

FROM THE DIRECTOR'S DESK

The great news is we have a wonderful new Administrative Assistant at the CVCF. Let me introduce you to Jennifer Churchill. She is my right and left hand! I am truly grateful to have found someone with whom we shall be able to reach new and higher horizons.

We recently held two fundraising events:

Jerry Seinfeld in Montréal and a VIP Reception with **Julio Iglesias** in Calgary. A big thank you to all of you who attended, and provided support and sponsorship. It was difficult to promote tickets sales in the darkness of the horrific attacks of September 11th. Our lives and freedoms as we have known them have changed forever. It has taken such a catastrophe for all of us to realize how we have for far too long taken our freedoms for granted.

The plans for the 5th International Care of the Professional and Occupational Voice Symposium are in the initial stages. We hope to hold the conference in Montréal, TBA October 2002, and be back in the east to give more people the opportunity to attend the informative tutorials in voice care. If you have any requests or suggestions for this event regarding faculty and topics, please let us know.

Unfortunately, our goals were by far not met in our fundraising events of September. The tragedy and surrounding days and weeks have left us with the need to ask all of you to help. NOW is the time to support the Canadian Voice Care Foundation. As we are a national non-profit, your donations are tax deductible! Your support will help us to hold an even more substantial and comprehensive symposium.

The Voice Foundation meeting in Philadelphia was great and invigorating as always. The workshop on Energization Through Exhalation which I presented went very well and got a lot of interest.

We ask you and welcome you to submit articles for possible publication in upcoming issues of Voice Talk.

Have a wonderful fall and holiday season, get your well-earned vocal rest and regain your strength and energies through the beauty surrounding you. Let your resonant voices echo throughout the year to bring peace everywhere!



IN MEMORIAM

A few words regarding the tragic passing of Keith Mann (1939 - 2001), Director of Bands at Red Deer College, and founding Chair of the Red Deer College School of Music. For me, he was a mentor, as he and Jim Foote in Red Deer made it possible for the Canadian Voice Care Foundation to have our first conference. His association was not only as a band person, but also a voice person, always ready with a hand of support and a smile.

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What Music Educators Wished They Had Learned

Sharon L. Radionoff, Ph.D.

The field of music education requires high end voice use which starts when the bell rings and continues to days end without any real voice off or voice rest time. Music educators can have up to 8 classes back to back per day (including double class loads of 60-70 students). There may be a scheduled lunch hour but they often have to “serve” lunch duty. Other voice use requirements can include bus duty after school and/ or hall duty as well. The potential is high for breeding hyperfunction (excessive laryngeal muscular activity).

Music Educators use voice for instruction, demonstration, and discipline. Therefore, they switch back and forth between speaking and singing many times during one class period. Unfortunately, the luxury of possessing one larynx for singing and one for speaking is not available. What does this mean for the music educator? It means that speaking habits must be as pristine as possible to ensure vocal survival. This, however, is most often not the case.

It is common for music educators to demonstrate the following speaking habits during conversational speech: (1) excessively low pitch, (2) low airflow, (3) harsh glottal attacks, (4) laryngeal resonance, and (5) pushed/ pressed voice. These technical faults often occur as a result of the teacher trying to sound more authoritative and stern. These speaking habits then bleed into even the best singing techniques. Common singing problems include: (1) loss of range (usually upper), (2) pushed/ pressed chest voice, (3) strained head voice, (4) loss of flexibility and (5) hoarseness. Remember we have only one larynx. Therefore, what we do when we don't sing will directly affect what we do when we sing. It is critical to career survival for a music educator who experiences difficulty to undergo both speech therapy and singing voice training. It is critical to career survival for a music educator who experiences difficulty to undergo both speech therapy and singing voice training.

This therapy/ training is made more beneficial if the therapist understands the physical and vocal demands of the music educators' livelihood. The physical demands can create an atmosphere where misalignment of body posture may occur. This is significant because the body skeleton is the frame for the human vocal instrument. Therefore, music educators must pay close attention to the way their “frame” is aligned. Misalignment of body posture can interfere with the “systems balance” that constitutes the voice.

In order to create a dependable technique there must be a balance of the respiratory system, the oscillator (vocal folds), and the resonator (supraglottic vocal tract – comprised of the supraglottic larynx, tongue, lips, palate, pharynx, and nasal cavity). When this balance does not exist, the singer will create compensations in order to achieve a desired sound. There are certain areas where problems frequently occur. The major areas which need to be monitored are: (1) Stance/ posture (2) Head/ Neck position (3) Jaw position, and (4) Tongue position. The position of the postural elements mentioned above will affect breath flow, breath support, resonance, and voice quality. Misalignment of the “frame” of the instrument will cause a chain of compensations to occur in the “systems balance”. This can cause minor vocal difficulties which may eventually lead to pathologies such as nodules.

In the following section I have outlined two common scenarios which music educators encounter. Each scenario has corresponding sections entitled “red flags” and “problem solvers”. The red flags section refers to potential pitfalls which commonly occur in the given scenario. The problem solvers section may either help resolve existing vocal problems, or avert potential problems. These issues must be monitored in order to sustain vocal health as a music educator.

Scenario 1: You are a elementary music educator and teach with an upright piano positioned in front of your class (you accompany all of your own classes). You either sit on a regular piano bench or stand.

Problems Solvers: Sit on a stool. This will put you in a better line of vision with your students. It will also allow you to use a healthy head/ neck position and better upper torso/ sternum and back position. In turn, you will be able to release and use your abdominal muscles for breath support. If you have a small enough class, you may wish to have your students come around the piano.

Scenario 2: You are a middle school or high school choir director. You may direct a mixed chorus, girls ensemble, and/or boys ensemble.

Red Flags: Are you in the habit of "helping" different sections by singing all of the parts (even if the part is out of your natural range?). Are you continually demonstrating vocally? When you conduct, do you use proper upper torso/ sternum position or is your chest collapsed and are your shoulders hunched forward? When you cue sections, what is your head and neck position? Are you elevating and protruding your head and neck? Just as in the previous scenario, the question of how you sit at the piano is a key issue. (You may be in luck and have an accompanist other other than yourself!).

Problems Solvers: Singing out of our natural range will cause you to create compensations of your head/ neck alignment, tongue, and larynx position. You can help alleviate these problems by using different methods to teach parts. You might choose to (1) use students to demonstrate, (2) play the part on the piano, or (3) have a couple of the musicians with good ears demonstrate while you play the piano. In order to monitor conducting posture, practice conducting and cueing your music in front of a mirror. Also write postural reminders for yourself such as "upper torso/ sternum" on index cards and place them in strategic places. In regard to placement of the rehearsal piano, if you

accompany your own ensembles, the same issues apply as in the previous scenario.

Many music educators are often also involved as church choir directors, paid church soloists or cantors, or performing entertainers, and direct or participate in community theatre and choruses. Each of these scenarios has its own set of "red flags" to monitor. On a demand scale of low to high end voice use, a music educator is definitely a high demand voice user. Therefore, it is crucial to vocal health and survival (not to mention enjoyment) to be on guard and monitor for possible "systems balance" pitfalls. This will help to ensure healthy vocal production and allow music educators to continue voice use for a livelihood as long as they choose, and not have to stop because the voice won't allow them to continue.

Sharon L. Radionoff, Ph.D.

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Peace on Earth

Controlling Mucus Through Diet

W. Benson, RD, MPH

Milk forms mucus, so don't consume it before you perform. How many times have the myriad of professionals who use their voice professionally heard this piece of advice?

But is the bit of folklore based on fact or myth? For decades, indeed if not centuries, this bit of folklore has been passed along. A scientist finally tested the theory by comparing people's sensation and symptoms of "milk mucus: after drinking milk or a soy placebo. He studied 169 people, of which 70 believed milk produced mucus. There were slight increases in feeling for only three of fourteen sensations; specifically a coating or lining in the mouth, throat or tongue; increased need to swallow and thicker saliva. The feelings were evident at five minutes but completely gone by four hours. The amazing observation for the researchers was that these sensations were the same for both cow's milk and soy milk! After all these years, milk is not the culprit we had thought.

So why make a big deal of this? The researchers continued to ask questions. It turns out that people who believe milk causes mucus drink less milk and eat less cheese than "non-believers". With inadequate calcium intakes being one of the most common nutrient

deficiencies for Canadians, especially women, it's time to address the myth.

A second consideration is the nutrition consequences for people who use their voices for hours at a time. If they avoid milk products, their overall diet may suffer needlessly.

For the professional voice, truly determine if you are in the minority of people who may develop mucus from fluids like milk or soy milk. Perhaps the solution is to have a glass of water to rinse the mouth and throat of mucus. If you use your voice to communicate for hours at a time such as a teacher, **sips of water may be the best long term answer.**

By including milk and milk products in your diet as one of many healthy foods, your body will be eternally grateful.

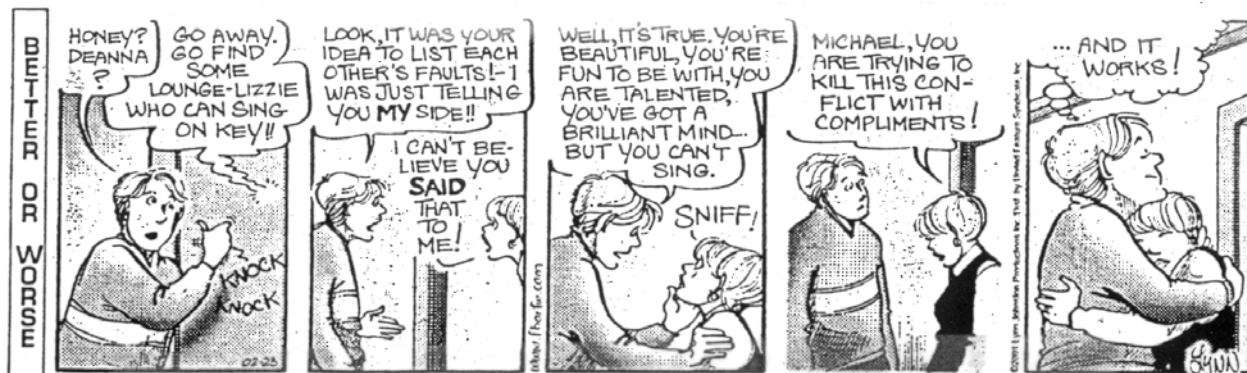
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Reference:

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Voice Dysfunction in the Broadcasting Professional

Michael S. Benninger, MD

Q: To date, there is a storehouse of information on voice problems of the professional singer, but what is known about other professionals who depend on their speaking voices for their livelihood?

A: Professional voice users are individuals who rely on their voices to perform job-related tasks successfully. They are public performers, preachers, teachers, salespersons, telephone operators, aerobics instructors, receptionists, and many others who would be seriously affected in some way by prolonged loss of voice. Anecdotally, most laryngologists and voice pathologists have had frequent occasion to treat nonsingers in voice-related professions. Despite these experiences, little data are available to describe the incidence, severity, amount of disability, assessment, treatment, and outcome in these voice professionals. Included in this population are radio and television broadcasters, whose voices are highly “visible” and who continuously face the potential for scrutiny should voice dysfunction occur.

Q: What is known about voice dysfunction in broadcasters?

A: Large amounts of evaluation data are lacking. In the Department of Otolaryngology – Head and Neck Surgery and the Division of Speech-Language Sciences and Disorders at Henry Ford Hospital, we have attempted to evaluate professional voice users via questionnaires sent to radio and television broadcasters in the greater Detroit metropolitan area. The purposes of the evaluations were to determine the prevalence and severity of voice problems in this group, to describe the most common voice-related problems and complaints, to describe the management methods used for the voice problems, to compare the prevalence of voice

problems in vocally trained and nontrained broadcasters, and to assess whether the weekly amount of professional voice use in broadcasters was related to the incidence of voice disorders.

Fifty broadcasters from 13 radio and television stations participated in the questionnaire survey. Thirty-four respondents were radio broadcasters, 14 were television broadcasters, and 2 performed in both radio and television. There were 40 men and 10 women. We evaluated the severity of voice problems by using the length of time respondents were absent from work because of their inability to use their voices. Fourteen of the 50 respondents (28%) were smokers. Nine of the 14 (64%) were television broadcasters, and 5 of the 34 (15%) were radio broadcasters. It was interesting to see the frequency of cigarette smoking among television broadcasters, given that the detrimental effects of smoking on the voice are well recognized. Despite this high rate of smoking in these television broadcasters, they did not have more frequent voice problems than the radio broadcasters. Decreased amounts of professional voice use for television broadcasters may be related to this finding. Furthermore, physical appearance may mask minor voice changes that are overlooked. These minor changes might be more noticeable in radio broadcasters who are more dependent on voice alone.

The weekly amount of professional voice use ranged from 5 to 56 hours per week, with an average of 28 hours, eighteen (36%) had 6 or more years of professional broadcasting experience. Twenty-three (46%) reported that they had received, or were presently receiving, some type of formal voice training that included vocal music classes, speech classes, and voice treatment.

Voice complaints were common among the respondents. Forty-two of the 50 broadcasters (84%) reported at least one voice complaint during the previous

year. The most common complaints were hoarseness, decreased pitch range, vocal fatigue, throat dryness, and sore throat. Self-management for voice problems was preferred over medical management. Twenty-eight of the 42 respondents with voice complaints (67%) did not seek medical help intervention. The other third saw a medical doctor for their complaints. The most popular self-management remedies reported were external humidification, voice rest, tea with honey, hot soup, and salt water gargles, three of the subjects reported use of home remedies that are known to have detrimental effects on the voice, including alcohol, coffee, and a lower than normal habitual pitch.

Ten of the 42 subjects (24%) with voice complaints during the previous year underwent voice training because of their problems, one had voice treatment from a speech-language pathologist, five worked with a singing teacher, and four took lessons in dramatic arts.

Fifty-six percent of the broadcasters had voice problems that resulted in at least one day of absence from work. Six broadcasters missed more than 3 work days, and only one missed more than 7 days of work due to voice dysfunction. There was no difference between the radio and television broadcasters. The most commonly reported voice problem that resulted in absence from work was hoarseness associated with acute or chronic upper respiratory tract infection. The frequency of absence from work due to a voice dysfunction did not seem to be lessened by having previous voice training nor affected by the weekly amount of professional voice use.

Q: Are there other factors that can place broadcasters at risk for problems with their voices?

A: Radio and television broadcasters would seem to be inherently at risk for voice problems. This could be related to overuse or poor technical training. Furthermore, allergies or upper respiratory tract infections might affect performance. Some broadcasters may attempt to habitually use a lower pitch to obtain a more dramatic "vocal signature".

Koufman and Blalock (1988) have described the habitual use of a pitch that is slightly higher than the lowest note in the pitch range, with a concomitant musculoskeletal tension dysphonia. They call this set of vocal behaviors "The Bogart-Bacall Syndrome". In their study, 4 of the 67 subjects who received voice treatment for musculoskeletal dysphonia had some degree of voice improvement.

Some environmental conditions in the studio may play a role in how well the broadcaster's voice functions. Television studios are often dusty and dry. This is exacerbated by the effects of bright lights and the associated heat. The drying may predispose broadcaster to laryngeal and pharyngeal irritation with secondary vocal dysfunction.

The use of sound feedback systems may also affect vocal behaviors. Stereo headphones have maximal output of almost 120 dB SPL, whereas unilateral, in-the-ear listening devices are often used with relatively high volume to overcome conflicting sounds for the nonfitted ear. Both of these feedback systems may result in the use of increased vocal loudness due to the Lombard effect. Pitch may also increase in the presence of background noise. When subjects use an earphone, mean pitch increases by about one-half semitone per dB of sound level (Gramming, Sundberg, & Ternstrom 1988). Those broadcasters who work outside of the studio, particularly on-the-street reporters, have much less control over environmental conditions than those who work inside the studio. Adverse weather conditions, substantial and uncontrollable background noise, and poor acoustics may negatively affect voice production.

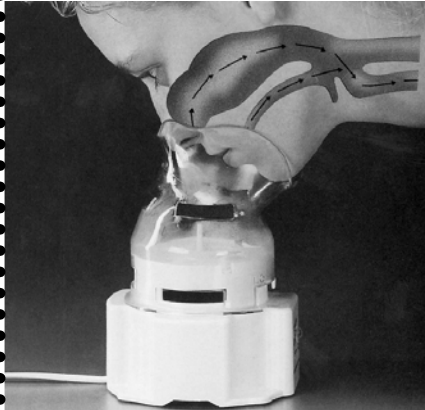
Often these broadcasters have less experience, and may not have developed the vocal techniques needed to overcome these external obstacles. Vocal strain, irritation, edema, or musculotension-related dysphonia may ensue.

Radio and television broadcasters are often in positions of high public visibility and, as a result, depend on their voice outside the studio. A hectic schedule with personal appearances can affect diet and lifestyle, which may contribute to a voice problem. Late-night eating after such appearances, or following their evening or night programming, may predispose to gastroesophageal reflux, which is a common source of dysphonia. In many cases, frequent air travel may be necessary. Continuous voice use

(Continued on Page 9)

Calendar of Events

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(Continued from Page 7)

and the dry and loud conditions of an aircraft cabin could have negative effects on the voice. This has prompted many vocologists to advise voice professionals to use their voices carefully and sparingly during their travels.

Q: Why do you think the incidence of voice problems unrelated to upper respiratory tract infections among the broadcasters was so low?

A: Many factors play a role in the relatively low incidence of voice problems unrelated to upper respiratory tract infections. In most broadcasting studios, volume and sound feedback are well modulated. Voice projection is usually not a problem because volume can be easily adjusted to compensate for voice with inadequate loudness. Some broadcasters host jazz, classical, or late-night programs that require the use of an easy, calm, confidential tone. Finally, voice use for these performances is often in short bursts with frequent breaks for music, commercials, and other speakers that allow for periodic periods of voice rest. Voice use is rarely continuous over long periods of time, and the amount of total voice use is probably substantially less than that perceived by the respondents in our survey.

Q: Would voice training be of benefit to broadcasters?

A: Unlike most singing professional, many broadcasters have no formal voice training. Evidence suggests that an excellent singer is usually not physiologically superior to the nonsinger, but has benefited from technical voice training (Brown, Hunt & Williams (1988). Voice treatment has also been found to help the actor with vocal style while maintaining the integrity of the voice. Furthermore, it is generally thought that voice training may be instrumental in preventing voice-related dysfunction. If these suppositions are accurate, voice training in broadcasters would improve voice quality and help prevent injury despite our survey not supporting voice training as protection against voice problems. In addition, the amount of professional voice

use did not correlate with increased incidence of voice problems. However, based on experience with other voice professionals, voice training by a voice therapist or teacher of acting, oration, or music could serve to improve voice quality, prevent potential injury, and help the individual compensate for any voice problems that may occur.

More information is needed to determine if proactive voice care is beneficial in preventing or curtailing voice problems in this distinct group of professionals.

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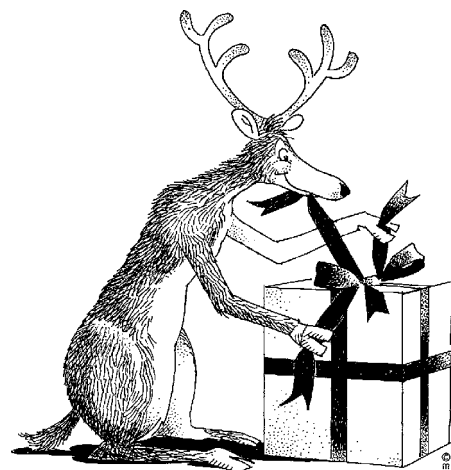
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American Journal of Speech-Language Pathology, Vol. 4, No. 1 © American Speech-Language-Hearing Association Reprinted by permission.



Vocal Definitions

NEUROLOGICAL DISORDERS

Neurological Disorders result from malfunctioning of the neural "firing patterns" that produce vocal coordinations. Distinguishing between neurologic and psycho-genic disorders is sometimes a challenge for physicians and voice therapists.

Vocal Fold Paralysis means that the motor nerves for one or both vocal fold paralysis is injury to one or both of the recurrent laryngeal nerve during neck or chest surgery. The left recurrent laryngeal nerves extend more deeply into the chest than the right recurrent laryngeal nerve. In uncommon instances, a laryngeal motor nerve can become disabled because a viral infection has "lodged" in it. Temporary or permanent paralysis may result.

Apraxia results from the destruction or impairment of nerve cells in Broca's area of the brain that "plan" motor programs for speech. Under appropriate circumstances, trained speech pathologists or music therapists may be able to use singing to: "reroute" speech function through nearby intact neural pathways that previously were used for singing.

Spastic Dysphonia and other movement disorders can be the result of neurologic dysfunction, but may have a psycho-genic origin in some people. A common voice symptom is frequent, uncontrollable

"surges" of vocal "strain" or "strange-like" phonation in continuous speech.

ENDOCRINOLOGIC DISORDERS

Endocrinologic Disorders result from imbalances in the hormonal secretions of the body's endocrine glands.

The gland that impacts most directly on voice is the thyroid gland that is located at the base of the thyroid cartilage. **Hyper-Thyroidism** is an over-production of thyroid hormone that results in increased metabolic rate and disturbances of the autonomic nervous system, such as increased heart rate. These symptoms are thought to contribute to an "overworking" of the larynx.

Hypo-Thyroidism is an under-production of thyroid hormone. Among a number of other effects, the condition may result in the deposit of a gelatin-like liquid into the superficial layer of the vocal fold mucosa. The effects on vocal ability include reduction of pitch range and vocal fold agility, and the condition may manifest itself in a reduction of upper partials in the vocal fold spectrum. "A veil over the voice" is a common description of the voice quality.

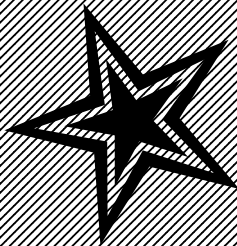


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