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# Dispelling Vocal Myths. Part 3: “Sing OVER Your Cold!”

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## VOCAL FOLD SWELLING: MYTHS AND FACTS

**T**HIS, THE THIRD IN A SERIES OF ARTICLES about misconceptions that singers harbor about their instruments,<sup>1</sup> examines some myths and truths about vocal fold swelling, particularly as it pertains to upper respiratory infection (URI). Colds and flu are a pervasive part of our lives as singers, and it is clear that singers have heard a great deal of information on the topic. Much of the information is conflicting, and it comes from a wide variety of sources, such as physicians, television commercials, other singers, and grandmothers. Singers are eager to know what information is valid, and they are eager to dispel myths.

## VOCAL FOLD EDEMA

Edema classically refers to an excess accumulation of thin or serous fluid in connective tissue—typically just beneath the skin or mucosa. This can happen anywhere in the body and is seen as swelling of the area affected. When it occurs in the vocal folds the fluid accumulates in a specialized area below the surface covering (epithelium) known as Reinke’s space. Reinke’s space is the gelatinous layer of the vocal fold that allows vibration at a wide variety of frequencies and configurations. When a vocal fold is edematous, or swollen, much of its ability to vibrate at higher frequencies is lost. The greater the amount of swelling there is, the greater the loss of vocal range. Swelling will also affect the smoothness and regularity of vocal fold vibration resulting in a rougher quality to the sound. Depending on the cause, edema can affect the entire length of the vibrating part of the vocal fold, or a small and discrete section.

Vocal fold edema can occur from natural and legitimate causes, such as URI or hormonal status. It can also result from non-voice-related high impact activities, such as coughing or throat clearing, or high impact vocal behaviors such as prolonged, loud voice use. Many high impact vocal behaviors are perfectly legitimate, and in limited amounts should not necessarily be dangerous for a healthy larynx. Most of us can talk at a noisy party or cheer at a sporting event with no undue consequences. With a healthy larynx, if we do develop some hoarseness after loud voice use, it can resolve within a day. It is important to note that the tendency to develop vocal fold edema is highly individual, and unrelated to talent. Some individuals can yell all night with

no hoarseness, and others become hoarse quickly. On the other hand, the act of loud voice use may predispose some individuals to development of edema and the consequent hoarseness. It is important for singers with needs for frequent or prolonged loud voice use to learn techniques and strategies to minimize vocal fold impact as much as possible.

Vocal fold edema can be acute or chronic. Acute edema is typically reversible with time, particularly with a viral URI, or with a reduction in trauma or even voice rest. Chronic or long standing edema may be reversible, but resolution can be much more difficult. Intervention should focus on reduction or elimination of the cause of the edema to accomplish the greatest long term results.

Reinke's edema is a chronic form of vocal fold edema that can be severe. It is typically seen in smokers who overuse their voices for a long period of time. There is a variable susceptibility to this disorder, however, as most people who exhibit these behaviors will not develop significant Reinke's edema. On examination of the larynx, polypoid swellings of variable size with a base along the entire vibratory surface of the vocal fold can be seen. The vocal range becomes abnormally low with a rough quality. The effects on voice quality loosely parallel the severity of the vocal swelling. Stopping tobacco use and improving vocal technique can improve voice quality, but resolution of large edematous swellings often requires surgery.<sup>2</sup> Fortunately, most serious singers will maintain sufficient vocal and general health to avoid severe or even moderate Reinke's edema. After many years of voice use, a few singers may develop a subtle chronic edema that produces voice changes noticeable to them, but it would be visible only with careful laryngeal exam and stroboscopy. Some professional voice users (including singers and actors) rely on the characteristic sound of mild Reinke's edema for their husky voice quality. Other medical conditions resulting in vocal fold edema are unrelated to vocal hygiene or vocal technique, and are beyond the scope of this article.

### **SYMPTOMS OF SWELLING**

Edema disrupts vocal fold vibration in a variety of ways. The stiffness and irregularity of the mucosa result in irregular or aperiodic vibration, which results in a roughness to the voice quality. Singers may refer to this as a

“gravelly” quality. Irregularity of the vibratory margin, or glottis, may also result in air escape during phonation. The turbulent noise of the air escape is known as breathiness; singing teachers are well acquainted with this sound. There are many lay descriptions for this quality; “raspy” and “laryngitic” are two commonly heard in the clinic. Many singers will refer to laryngitis as the sound of the voice, as opposed to simply inflammation of the larynx. Hoarseness associated with upper respiratory infection is quite recognizable. In the case of mild, especially localized swelling, the classic symptom is delayed onset in high, soft phonation. At the onset of phonation, there is a brief burst of air, after which the voice “cuts in.” This is also the classic vocal symptom in vocal lesions such as nodules.

### **Swelling Myth #1: The worst thing that can happen to a singer is “nodes.”**

Singers seem terrified of vocal nodules, commonly called “nodes.” In reality, although nodules are a nuisance, in the scheme of “bad things that can happen to singers,” they are relatively innocuous. Nodules are a response to chronic trauma along the surface of the vocal fold. They tend to occur at the middle of the vibratory portion of the vocal fold where the amplitude of vocal fold vibration—and thus the local trauma—is greatest. The epithelium responds to this trauma by creating a greater protective surface. The process involves damage to a small section of the epithelial surface and a resultant inflammatory response. The tissue responds by thickening of the epithelial surface, increasing fibrous tissue (improving tissue support), and occasionally increasing the amount of gelatinous material in the underlying layer (edema).<sup>3</sup> Unfortunately, the presence of a nodule increases the trauma at that site due to the raised surface at the point of maximal contact. Both vocal folds are typically affected, and thus the nodules are seen on both vocal folds at matching sites. If a fullness remains on one side only, the diagnosis of vocal fold nodule should be reviewed.

So how is this so “innocuous”? Like the calluses on the finger tips of guitar players or the feet of barefoot walkers, vocal fold nodules are an appropriate response to increased and repetitive local trauma. As long as the trauma remains, the “need,” from a tissue sense, for vocal fold nodules will exist. Elimination of the increased trauma will eliminate this “need” and, like the finger tips of the ex-guitar player,

revert to a more normal state. Voice therapy directed at reduction of vocal trauma is effective in the treatment of vocal fold nodules and surgery is rarely needed. Although there are much worse things that can happen to a singer, we do often see them develop at very inopportune times, resulting in delayed recitals and increased opportunities for the understudy. This no doubt leads to their notoriety in the singing world.

Because nodules result in localized areas of swelling on the vibratory margins of the vocal folds, they can cause air escape and irregular vibration. This can result in substantial disruption to singing, not only in breathiness, roughness, and delayed onset in high soft singing, but also in increased effort and fatigue associated with voice use. Increased effort can have a deleterious effect on technique. It should be noted, though, that there are other vocal fold lesions that can result in the same voice characteristics, and some of these lesions may be less likely to resolve spontaneously.<sup>4</sup> The purpose of this article is not to provide a description of every possible vocal lesion; nor is it necessary for the teacher of singing to be conversant with all the kinds of laryngeal lesions or voice disorders. Rather, we recommend that the singing teacher be alert for the vocal characteristics that may indicate vocal fold swelling, and help a student seek appropriate assessment.

### **Swelling Myth #2: Take aspirin or ibuprofen to prevent vocal fold swelling.**

This disturbing myth seemed popular ten to fifteen years ago, disappeared, and resurfaced just recently. It makes sense: aspirin and ibuprofen can help reduce swelling in joints, and therefore reduce pain. Singers believe they can take these medications prophylactically before some period of very heavy vocal demand, to prevent swelling in response to the high vocal fold impact. This could potentially be hazardous, though, because aspirin and ibuprofen inhibit aggregation of platelets that are important in clotting, and therefore can lead to increased bleeding. Thus when bleeding starts, often from vocal trauma, it takes longer to plug the bleeding vessel and more blood is lost. Escape of blood into the tissues can lead to an inflammatory response that could lead to scarring, or walling off a portion of the clot to form a cyst. The effect on platelets is reversible in a few days with ibuprophen.<sup>5</sup> With aspirin the effect lasts until new platelets are made

in a week or more.<sup>6</sup> Although the probability of vocal fold hemorrhage is low, it can cause severe dysphonia in the short term. For the unfortunate person who develops a scarring of the vocal fold following a hemorrhage, consequences can be severe.

Many singers need to take aspirin, ibuprofen, or other nonsteroidal anti-inflammatory analgesics, for legitimate reasons. This is made safer by avoiding sudden, very high impact to the vocal folds. Nonsinging activities such as prolonged coughing, yelling, or grunting thus are a greater risk. Moderate or light singing activities do not create a disproportionate risk for hemorrhage unless there is already a compromise to the vocal fold mucosa. Excessive voice use should be avoided while on anti-inflammatory medications. Each singer should judge his or her own tolerance for risk. A laryngeal evaluation can be helpful in this decision.

### **Swelling Myth #3: Take steroids to reduce vocal fold swelling.**

This is only a partial myth. Steroids in this section refers to corticosteroids that are commonly prescribed for various medical illnesses, not anabolic steroids used by athletes for performance enhancement. These steroids have a powerful anti-inflammatory effect that can be used to reduce vocal fold edema. Examples of this class of steroids include prednisone, dexamethasone, and hydrocortisone. Along with their benefits, steroids have a number of acute and chronic side effects associated with their use. The adverse effects of chronic steroid use tend to be more severe. Singers needing to reduce edema quickly for a performance or audition may be prescribed a short course of oral steroids. Caution is advised regarding the use of steroids to provide better voice quality for several reasons.

- 1) The effect may mask a legitimate case of vocal fold disease, and may make you think you're better than you actually are, allowing you to do more harm to your vocal folds by overusing them when they should rest.
- 2) In cases of chronic or prolonged vocal fold edema, the edema will often return as soon as the steroid effect is gone. While it may make sense to reduce a case of acute edema for a single important performance (followed by voice rest), it doesn't make sense to try to reduce chronic edema for a week or two if you have a long run of performances with no possibility of rest. This could cause you to injure yourself further.

3) Repeated or prolonged use of steroids can lead to a long list of side effects and is not recommended for treatment of vocal enhancement alone. Therapy should be directed to the cause of repeated swelling.

In our clinical experience, there have been singers who have been helped by a short course of steroids to get through a single performance, or weekend run, without unpleasant consequences. Others were helped, but disliked the side effects. Still others felt they weren't in control of their voices, and in retrospect, would have preferred to cancel. As with many issues, it is highly individual.

## UPPER RESPIRATORY INFECTION

### Swelling Myth #4: You can “sing over” a cold.

Vocal symptoms of upper respiratory infection (URI) are well recognized. The sore throat associated with URI is usually not in the vocal folds themselves. The pain is actually in the nose and pharynx, even more than the tonsils, with the exception being tonsillitis. There is a direct inflammatory response in these tissues that results in the typical symptoms of a cold. Stimulation of the respiratory tract at one site—for example, the nose—can result in the expression of inflammatory mediators at another site separate from the site of stimulation. Laryngeal swelling can occur during a viral nasal or pharyngeal infection by the activation of inflammatory cells, the presence of thickened mucus, or the traumatic effect of coughing and throat clearing.

Upon laryngeal examination, vocal fold manifestations are variable, usually involving mild swelling, drying, and/or irregularity of the surface. The vocal consequences are variable as well, ranging from complete inability to sing or talk, to mild roughness in the sound, or difficulty with some part of the singing range. The laryngeal manifestations and vocal consequences do not always correlate exactly. Therefore, in the clinic we are not surprised to see very mild edema resulting in a severe disruption of the singing voice, or significant irritation with only minimal change in the voice. We are also not surprised when one singer tells us he or she can talk but cannot sing, while another states his or her speaking voice is hoarse, but he or she can “sing over it” in the upper register. If the upper register is preserved, and the singer can still sing easily, there is probably not much harm from light or moderate singing. However, continued vocal fold impact could lead

to increased edema and eventually affect the voice.<sup>7</sup> Patients with an acute laryngitis may also manifest findings of a muscle tension dysphonia, with either abduction of the vocal folds or false vocal fold phonation that exacerbates and can prolong the dysphonia even after the inflammation has resolved. Therefore, it is important to ensure that the technique continues to be easy, or that if the voice must be “pushed” to sound normal, it is for limited amounts of time. How any singer experiences a URI is individual, and this year's URI may be entirely different from last year's. You cannot count on being able to “sing over” your cold.

For hoarseness resulting from URI and coughing, here are some recommendations we make in our clinic.

- 1) For vocal fold edema resulting from URI, the best option is to allow the process to resolve while taking general care of yourself. This would include appropriate hydration, rest, and a reduction of voice use appropriate to the level of symptoms. Ibuprofen and antihistamine can reduce vocal fold swelling, but they have the adverse effects of inhibiting platelet aggregation (ibuprofen), or drying of the tissues and sedation (antihistamine). Use of these medications should be associated with a reduction in voice use. If you have a viral URI, antibiotics are not used.
- 2) In order to protect the vocal folds from the high impact of coughing, it is helpful to suppress the cough. Start with nonmedicated cough drops. No particular brand is better, though the menthol-eucalyptus combination drops tend to be drying. Hydration and steam can also be helpful. If nonpharmacologic methods do not bring relief, the next step is dextromethorphan; it is found in over-the-counter (OTC) cough syrups. Prescription cough suppressants are available if necessary.
- 3) Beware of medicated cough drops with an anesthetic effect that keeps you from feeling pain. Pain is a useful mechanism that tells you when to stop talking or singing. At night, anesthetics that help you sleep may be helpful, but an anesthetic effect that lets you speak or sing through your pain may increase the trauma to your vocal folds.
- 4) If postnasal drainage causes throat clearing, saline nasal irrigation and throat gargle may provide temporary relief. Guaifenesin may be helpful. It is a mucolytic that thins the secretions so they collect less on the vocal folds. It is present in most OTC

cough suppressants, but you can supplement with pure guaifenesin. There are both pill and liquid forms in both brand names and generics; all are acceptable. Some patients report different effects from the pill or liquid form. It may result in a runny nose, so don't experiment right before performing!

- 5) Antihistamines can be used to help with runny nose and postnasal drip; however, their use tends to dry the mucosal tissues, and it may be better to let the URI run its course. The runny nose and other symptoms of URI, while unpleasant, are not dangerous. Acetaminophen is an effective treatment for reducing the discomfort of a sore throat.<sup>8</sup>

## OTHER CAUSES OF VOCAL FOLD EDEMA

### Swelling Myth #5: Birth control pills cause swelling

The mild edema caused by premenstrual fluid retention can create havoc for some singers, and be a nonissue for others. Each singer must learn to deal with her own voice changes in her own best way. Many singers believe that birth control pills also cause edema, and this was true years ago. In the days when baby boomers were starting to take birth control pills, voice changes, especially loss of upper pitch range, were commonly reported. Female singers were cautioned about the use of birth control pills. In the past twenty years, however, formulations have changed, and voice changes have been less commonly reported. Moreover, recent research has shown that women taking birth control pills may be more consistent vocally, because they do not have to contend with the fluctuating hormone levels of the natural menstrual cycle.<sup>9</sup>

### Swelling Myth #6: Allergies cause swelling

This may turn out to be true. There is growing recognition of the effect of inflammation on the entire airway (nose to lungs).<sup>10</sup> Stimulation of one part of the respiratory tract can result in an inflammatory response at a different respiratory site. This seems to hold for allergies as well as for URI. Thus, chronic nasal allergies or allergic asthma may be a cause of laryngitis, with the result being a variable amount of hoarseness. The role of the larynx is currently not well understood in this process, but can be affected by multiple mechanisms. These

include the direct effects of mucosal inflammation, the effects of being a conduit between the upper and lower airway, as well as the secondary effects of coughing and throat clearing. Laryngeal changes can include vocal fold edema and increased phlegm on the vocal folds.<sup>11</sup> In some singers this could be difficult to distinguish from the more common laryngitis due to acid reflux.

## VOICE USE AND VOCAL FOLD EDEMA

An important principle of voice use with edematous vocal folds is this: If the vocal folds are compromised, it's unlikely the voice will be normal.

- If you must "push" your voice to produce a normal sound, do so for the least amount of time possible, and rest afterward.
- Try to alter your technique as little as possible. One of our most common clinical scenarios is that of singers who have developed a long-lasting voice disorder because they pushed their voice while they were sick. This is most often not a case of a single performance, but rather participating at full voice in rehearsals and performances, over the course of a week or more, at a time when the voice was compromised. In some cases a vocal fold lesion develops, while in others, the technique begins to accommodate to the need for increased effort, and this doesn't resolve spontaneously when the vocal fold status returns to normal. This can happen to highly trained, highly talented singers. Sometimes canceling a performance can save a career.
- Absolute voice rest is rarely indicated, but reducing voice use is wise.<sup>12</sup> While it generally makes sense to cut back on overall voice use, and to reduce volume, a restriction in pitch range is highly individual.
- Continuing to attend voice lessons can be helpful for monitoring; lesson activities and expectations can be adjusted. Self-monitoring during choral rehearsals can be more difficult, however, so we often recommend that students attend choir but refrain from singing.

## WHEN TO SEE THE OTOLARYNGOLOGIST

Most adults, on average, will get two URIs a year, which will last around three to five days. If symptoms last over ten days, a bacterial complication becomes more likely. Sometimes the symptoms of URI have resolved, but singing remains impaired for many weeks. Often noth-

ing should be done except to allow the voice to return to normal over time while preventing the addition of harmful compensatory habits. It makes sense, however, to have a laryngeal exam, preferably with stroboscopy, under several circumstances:

- 1) if you have change in vocal quality that lasts longer than a typical URI (over two weeks);
- 2) if you have upcoming singing demands, and want to ensure that you are safe to sing;
- 3) if your voice is problematic despite resolution of other symptoms. This can be true even if the voice sounds normal, but you have the sensation of increased effort or fatigue, longer need for warm-up, or some other sense that something isn't right. It behooves you to ensure that there is no lesion or lingering technical problem.

Difficulties with swallowing and breathing cannot be ignored and evaluation can be helpful. Timing depends on the nature of the symptoms.

### THE TEACHER'S ROLE IN DEALING WITH VOCAL FOLD SWELLING

It should be obvious that the most important thing the teacher can do to protect a student from injury is to teach sound, healthy technique, and to promote singing activities that are appropriate to the student. The teacher can also be a source for sound advice, free from myths, regarding the voice consequences of URI and other sources of swelling. To avoid, detect, or resolve chronic vocal fold swelling, some other, less obvious, actions are recommended.

- 1) For young women especially, ensure that easy production of high soft singing is part of the technique, and practiced regularly. Then, if delayed onset develops, you can rule out technical problems and consider other possible causes (e.g., premenstrual edema, URI, the development of lesions).
- 2) Listen carefully for signs of vocal fold swelling especially in a new student, or students returning after illness, heavy vocal activity, or summer break. If there is hoarseness that does not resolve with careful attention to technique after several weeks, recommend a laryngeal exam.
- 3) Don't play piano along with all the notes during all vocalises; the sound from the piano can mask the subtle sounds of swelling.

- 4) Be on the lookout for a strong abdominal squeeze at the onset of phonation; this can indicate that the singer is trying to force the glottis to close and avoid delayed onset. A healthy larynx with good technique can produce immediate onset, at high pitches, with no overt contraction of the abdominal muscles.
- 5) Help young singers determine their own propensity for vocal fold swelling; some singers never develop hoarseness, while others develop swelling every time they go to a sporting event or loud party. This does not mean that one is more talented, or a better singer, than the other. It is simply important for the "sweller" to know that he or she needs to make appropriate decisions about voice use.
- 6) Keep in mind that mild, transient hoarseness is not necessarily dangerous, and that there is nothing intrinsically dangerous about high vocal impact for a healthy larynx. On the other hand, if a singer suspects vocal fold swelling from some activity—for example, experiencing hoarseness after rehearsals or performances—then perhaps the activity should be modified. The teacher can help keep the needs of the voice and the needs of the person in perspective.
- 7) Keep in mind the individuality of each person's response. The teacher should remember that what is true for him or her will not necessarily be true for every student.

To summarize, vocal fold swelling can be acute or chronic, and may or may not be related to voice use. In the case of URI, full resolution of the hoarseness is expected if you take care of yourself, and do not strain or overuse the voice. Performing while hoarse is possible, but not ideal. Chronic or repeated hoarseness, in the absence of URI, is more worrisome. The teacher can help detect vocal fold swelling, can help manage it appropriately, and can help direct the student to a voice specialist when needed.

### NOTES

1. Deirdre Michael, "Dispelling Vocal Myths. Part 1: 'Sing From Your Diaphragm!'" *Journal of Singing* 66, no. 5 (May/June 2010): 547–551; Deirdre Michael, "Dispelling Vocal Myths. Part 2: 'Sing It Off the Chords!'" *Journal of Singing* 67, no. 4 (March/April 2011): 417–421.
2. Robert T. Sataloff, "Common Medical Diagnoses and Treatments in Patients with Voice Disorders," in R. T. Sataloff, ed., *Vocal*

*Health and Pedagogy: Advanced Assessment and Treatment*, 2nd ed. (San Diego: Plural Publishing, Inc., 2006), 8–11.

3. Regina Helena Garcia Martins, Julio Defaveri, Maria Aparecida Custodio Domingues, Rafael de Albuquerque e Silva, and Alexandre Fabro, "Vocal Fold Nodules: Morphological and Immunohistochemical Investigations," *Journal of Voice* 24, no. 5 (September 2010): 531–539.
4. Sataloff.
5. J. A. Lopez and E. Lockhart, "Acquired Disorders of Platelet Dysfunction," in Ronald Hoffman et al., *Hematology: Basic Principles and Practice*, 5th ed. (Philadelphia, PA: Churchill, Livingstone, 2008).
6. G. A. Fitzgerald, "Prostaglandins, Aspirin and Related Compounds," in L. Goldman and D. Ausiello, eds., *Cecil Medicine*, 23rd ed. (Philadelphia, PA: Saunders, Elsevier, 2007).
7. Sataloff, 2–3.
8. For singers concerned about effects of any medications on the voice, see the website for the National Center for Voice and Speech, which has a "Voice Team Locator" to help find voice specialists in various areas, <http://www.voiceacademy.org/rx.html>; Robert T. Sataloff, Mary J. Hawkshaw, and Joseph Anticaglia, "Medications and the Voice," in Sataloff, 193–212.
9. Ofer Amir, Tal Biron-Shental, and Esther Shabtai, "Birth Control Pills and Nonprofessional Voice: Acoustic Analyses," *Journal of Speech, Language, and Hearing Research* 49 (October 2006): 1114–1126.
10. John H. Krouse and Kenneth W. Altman, "Rhinogenic Laryngitis, Cough, and the Unified Airway," *Otolaryngologic Clinics of North America* 43, no. 1 (February 2010): 111–121.
11. John R. Cohn, Patricia A. Padams, Mary J. Hawkshaw, and Robert T. Sataloff, "Allergy," in Sataloff, 52.
12. Sataloff, 2–3.

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Dr. Michael received a BA in music and psychology from Hamline University in St. Paul, MN, MA in Speech-Language Pathology, and PhD in Communication Disorders, with a specialization in voice science, from the University of Minnesota. She has been a voice and piano teacher for thirty years, and a speech-language pathologist since 1991. She is a frequent presenter at national and international conferences for voice

and singing science, most especially the Annual Symposium: Care of the Professional Voice sponsored by the Voice Foundation, and the biannual International Conference on the Physiology and Acoustics of Singing. She also lectures regularly at colleges around Minnesota and Wisconsin, in the areas of voice science, vocal health, and voice treatment. Her educational goals are to make voice science accessible to singers, and to educate medical residents on voice disorders and the special needs of singers. She serves NATS locally as a collaborator and adjudicator, and nationally, making appearances in workshops and conferences in 1997, 2000, 2006, and in the 2009 Winter Workshop in Miami. She serves on the Scientific Advisory Board of NATS, and gave a presentation on voice disorders in singers at the National Conference in 2010 in Salt Lake City. Her areas of research and publication include perceptual characteristics of voice, acoustic measures of voice quality, and various aspects of normal and abnormal speech and singing production.

Dr. Michael maintains a lively private voice and piano studio, and is active in a variety of local teaching and music organizations. Her most recent project has been to revamp the singing critique forms for the Minnesota Federation of Music Clubs Junior Festivals. A soubrette soprano, she continues to sing in a variety of musical styles and venues.

**Dr. Goding** received his medical degree from Tulane University School of Medicine in New Orleans, Louisiana in 1982. He completed a residency in Otolaryngology—Head and Neck Surgery at the University of Washington in Seattle, Washington in 1988. Since then he has been on the faculty in the Department of Otolaryngology—Head and Neck Surgery at the University of Minnesota and at Hennepin County Medical Center (both in Minneapolis, MN). He currently is an Associate Professor in the Department of Otolaryngology—Head and Neck Surgery, University of Minnesota, Minneapolis, Minnesota. He has subspecialty interests in laryngology, upper airway disorders, and care of the professional voice. He is the medical director of the Lions Voice Clinic at the University of Minnesota and the Siegel Laryngeal Physiology Laboratory at Hennepin County Medical Center. Dr. Goding is a reviewer for *Otolaryngology—Head and Neck Surgery* and *The Laryngoscope Journal* and *Archives of Otolaryngology*. He has authored over 40 articles and book chapters and given over 100 scientific presentations both locally and nationally.

Summer for thee grant I may be  
When summer days are flown!  
Thy music still when whippoorwill  
And oriole are done!

For thee to bloom, I'll skip the tomb  
And sow my blossoms o'er!  
Pray gather me, Anemone,  
Thy flower forevermore!

"Song," Emily Dickinson