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The Voice

The Voice

VOICE OF THE EDITOR

Kim Steinhauer, PhD

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PHD

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CLINICAL TOOLS FOR YOUR VOICE BOX

BY KIMBERLY STEINHAUER, PHD

We are fortunate to feature voice treatment exercises from three experienced Speech-Language Pathologists who specialize in voice therapy in this issue of the Voice Foundation Newsletter, “Clinical Tools for your Voice Box.” Christina Kang, Joanna Lott, and Nandhu Radhakrishnan graciously accepted the difficult task of writing out voice treatment exercises that are best expressed, of course,

vocally. While treatment plans are highly personal, there are universal exercises that can address the core principles of voice rehabilitation. Christina, Joanna, and Nandhu have provided clear objectives and detailed descriptions of their treatments in hope that you and your patients may add another tool in the “voice box” of exercises that lead to enhanced communication and quality of life.



KIM STEINHAUER, PHD

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Voice of the Editor



TRANSITIONING FROM SPEAKING TO SINGING VOICE REHABILITATION USING RESONANT VOICE THERAPY

BY CHRISTINA H. KANG, MM, MS, CCC-SLP

Objective: Use of motor learning principle to unload laryngeal tension during singing.

Description: Long-term retention of ease and clarity in vocal production that is achieved in resonant “speaking” voice can be effectively incorporated into singing voice rehabilitation by utilizing the Motor Learning Principle.

As a Speech-Language Pathologist and a Singing Voice Specialist, it is common to treat patients who do not engage in optimal coordination of the phonatory subsystems: respiratory, phonation, and resonance. Patients may be professional singers, or just enjoy singing as a hobby. They often present with al-

tered vocal function characterized by complaints including vocal strain, vocal fatigue, reduce pitch and or loudness range, difficulty with register transition, voice breaks, pitch instability, and odynophonia, to name a few. The symptoms apply to both in speaking and singing voice.

Whether the patients need surgical intervention or not, voice rehabilitation is an integral part of the care protocol. Much of the time, the goal of the voice rehabilitation involves unloading of the acquired laryngeal muscle tension, oral tone focus sound production, and vocal hygiene. Some of the most effective evidence-based physiological approaches include Resonant Voice Therapy, Vocal Function Exercises,

Circumlaryngeal Massage, and Semi-Occluded Vocal Tract Exercises.

All of these techniques mentioned are effective for both speaking and singing voice rehabilitation. However, some patients require further guidance in incorporating the newly acquired vocal technique into singing voice. It is this author’s opinion that long-term retention of ease and clarity in vocal production that is achieved with resonant speaking voice can be effectively incorporated into singing voice. Although the approach is best demonstrated in person, I will do my best to describe the process.

I focus on speaking voice therapy first by using a combination of the physiological voice therapy ap-

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“MUCH OF THE TIME, THE GOAL OF THE VOICE REHABILITATION INVOLVES UNLOADING OF THE ACQUIRED LARYNGEAL MUSCLE TENSION, ORAL TONE FOCUS SOUND PRODUCTION, AND VOCAL HYGIENE.”

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proaches best suited for the patient.

Once the patient is consistently producing spontaneous resonant speech, I introduce pitch range navigation exercises. I use the metaphor of differently sized houses, explaining that each pitch has a "house" inside the vocal tract that is appropriate for that pitch. They have to let the house sizes change from pitch to pitch, one vowel to another. This has been useful in helping patients in letting go of their desire to control each note with laryngeal and vocal tract tension.

I start with lip, tongue trills, /m/ chanting, or resonant voice syllables while emphasizing balanced phonatory onset. This is accomplished with the use of motor learning principle focusing "outcome" rather than the "process." The singer is

asked to put a fist out in front of his or her face, and visualize that the sound is inside of the fist. The singer phonates by letting go of the sound from the fist. This psychological game helps the singer focus on the outcome rather than the process of phonation. The next trial is to phonate without the hand gesture and note any physical difference between phonating with the gesture and without. Repeat until the singer is proficient in resonant phonatory onset. Patients must understand that the goal is to focus on the feel of resonant voice even in singing.

Once the singer can produce a resonant voice onset, we move on to **pitch range navigation** in small interval increment. This is achieved by putting a hand right in front of the lips as if the singer is about to turn a knob away from the lips. After a balanced onset, the singer turns the knob away from the lips as she changes pitch, simulta-

neously with the turning motion of the hand. As with the previous exercise, the patient focuses on the hand rather than the throat. The ease of voice should be the same whether the singer is singing the intervals of half step, major 3rd, fifth or an octave. I prefer to start with small intervals so that the singer can perceive the physical difference in comfortable range before raising the task difficulty. There are much to be negotiated physically in pitch range navigation as subglottic pressure must be adjusted masterfully. Once the pitch is produced in resonant voice, the right amount of subglottic pressure is engaged. Now the key is to maintain that engagement and adjust to the newly required subglottic pressure without unwanted laryngeal and/or vocal tract muscle tension. Now the exercises can be transitioned into triads, arpeggios, and musical phrases.

In my clinical experience, the concepts explained above can be executed at all skill levels and genres of singing.

MODIFIED VOCAL FUNCTION EXERCISES

Nandhu Radhakrishnan, PhD, CCC-SLP

Objective: The objective of this exercise regime is similar to vocal function exercises. My target is to engage the larynx without increasing tension, improve physiological frequency range, enhance vocal economy without any strain, increase endurance by coordinating airflow and glottal adduction, and to improve vocal endurance and strength. This physiologic exercise enhances the overall balance of the subsystems involved in voice production (respiration, phonation, and resonance).

Vocal Function Exercises (VFE), by Joe Stemple, have been widely used and reported in the literature after publication of the first study (Stemple, Lee, D'Amico & Pickup, 1994).

The strategic protocol and the rationale behind the eight steps involved appear logical and relate well with exercise physiology. In my practice and experience from supervising graduate clinicians I have noticed patients from the geriatric and vocally untrained group facing difficulty in observing key concepts like frontal focus, lip buzz, and musical notes. Consequently, I have had patients not able to practice them as homework. To overcome this situation without sacrificing the exercise regimen, I modified the instructions to enable these patients understand and follow these eight steps (Radhakrishnan and Scheidt, 2012). Below is a table comparing VFE to modified VFE.

(Continued on page 5)



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Evaluation & Enhancement)*

NATS/TVF CHAT SEASON!

The NATS ([National Association of Teachers of Singing](#)) Chats, sponsored by [Inside View Press](#), are live online, real-time discussions for voice teachers and singers; SLPs; and Laryngologists. Topics vary widely and have included classical and CCM (Contemporary Commercial Music) vocal technique, vocal repertoire, teaching strategies, business strategies for private studio teachers, resources for university teachers, and arts advocacy. Guests have included prominent teachers, authors, composers, and artists.

**May NATS Chat - Guest: Paulo Szot, renowned Met and Broadway Star,
"Classical Crossover: From the Met to Broadway and Back"**

Date: May 21, 2017 (Third Sunday)

Time: 9:30 p.m. ET / 6:30 p.m. PT

[Register HERE](#) for the May NATS Chat.

[FULL CHAT SCHEDULE](#)
[NATS CHAT FAQ](#)
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MODIFIED VOCAL FUNCTION EXERCISES (CONTINUED)

	Instructions	
	Vocal Function Exercises	Modified Vocal Function Exercises
Warm-up	Sustain vowel /i/ as long as you can on musical note F4	At a comfortably high pitch, Sustain vowel /i/ as long as you can using a nasal twang.
Stretching	Glide from low pitch to highest pitch on the vowel /o/ as in the word ‘ knoll ’ .	Using this straw, glide from low pitch to highest pitch
Contracting	Glide from highest pitch to low pitch on vowel /o/ as in the word ‘ knoll ’ .	Using this straw, glide from highest to low pitch
Power	(i) On musical note C4, sustain the vowel /o/ as long as you can	Imagine standing in front of a staircase: (i) Using this straw, at your comfortable pitch, and standing on the first stair, sustain your voice as long as you can
	(ii) Repeat the above step on musical note D4.	
	(iii) Repeat the above step on musical note E4.	
	(iv) Repeat the above step on musical note F4.	(ii) Climb up to the second stair, one step up in pitch, and sustain your voice as long as you can.
	(v) Repeat the above step on musical note G4.	(iii) Climb up to the third, another step up in pitch, and sustain your voice as long as you can.
		(iv) Climb to the fourth, another step up in pitch, and sustain your voice as long as you can.
		(v) Climb to the fifth, another step up in pitch, and sustain your voice as long as you can.

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Special instructions for VFE:
Frontal focus during warm-up, active lip-buzz during stretching, contracting, and power building steps.

Modified VFE: Use a straw that

has a diameter of a ball-pen refill.


Both these exercises have shown comparable results in my experience indicating that the modified version did not diminish the goals of VFE. Reflections from patients’ practice have shown compliance to these modified exercises because they are easier to remember and associate.

References:

Stemple, J. C., Lee, L., D'amico, B., & Pickup, B. (1994). Efficacy of vocal function exercises as a method of improving voice production. *Journal of Voice*,8(3), 271-278.

Radhakrishnan, N., & Scheidt, T. (2012). Modified vocal function exercises: A case report. *Logopedics Phoniatrics Vocology*,37(3), 123-126.





World Voice Day

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Justice Sandra Schultz Newman, Gala Chair

Cordially invite you to the gala on **Friday, June 2, 2017**

Voices of Summer Gala Honoring

Reri Grist

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International Star*

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*President, Artistic Director
Academy of Vocal Arts*

Daniel V. Schidlow, MD

Dean, Drexel Medical University

Tommy Tune

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6:00pm Cocktails-Reception

7:00pm Dinner, Awards, Entertainment, Dancing

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The Playful NG-Siren

BY JOANNA LOTT, MA, CCC-SLP

Objective: To understand the use of ng-siren to discourage poor habitual breathing patterns and improve coordination of breath with voice resulting in improved vocal quality and efficiency in singers wishing to return to choir.

Recently, my caseload has been disproportionately women over 65 who have faced a set-back related to muscle tension dysphonia, mild glottic insufficiency, or both. For all of these women, the goal is to sing in the choir again. Complaints include vocal instability, loss of range, difficulty getting loud, increased effort and vocal fatigue. For these patients, my go-to therapy tool, especially when it is time to address the singing voice, has been the “ng” siren.

I find the “ng” siren to be a great tool to repair poor habits related to breathing in adult singers. None of my current caseload had ever had a voice

lesson, but all felt 100% confident in one rule – sing from the diaphragm. Each of these singers displayed a well ingrained habit of taking in a large volume of air, with little to no regard for what came next (phrase length, loudness, quality, etc). Then, the rule on the exhalation, without fail, was to push the air out with the abdominal muscles (and sometimes the hands). The result: overbreathing and overblowing, yielding poor vocal quality and efficiency.

The ng-siren is introduced, allowing the patient to notice several things: 1) greater endurance, 2) greater vocal stability, and 3) access to broader range. What they might not notice, but what is arguably most important: the patient starts adjusting the breath to meet the needs of the target sound. This happens without the clinician directly addressing a change to the breathing. The target for the siren is soft, but not breathy. If the pa-



JOANNA LOTT, MA, CCC-SLP

*Speech Pathologist & Voice Specialist
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tient overblows the siren, it will become breathy or loud.

Ng siren is easy to teach. It should sound like a siren, meaning there is no set interval or beginning middle end that the patient might be expecting – it’s just gliding through the range on the sound “ng.” The hardest thing can be getting the patient to sustain the “ng” sound, because it’s not something we usually sustain. Simply have the patient say the word “sing” and sustain the “ng” sound at the end. I instruct them to use a “soft, but not breathy” quality.

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NG-SIREN CONTINUED

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Another important point to make is to allow the voice to sound different from the patient's habitual singing or speaking voice. Sometimes the voice will break within the first few moments of the siren, causing the patient to stop and say, "I guess I'm not doing it right." I encourage the patient to let the voice break, using it as an opportunity to explore and repair the "glitches" in the voice. I call this the Loop-de-loop.

In the loop-de-loop with the siren, the patient notices a break, and revisits that part of the range making subtle adjustments until the break resolves. This also helps the patient understand the relationship between the breath and the voice, introducing a new relationship that involves coordination of the mechanisms within the

system, rather than breath as the main driver for voice.

My knowledge and understanding of the "ng" siren comes from Estill Voice Training, but I don't think the patient has to know Estill to achieve this target sound and the vocal ease that comes with it. There is effort involved, in the soft palate and the occipital region, but if the effort is targeted and specific it can release unwanted tension.

I also love that the siren can be

"I also love that the siren can be practiced so quietly, making it a much more accessible practice exercise than some others"

practiced so quietly, making it a much more accessible practice exercise than some others. It is also easy to transition from the simple ng-siren to using the ng to hum through a song – again, allowing for quiet practice. Once the patient has mastered siren through a song, we some-

times attempt "mirening," which is mouthing the words while humming through the song on the ng sound. At first, this can feel very uncoordinated – kind of like rubbing your belly and patting your head at the same time. But if the patient can get the hang of it, it can be another valuable step toward releasing muscle tension in the jaw and tongue.

My instructions for practicing the ng-siren: Using a soft, but not breathy voice, glide on the ng sound throughout your range. The goal is an easy feeling in the throat, but you may feel effort in the roof of the mouth and the back of the neck. Avoid practice scales or intervals – let this be free and fun. Siren for as long as you can on one breath. Siren a little higher or lower each time, as is comfortable for you. Siren through your favorite song and notice when old habits try to kick in, changing the quality or where you feel the effort. Allow your voice to sound different – even what you would consider bad or wrong. Just play.



just play.

Reri Grist



TOMMY TUNE



VOICE FOUNDATION NEWS

46TH ANNUAL SYMPOSIUM: CARE OF THE PROFESSIONAL VOICE

CHAIRMAN, ROBERT T. SATALOFF

MAY 31–JUNE 4, 2017 PHILADELPHIA PENNSYLVANIA

Wednesday, May 31

Basic Science Tutorials

Accent Reduction Coaching

Thursday, June 1

Science Sessions

Quintana Awardee: Dimitar Deliyski, PhD

An Engineer in DysphoniaLand

Keynote Speech: Robert Zatorre, PhD

Panels

Poster Session

Friday, June 2

Special Session:

Transgender Voice: Insights and Updates

Nancy P. Solomon, PhD

Lance Wahlert, PhD

Wylie Hembree, MD

Robert T. Sataloff, MD

Adrienne Hancock, PhD, CCC-SLP

Jenni Oates, PhD, M App Sc.

Georgia Dacakis, B App Sc (Sp Path), Grad

Dip Comm Dis., M. Ed

Young Laryngologists Study Group

Vocal Workshops

Voices of Summer Gala**Saturday, June 3**

Mixed Sessions

Panel: *NIDCD Funding of Voice Research*

G. Paul Moore Lecture - Sten Ternström, PhD

*Mind the Gap***Special Session:***Training for the Professional Speaker*

Aliaa Khidr, MD, PhD, CCC-SLP, Moderator

Professional Speakers Work Force

Eeva Sala, MD, (Finland)

Future Speech-Language Pathologists

Aliaa Khidr (USA)

School Teachers

Fabiana Zambon, SLP, MSc (Brazil)

Television Reporters

Vanessa Pedrosa, MSc (Brazil)

Radio Reporters

Bernadette Timmermans (Belgium)

Fitness instructors

Anna Rumbach, PhD (Australia)

Teklemarketers

Ana Elisa Ferreira (Brazil) :

Catholic Preachers

Kate Burke, MFA (USA)

*Vocal Master Class: Reri Grist***Sunday, June 4**

Medical Session

Panel: *What ENTs Need To Learn from Their SLPs: Tough Love From Your Most Important Voice Care Partner*Panel: *Case Studies in Laryngology– Pushing the Limits*

Voice Pedagogy Session



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