham mam ma + tha thi thu tha

works best as an air release for high, light voices

shu tha tha tha tha

change exercise to mu-mil as exercise descended

mo me tha  
me mo tha

for a stuck soft palate

sn sn

for tight jaw & lip muscles; sound should be breathy & cheeks should move

bla bla  
pla pla

reverse vowels as needed; be sure to track the f!

tha thu thi tho the tha

Tracking f! last 2 vowels can be reversed when lower. also e-u

tha thu tha

Alternating lip + tongue consonants, front + back vowels

Ta be da me ni po tu la be

la be da me ni po tu la be

the tha tho tha the

For tongue flexibility - use /i/ /o/

tha the tha the tha the tha

To loosen lip muscles; see "blah" exercise also

joi

Raspberry on whistle

tha tho tha tho tha tho tha tho

Release tight tongue, air. Use lip buzz if student can't get do raspberry.

If the sound is not "nasal" enough in middle voice, raise the butterfly area vault (where hard + soft palate join).

If /a/ is too open in middle voice, mix with /e/ and /y/

59

If sound is vibratoless, air pressure is too high and the vault too low (sometimes called "height of the vowel").

To obtain cheek bone focus & get into what Coffin called "shallow cup". Use Mona Lisa pucker.

thae tha

lip buzz thi tha

Forward focus. Change vowels as needed.

Oral /u/, mostly air, not siren. Baby-doll feel. Feels effortless. Will tune the middle voice if done correctly. Feel lots of air on the back of the hand. Can use chromatic scale.

/u/ thae tha

Can use  $\ominus$  instead of /m/.

mi me ma

Sing /N/ like /t/ in middle voice.

John is the son of my mom.

④

# Joining MIDDLE & UPPER, LOW & MIDDLE

thae tha tha

thae tha tha tha tha tha

ja tha

For the low voice, the volume is low. When going from chest to middle, nasality prevents the register break (Lilli Lehmann)

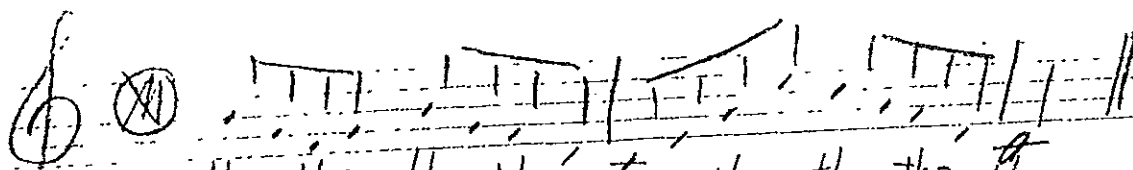
tha (y) tha

Use of /y/ adds height, but sometimes needed for focus and increased intensity.

(source if needed)

source: prange  
in a lighter mix

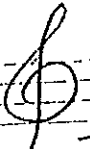
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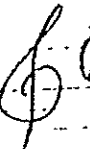


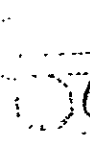
tho tha the tha tho tha the tha tho  
the tha tho tha

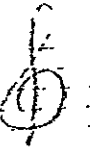
# HEAD VOICE

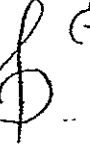
To get into head voice, the space must be prepared. Method 1: blow a little air down the nose, slow snore, ~~no~~ little bit.

 tha || Sing in pure head. Needs bright Italian ~~la~~ sometimes mixed with ~~ae~~. Plenty of air flow.

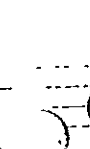
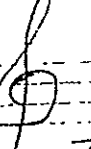
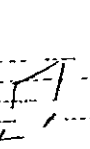
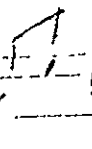
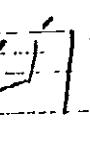
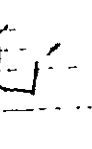
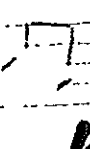
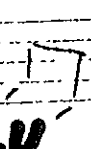
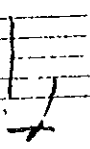
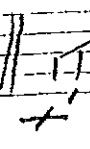
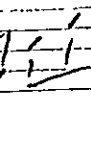
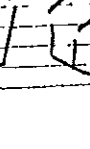
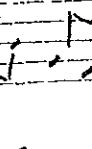
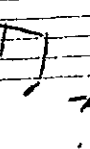
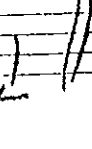
 ~~no~~ tel || Sing tel or ~~el~~ behind hand, then sing arpeggio into the prepared back space. Releases upper constrictor muscles of the soft palate to permit a better overtone (harmonic) response.

 thae tha the tha || Mix ~~la~~ & ~~el~~ with W on heavy mix

 thae tha tha tha tha || If balance is used, tends to stay in light mix (Italiana), medium mix on legato needs modification.

 the || Variation

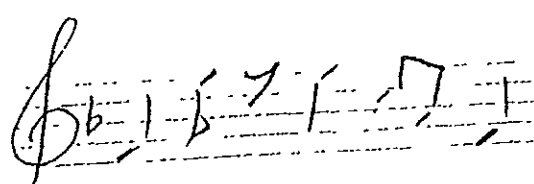
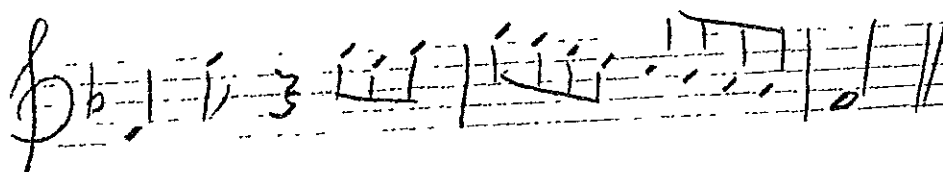
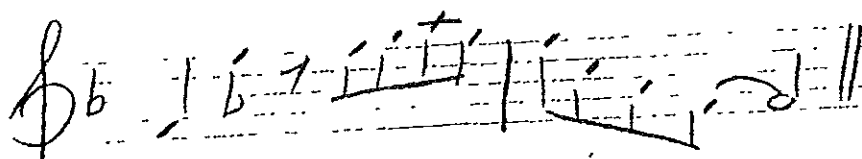
In both these vocalises, air flow & resonance vault must cooperate. The singer gets 3 chances instead of only one.

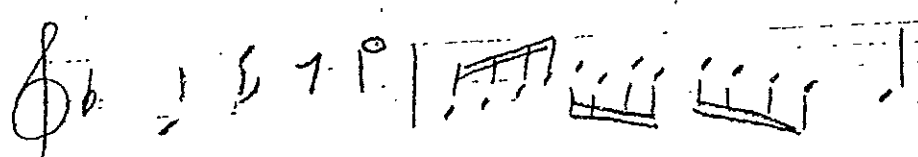
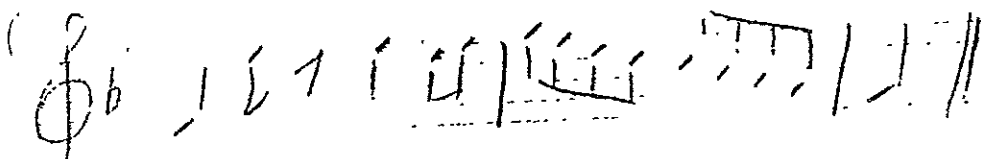
Both vocalises staccato; different rhythmic patterns. Whistle begins around B<sup>5</sup>. Air flow



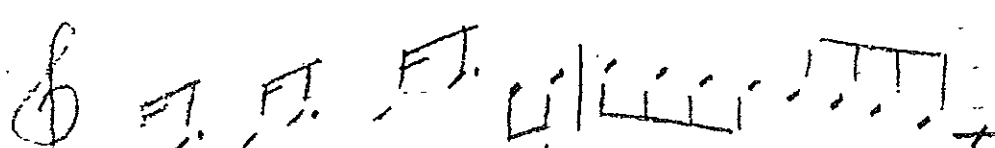
Use flip + Italian /a/ on 2nd note, then fully voice on 3/4. Variations below.

Good for middle voice focus + to remove weight.

Centering the /a/ on an ascending pattern



ia ia ia tha

Voice generally "turns" on F#<sup>5</sup> or G<sup>5</sup>. Watch for vowel change which varies with each voice. Use a/a or a/p for dark timbre, a/e or a/o for bright timbre

Sound should have:

- ① even vibrato
- ② brilliance, ring
- ③ intensity ("hooked-up")

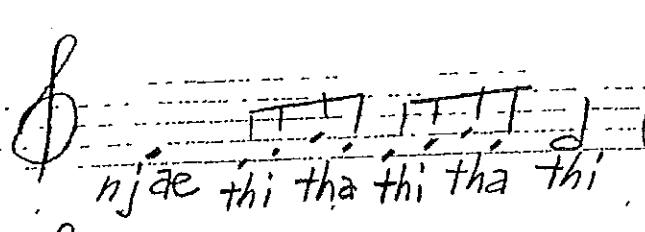
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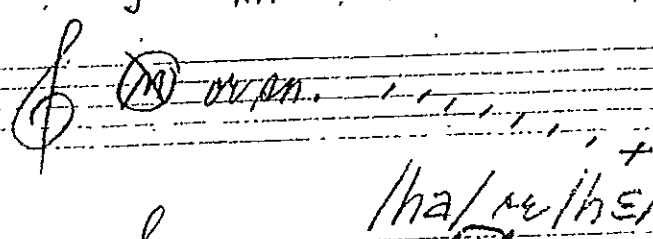
If too dark, there is no core or focus, cannot sing softly above G<sup>5</sup>, no messa di voce.

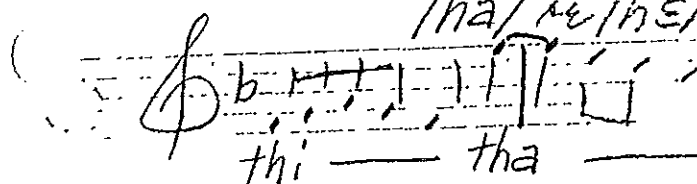
# BLENDING

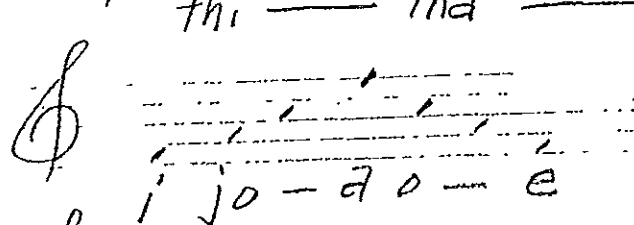
⑨

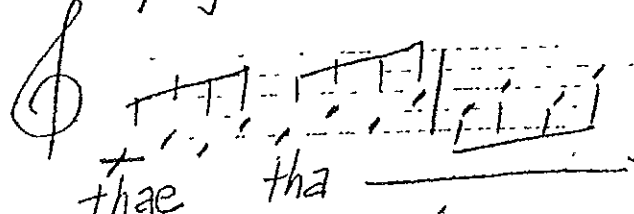
When starting in low or middle voice, use nose crease lift (nasal flare). Provides width in back; gradually add height via cheekbone lift in upper passaggio.

 || Laryngeal register bridge. Use but if a very young voice. Good for brightening a "muddy" voice.

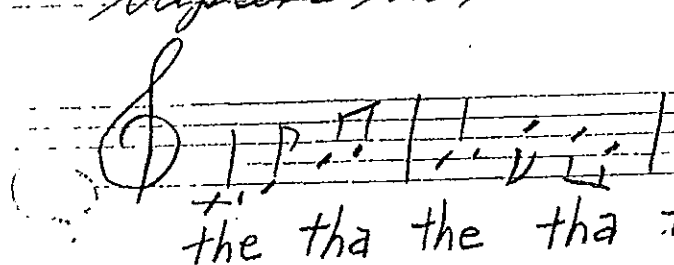
 || Use whatever vowel works. Good for resonance problems between A<sup>4</sup> - C<sup>5</sup>. Use

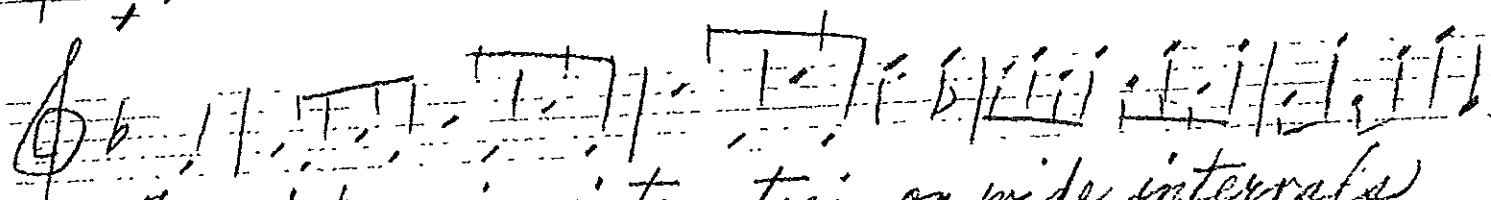
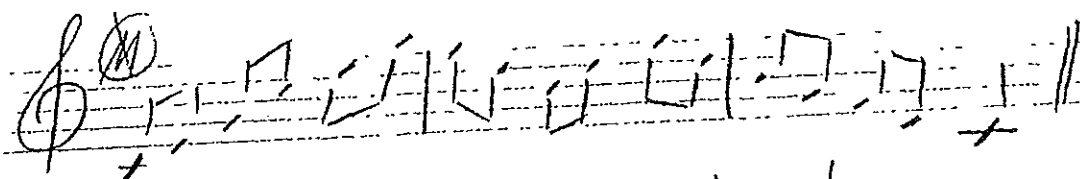
 thi — tha —

 || Do quite fast. "Slow down the breath & speed up the exercise."

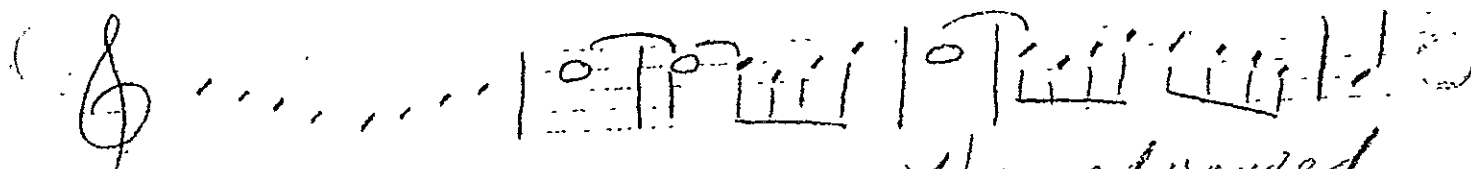
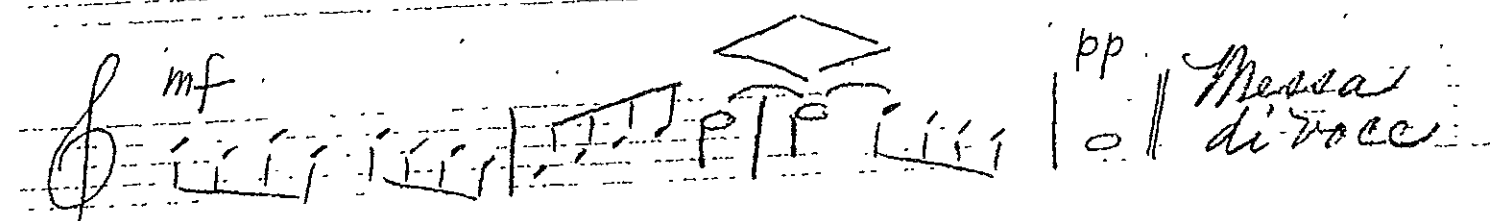
 thae tha — tha - tha

For testing the evenness of scale. May use triplets on the descending line.

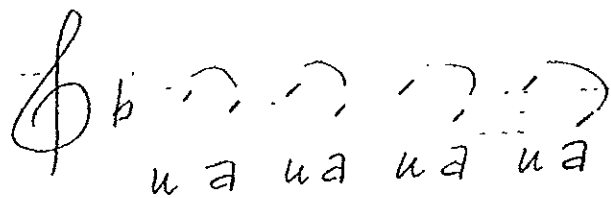
 || For modifying /e/ to /ɛ/. Can also use /o/ and /ɔ/.  
the tha the tha the tha the



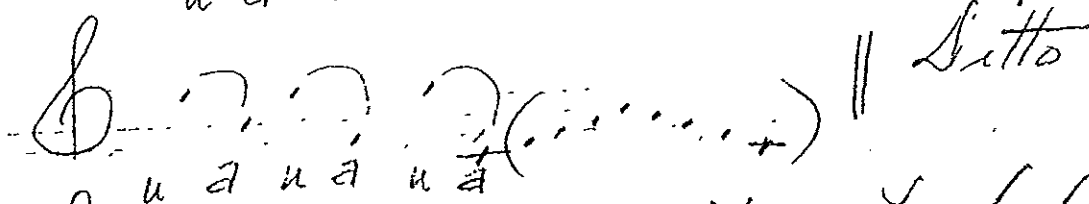
For improving intonation on wide intervals  
Advanced only



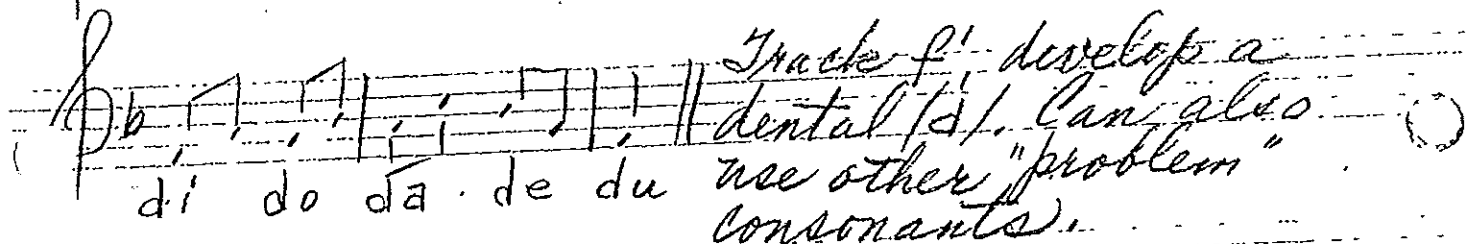
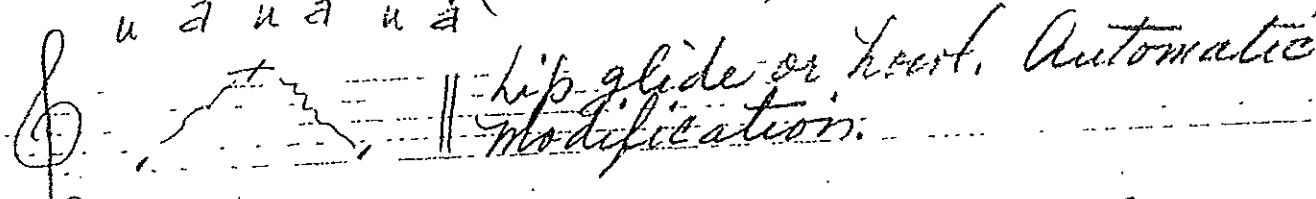
Very advanced



Developing legato, the  
a's should match



Sitto



Track f' develop a  
dental /s/. Can also  
use other "problem"  
consonants.

# AGILITY

(11)

Use light  
timbre, steady  
sound. Use  
front vowels.

ja — ja — ja — ja

thi the tha

staccato

Above 2 vocalises to develop fioritura

68

Proper use of  
Italian /r/ and  
/l/



the tho tho  
thi the tha

W.C. Fields "Oh yes" and "Oh no" to develop nasality in a completely flat voice or a muddily, hooty one

e ja e ja e ja e ja e

the the tho tha tho

Middle voice uses higher support, then shifts to the belt area as singer goes up. Staccato preceding the exercise gives a more flexible energy or support and helps smooth out the breath flow. See two vocalises below.

he tha tho tha tho tha

Can bounce the arpeggio for lighter mix

he he

70

Alternates lips & tongue, dentalized d, t, & n.

# FALSETTO

ghost tu/

Use extra air & pucker over bridge. "Bump" does not matter.

hi — a — ha — a —

hu — a —

after nasality of ti / (supported falsetto) use hn / Extrinsic muscles must be working for belt support and full operatic sound.

pu — a —

works wide back muscles. For mature voices only.





For /i/ vowel on E<sup>4</sup>, F<sup>4</sup>, F<sup>#4</sup> use /4/ plus lift of corners of mouth. Don't change vowels too much, but equalize them. /i/ is essential in the passaggios for baritone and basses.

The only vowels which work on high B<sup>b</sup>, B, & C are front and neutral ones. (Coffin)

ne ni ne ni ne the thy tho thp tho thp

First vocalise is heavy, i.e. of vocalis; should be forward & very metallic. Follow with second vocalise preceded by raspberry to counteract heavy isometric action of the cords. FOR MATURE VOICE.

u a u a u a

Develop legato, watch colors + weight

ja ja tho the wa wa the tho

w = lip glide  
j = tongue glide

73

thp the tho thp the tho

Also thp, the, tho

Handwritten musical notation on a single staff. It begins with a treble clef and a key signature of one sharp (F#). The melody consists of a series of eighth and sixteenth notes, some beamed together. Below the staff, the lyrics 'the', 'tho', and 'the' are written, with horizontal lines indicating the pitch contour of the voice.

To sing over an orchestra, you must get the standing wave going. (see top of p. 18). Sbriglia calls it "the vibration of the lips and the rumble of the chest."

Handwritten musical notation on a single staff. It begins with a treble clef and a key signature of one sharp (F#). The melody consists of a series of eighth and sixteenth notes, some beamed together. Below the staff, the lyrics 'thmae', 'the', and 'tha' are written, with horizontal lines indicating the pitch contour of the voice.

Instant full look-up. Not for beginners. Initial sound must be very nasal. Add ring.

When descending, rise slightly for each semitone down through the passaggio.

Handwritten musical notation on two staves. The top staff shows a melody with notes and slurs, with the word 'bite' written below. The bottom staff shows a similar melody, with the phrase 'in a bite, teeth are almost closed and tongue fronts.' written below. Both staves have a treble clef and a key signature of one flat (Bb).

Italian Tenors // the both.

MATURE VOICES ONLY

# AGILITY

8 *thp* *tho* *the* *the* *the* *the* *tho* *tha*

So put more focus in *to* and *ta*.

8 *thp* *the* *tha* *tho*

For light  
mit. Advanced  
finger only.  
Good for  
centering the *to*

8 *thp* *the* *thp* *the*

Above for agility & also to check evenness of scale.

8 *do* *staccato* or *bounce* on *nae*

Very nasal &  
thin, "witchy"  
an agility mixer

8 *tha* *tho* *the* *tha*

Carry suspended air flow through the tests.

## GENERAL

(22)

If a tenor is banging the notes, put him on a glide, shorten the sternomastoid (head up slightly)

When there is a scratch in the voice, there is probably too much pressure in the cordal closure. Move the air with an imaginary /h/ or if severe, use a raspberry.

We must sing on pure tone, not pure vowels. "The good Italian singers never sing anything but a mixed vowel." (Hilli Lehmann)

"Speech is combined cavities, but in singing you take some of the hump out of the tongue. f' results from treating the oral-pharyngeal space as a pipe & not as 2 cavities." (Coffin)

Coupling is tighter on pp. Front vowel hump eliminated or reduced, resulting in a pen tube configuration.

"... only from an eternally alive form with elastic muscular action can the breath flow, the tone resonate." (L. Lehmann, 23)

## ON THE STAMINA OF THE SINGING VOICE

The practice of singing three or four hours a day will ruin the most robust organ; three half hours a day at long intervals ought to be the maximum of study, and should give flexibility without risk of fatigue.

Manuel Garcia, Hints on Singing  
(London: Ascherberg, Hopwood, 1894),  
p. 18

Pause therefore after, say, a quarter or half an hour's practice....If fatigue is felt in the breathing muscles, but not in the throat, the practice has been good, and may be repeated two or three or (later on) four times during the day.

William Shakespeare, The Art of Singing (Bryn Mawr: Oliver Ditson, 1921), p. 176

How long should the practice period be for beginners? -- half an hour each day, ---three times, not more than ten minutes at a time.

William Earl Brown, Vocal Wisdom  
(maxims of G. B. Lamperti) (L. Strongin, 1931), p. 128

Tetrazzini advised singers to practice for ten or fifteen minutes only at a time and to leave off as soon as the voice feels tired.... Avoid over-use of the voice by singing too often at performance, practice or rehearsal.

Norman Punt, The Singer's and Actor's Throat (London: Heinemann Medical Books, 1952), p. 58

In general the public thinks that singers spend hours and hours of the day bellowing out scales and whooping up and down arpeggios. In fact, singers, teachers (the intelligent ones) and doctors all warn against the dangers of over-singing. The vocal cords, though muscles, are not like those of an athlete which must be worked out to keep their elasticity. Precisely the opposite: tired or overworked or strained because they are not correctly manipulated, these extraordinary ligaments that singers call on to make lightning changes in length and tension lose their ability to do so.

Robert Rushmore, The Singing Voice  
(New York: Dodd, Mead, 1971), p. 270

Sherrill Milnes, in answer to a question about how long he advises singing each day: "a maximum of an hour and a half, even for a mature voice like mine."

Discussion Session with students at  
the University of Colorado-Boulder;  
November, 1975

To those who don't know the effort that goes into singing, it may seem strange that an opera singer who sings only half an hour to an hour in an entire opera, requires two or three days to recover.... Consider a starting pitcher, who also relies largely on one set of muscles.... Now, if a pitcher throws too hard, too often and/or too young, he can ruin his arm.

Sean Kellogg, "As I See It," Sports Illustrated, May 14, 1979

(For young singers) under ideal circumstances, two or three short practice periods should be spread over the course of a day.... It is regrettable that some conductors with little working knowledge of vocal production will require singers to rehearse for long tiring hours. This is difficult for seasoned professional singers and an almost impossible situation for the novice.

Meribeth Bunch, Dynamics of the Singing Voice (New York: Springer-Verlag, 1982), p. 121

The master teachers of singing stated that four practice sessions of 30 minutes a day were sufficient for the most robust vocal organs. What happens when choirs have one, two, and three-hour rehearsals several days a week? What happens when operas are scheduled on consecutive nights? If the conductors will not protect a singer, it is up to the singer to protect himself by any guise. The wayward conductor will not be able to return to the singer the voice which he has taken, regardless of any price paid, nor can his singing teachers, nor his throat doctor. Nor can the singer restore his own voice if he has given it away.

Berton Coffin, Sounds of Singing (Metuchen, NJ: Scarecrow Press, 1987), p. 220

There is not much that a chorister can do about excessively long rehearsals other than to quit singing entirely. Often long rehearsals take place the day immediately preceding a concert. It is rather like cramming for an examination, since the percentage of musical or technical improvement is minuscule at such a late date, but the potential for vocal damage is great.

Barbara M. Doscher, The Functional Unity of the Singing Voice (Metuchen, NJ: Scarecrow Press, 1988), p. 184

COMPILED BY: Barbara M. Doscher,  
University of Colorado-Boulder,  
January 1, 1992

## Vocal Health Do's and Don'ts

### DO:

Get plenty of sleep  
 Drink a lot of water (at least 8 - 8 ounce glasses) daily  
 Eat a balanced diet  
 Maintain a regular aerobic exercise program  
 Practice regularly  
 Sleep with a vaporizer on if possible  
 Brush your teeth frequently  
 Maintain good posture

### DON'T:

Smoke  
 Drink excessive amounts of alcohol  
 Talk over loud music/crowds  
 Sing too much or too high or too loud  
 "Belt" or shout like a cheerleader  
 Make weird noises with your voice

### HOW TO AVOID A COLD

1. Do all the things in the "do list" above.
2. Avoid all the things in the "don't list" above.
3. Wash your hands with hot soapy water **frequently** during the day.
4. Eat foods containing B complex vitamins and calcium - this helps your body deal with stress.

### WHAT TO DO BEFORE A REHEARSAL/PERFORMANCE

1. Eat at least one hour before you sing.
2. Avoid dairy products or sweets.
3. Take time to stretch your shoulders, neck, etc.. - your body is your instrument!
4. Always, always vocalise before you rehearse or perform - just as you would stretch your muscles before a tennis match, so you must warm your singing muscles up before you use them full force.

### SURVIVING LONG REHEARSALS!

1. Pace yourself - you don't have to sing full blast all the time.
2. Bring a water bottle.
3. Avoid cough drops, esp. Chloroseptic brand (contains phenol)
4. If you get tired, sit out for a while, or "mark" the high notes down an octave/the low notes up an octave.
5. Don't sing if you are sick
6. Use good posture - you will breathe better and become less fatigued

## Care of the Professional Voice

### Vulnerable Times and Situations for the Larynx

#### I. Physical changes; illness:

1. Fatigue
2. Allergies
3. Infections
4. Gastric reflux
5. Dental problems
6. Puberty
7. Menses
8. Pregnancy
9. Menopause
10. Injury
11. Dryness
12. Drugs

#### II. Environmental conditions:

1. Dryness
2. Dampness
3. Cold
4. Dust
5. Smoke, pollution
6. Noise

#### III. Emotional conditions:

1. Psychological stress
2. Stage fright
3. Preparation

*The Functional Unity of the Singing Voice - Roscher*  
*Foundations of the Singing Art - Fields*  
*Building the Voice as an Instrument -*



#### IV. Travel conditions and changes:

1. Climate
2. Time zone changes
3. Dietary
4. Altitude
5. Physical and psychological stress
6. Noise: car, bus, train, plane, background, etc.

#### V. AVOID! AVOID! AVOID! AVOID!

1. Voice use (speaking and singing) before body warm up
2. Voice use (speaking and singing) without careful warmup
3. Excessive use of the voice (speaking and singing)
4. Singing and speaking at excessive intensity and frequency levels
5. Throat clearing, coughing, loud prolonged laughter, crying, screaming, and shouting
6. Imitating unusual sounds and noises: sirens, engines, animals, and other music instruments and voices
7. Hard glottal attack and glottal fry
8. Whispering
9. Irritants: tobacco, smoke, marijuana, cocaine, polluted air, alcohol, spicy foods, etc.
10. Drugs -- always consult a competent physician who understands the use and care of the professional voice
11. Noise pollution
12. Dry artificial climates
13. Speaking and singing with clenched teeth and mandibular constriction
14. Taking your voice for granted
15. Dehydration -- drink 8-10 glasses of water per day. Remember: caffeine and alcohol are diuretics which contribute to dehydration

## VI. Warning signs:

1. Hoarseness; harsh, husky, raspy, gravelly, etc.
2. Soreness or tenderness in throat or neck
3. Change in vibrato: "straight" tone, or wobble
4. Loss of range, quality, clearness, resonance
5. Pitch breaks, cracking
6. Increased breathiness
7. Pitch problems
8. Loss of dynamic control
9. Frequent throat clearing, dryness, tickle, burning, stinging
10. Increased effort needed to produce tone

## VII. Remember:

1. YOU are responsible for YOUR voice.
2. Voice rest is SILENCE (no singing, no talking, no whispering)
3. Save vocal miles: reduce voice use (speaking and singing) before rehearsals and performances.
4. Voice use (speaking and singing) must begin with proper warm up (body, breathing, sound) which is determined by your vocal, physical, and mental condition at that time.
5. Maintain good health. Eat a balanced diet, exercise regularly, and maintain body hydration (8 to 10 glasses of water a day).
6. Be aware of your voice, respect it, strive to understand it, and LOVE singing!

Ruth L. Drucker

## AGENTS AND FACTORS WHICH AFFECT PHONATION

### I. Drying Agents

1. Antihistamines - either prescription or over-the-counter - used to treat allergies and colds.
  - Chlorpheniramine
  - Diphenhydramine
  - Brompheniramine
  - Promethazine(trade names: Triaminic, Dimetapp, Chlor-Trimeton, Novafed A)
2. Sleep Aides - Scopolamine (Nytol and Sominex)
3. Cough Suppressants
  - Codeine (Robitussin A-C)
  - Diphenhydramine (Benylin Cough Syrup)
  - Dextromethorphan (Robitussin DM, Vicks Formula 44)
4. Antispasmodic Agents (to reduce gastrointestinal spasms)
  - Belladonna Alkaloids
  - Donnatal
  - Combidi
  - Pro-Banthine
5. Antidiarrheal Agents
  - Paregoric
  - Codeine
  - Lomotil
6. Antihypertensive Agents
  - Methyldopa (Aldomet)
  - Clonidine (Catapres)
  - Prazosin (Minipress)
  - Reserpine (Ser-Ap-Es)
7. Antidepressant Agents
  - Tofranil
  - Elavil
  - Vivactil
8. Antipsychotic Agents
  - Thorazine
  - Mellaril
  - Haldol
9. Large doses of Vitamin C (as recommended by Linus Pauling)
10. Diuretics
  - Lasix
  - Hydrochlorothiazide
11. Alcohol
12. Caffeine
  - Coffee and tea
  - Soft drinks
  - Diuretics
  - Cold remedies
  - Weight control aids
13. Unhumidified Air
14. Mouth Breathing

### II. Agents That Increase Risk of Vocal Fold Hemorrhage

1. Aspirin
  - Over-the-counter cold remedies that contain aspirin

AGENTS AND FACTORS WHICH EFFECT PHONATION  
II. (Continued)

1. Aspirin (Cont')
  - Coricidin
  - Empirin
  - Ascriptin
  - Bufferin
  - Excedrin
- III. Agents/Factors That Increase Vocal Fold Edema
  1. Chronic vocal abuse (overuse, throat clearing)
  2. Laryngitis
  3. Smoking
  4. Allergies
- IV. Agents/Factors That Change Vocal Fold Structure
  1. Puberty
  2. Menses
  3. Menopause
  4. Progetine dominate birth control pill
  5. Androgens such as Danazol
  6. Smoking
  7. Volatile fumes and irritants
  8. Vocal abuse
  9. Gastric reflux

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## VOCAL HEALTH



Dr. C. Richard Stasney  
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# Safeguarding the Singer's Voice: The Productive Cough

by J. David Garrett, Ph.D.

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Spring 97

The majesty and beauty of vocal music is highly dependent on a healthy larynx, and, more specifically, healthy vocal folds (cords). This is due to the fact that the vocal folds are the primary sound source for speaking and singing. Out of all the known species, humans have developed the most sophisticated control over the use of the larynx for sound production, and the demands on singers far exceed that of the average human. The increased demands that singers have on their voice often make them more susceptible to vocal fold problems. One of the simplest ways to prevent these problems is for singers to have a clear understanding of how the larynx works so that they can take the precautions needed to protect the vocal folds.

An important fact that is often over-

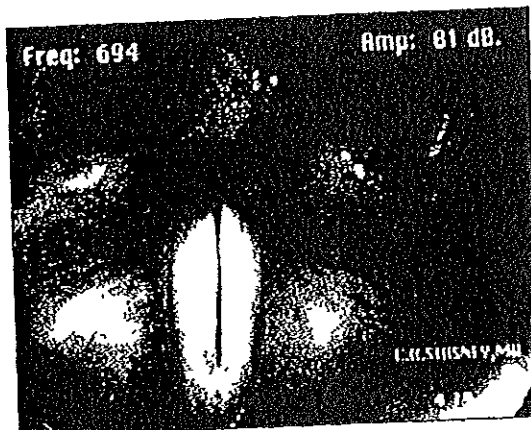


Fig. 1 Larynx during singing

looked, is that the larynx is used for many behaviors other than sound production. In fact, the main biological purpose of the larynx is to protect the lungs. The larynx achieves this task in two ways. The first is by preventing material from entering the lungs. During the swallow, the larynx functions to make sure that the food or fluid is channeled to the esophagus (the tube to the stomach) instead of entering the lungs. The second way that the larynx protects the lungs is by using the cough to remove any unwanted substances. For example, if any food or fluid touches the vocal folds or the area below, a vigorous cough is initiated so that it can be removed.

One of the most frequent causes for a cough is when there is thick mucous or too much mucous on or below the vocal folds. The common cold is one of the times we experience too much mucous. This is because the body increases the production of mucous when the tissue

has an infection or when it is irritated in some way. Thick mucous also presents a significant problem to singers, and, in most cases, is due to dryness. The thick mucous decreases the lubrication of the vocal folds and increases the need to cough. The problem is compounded for a performer because the body decreases mucous production when a person is under high stress.

Singers are faced with a basic dilemma where the cough is concerned. When a person coughs aggressively or frequently it can cause the vocal folds to be further irritated thereby making the problem worse. Unfortunately, it is virtually impossible to make it though life without coughing. The solution to the dilemma is for the singer to use two strategies to protect the vocal folds. One strategy is to take measures to reduce the need to cough, and the second strategy is (when needed) to use what we refer to as the "productive cough."

### Reduce the Need to Cough

The need to cough is significantly decreased when dryness is reduced. The reason that singers are told to drink large quantities of water is because it helps reduce the thickness of mucous. By doing this the vocal folds are lubricated properly and the need to cough or throat-clear decreases. Reducing the use of caffeine products can also help because caffeine tends to produce dryness. If you frequently suffer from allergies or colds, make sure and dis-



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cuss all the medications you use with an otolaryngologist to insure the best results with minimal dryness.

### The Productive Cough

There will always be times when there is a need to cough. The goal of the singer should be to cough in the most efficient way and in a way that minimizes irritation due to the cough. The following steps describe how the normal cough is produced

1. A very rapid breath is taken.
2. The larynx is closed tightly (Figure 2).
3. The chest and abdomen are pushed inward to build up pressure.
4. The larynx is quickly opened and air rushes through the area between the vocal folds to remove the mucous.

As mentioned previously, the purpose of the cough is to remove unwanted substances (typically mucous). The productive cough attempts to accomplish this goal with as little irritation as possible. Since air rushing through the vocal

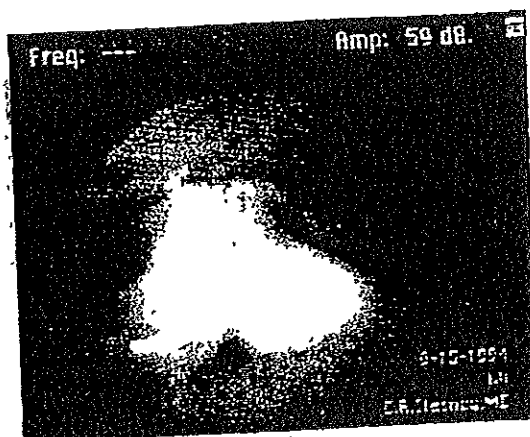


Fig. 2 Larynx during cough.

folds is what removes the mucous, it only stands to reason that you want as much air as possible.

In the productive cough the first and second steps are modified to read: take in as deep a breath as possible and then momentarily hold your breath. In the third step, the chest and abdomen should be pushed inward with as much strength as is possible.

These simple modifications will help enhance the efficiency of the cough. The fourth step is often where

the most amount of damage to the vocal folds occurs. As the air rushes through the larynx, some people bring the vocal folds too closely together causing the vocal folds to harshly bang together. This causes the loud sound people associate with a cough. The problem is that this banging action does not help the cough and it usually causes irritation. One method used to teach the productive cough is to expel the air while producing an 'H' sound. The general rule of thumb is that a more efficient cough is produced by increasing the amount of air, and a quieter cough produces the least damage to the vocal folds.

Throat clearing is a variation of the cough and is the most destructive and inefficient way to remove mucous. This is because throat-clearing is produced by banging the vocal folds together with very little air flow. Throat clearing is rarely successful in removing unwanted mucous. Throat clearing should be avoided and should be replaced by a productive cough only when needed.

### The Habitual Cough/Throat-Clear

It is very easy to get caught in a vicious cycle that results in consistent coughing and throat-clearing. The cycle often starts during a cold, but continues long after the cold is gone. The cycle is as follows: a person coughs or clears his throat, this causes irritation to the vocal folds, the body produces more mucous in response to the irritated folds, which, in turn, causes the person to cough and clear his throat more. There are several ways for a person to break out of this cycle. All of the techniques described above should be used to ensure the least amount of irritation. Sometimes it is possible to reduce the occurrences of coughing. The tickling feeling that often leads to coughing or throat-clearing can be reduced by massaging the front of the neck (on the sides of the larynx) in a downward motion.

In conclusion, it is important for the singer to understand how the larynx is used for behaviors other than singing. This knowledge will help the singer to take measures to protect the vocal folds at all times, and not just during singing. By far, the best defense against vocal fold problems is a strong offense.

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