Those who use their voice professionally for singing, acting, teaching, counseling, public speaking, telecommunications, oration, or other venues, need to maintain good vocal hygiene to sustain reliable, lifelong professional voice use. Like dental hygiene, vocal hygiene is a set of preventative measures that actively and consciously are undertaken by the voice user to maintain the health, reliability, and consistency of the voice. Proper training, strengthening, and conditioning are as important to the professional voice user as they are to a professional athlete. Attention to these practices will help prevent voice injury and maintain the voice through rigorous vocal performance and speaking schedules.

How can the voice be kept healthy?

Preventative medicine is always the best medicine. The more one understands his/her voice, the more one will appreciate its importance and delicacy. Education helps us understand how to protect the voice, train and develop it to handle our individual vocal demands, and keep it healthy. A little bit of expert voice training can make a big difference. Avoidance of abuses, especially smoke, is paramount. If voice problems occur, expert medical care with a laryngologist (an ear, nose, and throat doctor who specializes in voice care) should be sought promptly. Interdisciplinary collaboration among laryngologists, speech-language pathologists, singing teachers, acting teachers, many other professionals, and especially voice users themselves has revolutionized voice care since the early 1980s. Technologic advances, scientific revelations, and new medical techniques inspired by interest in professional opera singers have brought a new level of expertise and concern to the medical profession, and improved dramatically the level of care available for any patient with voice dysfunction.

How can a “normal” voice be made better?

Voice building is possible, productive, and extremely gratifying. Speaking and singing are athletic; they involve muscle strength, endurance, and coordination. Like any other athletic endeavor, voice use is enhanced by training that includes exercises designed to build...
CARE OF THE CONVERSATIONAL VOICE

The source of many voice problems in both professional speakers and singers lies in unrecognized abuse or misuse of the everyday speaking voice. That can take the form of chronic throat clearing, yelling or shouting above loud noises, or engaging in prolonged or emotionally charged conversations without paying attention to breath support, resonance, or proper body alignment. Even for the best trained voice professional, it is easy to forget to employ proper voice techniques during normal conversation, and conscious efforts must be made to use them at all times. Otherwise, the larynx may be subjected to phonotrauma, which may lead to the development of nodules, polyps, cysts, or hemorrhage (bleeding) on the vocal folds and a resultant hoarse voice.

The voice always should be warmed up at the start of each day, prior to talking, and cooled down at bedtime. Vocal warm-ups and cool-downs are analogous to stretching exercises used with other muscle groups. In the morning, they help to prepare the vocal muscles for prolonged use, that is, a day of conversational speech. The warm-up exercises used should include exercises in pitch variation to help stretch and tone the tensor muscles of the vocal folds, as well as exercises to help stretch and tone the opening (abductory) and closing (adductory) muscles of the larynx. In addition, exercises that focus on proper breathing and control of respiration during phonation should be employed to help tone the abdominal muscles and prepare them for use in support of phonation. Exercises to help relax the accessory muscles of phonation, such as stretching and loosening the tongue, lips, jaw, shoulder, and neck should be performed at the beginning of the warm-up. Exercises designed to recruit the appropriate muscles in the vocal tract for the production of an optimal resonance pattern should be employed each morning. The focus of such exercises should be forward placement of the voice. The cool-down exercises should also stretch the tensor, abductor, and adductor muscles, but the focus here is not to increase tone, but rather to help the vocal muscles achieve a state of healthy relaxation after a day of prolonged use.

All of the exercises chosen should be taught by and practiced initially with a voice teacher or speech-language pathologist who specializes in voice care (often referred to as voice pathologist or voice therapist). These...
individuals help to provide objective feedback and ensure that the exercises are being done safely and correctly. Just as improper technique while weight lifting without a trainer can result in a muscle tear or strain, so can improper performance of vocal exercises without proper guidance.

Prevention of harmful muscle use patterns during conversational speech helps to limit the development of vocal fold masses such as polyps, nodules, and cysts. Voice misuse and voice abuse can cause both acute and chronic vocal fold injury. Yelling and screaming, particularly during emotionally charged situations, and talking over loud noise, can cause forceful closure of the vocal folds, which can result in vocal fold hemorrhage (bleeding) (Figure 1), the development of “blisters” in the form of polyps (Figure 2) or cysts (Figure 3), or the formation of nodules, the laryngeal equivalent of calluses. For those who need to project their voices over loud noises (for example, stock brokers, politicians, machinists, construction workers, or cheerleaders, to name a few), working with a voice teacher or voice pathologist to optimize vocal projection while eliminating strain can help to protect the voice and to prevent debilitating injury.

For those who use their voices for professional speaking, including acting and public speaking, as well as for singing, many of the same principles apply. In addition to routine vocal warm-ups and cool-downs at the start and end of the day, preparation (with exercises) for intense voice use before vocal performance should routinely be employed.

Vocal Fold Lubrication

The vocal folds need adequate lubrication to maintain healthy vibration, particularly with prolonged phonation. This is achieved best by ensuring that the body is well hydrated at all times, but particularly prior to performing. Hydration is accomplished by drinking water or drinks that have balanced electrolyte, such as Gatorade. Urine color is a good guide to the state of hydration. A pale urine color implies that there is adequate hydration for the kidneys, which usually is a good sign of adequate hydration throughout the body. Those with known kidney disorders, heart disease, hypertension, pituitary abnormalities, and other health problems should consult their physician and exercise caution before attempting to maintain hydration in this manner, as these individuals’ usual mechanisms for fluid control may be impaired. Water is pre-
ferred over juices or concentrated beverages. The sugar, salts, and sweeteners in such drinks limit the amount of water that is absorbed by the body. Caffeinated beverages and alcohol are dehydrating and should be avoided during and for several days prior to vocal performance. It is most ideal for the busy voice to be hydrated at all times to prevent rapid changes in the body’s fluid content. Because of the concern for reflux during performances, large quantities of liquid/water should not be consumed within the two hours prior to or during vocal performance.

Minimizing Reflux
Because nearly everyone has some degree of reflux when intraabdominal pressure is increased, care should be taken to minimize reflux episodes during vocal performance. Reflux is the regurgitation of stomach contents into the esophagus and occasionally larynx, throat, and/or nose, and usually occurs when the pressure in the stomach surpasses that of the lower esophageal sphincter, the slings of muscles that is designed to help keep stomach contents in the stomach. A common misconception is that reflux is synonymous with heartburn. Heartburn is a symptom of severe and frequent refluxed gastric acid into the esophagus. Such irritation can trigger a cough, a sensation of tickle in the throat, a need for throat clearing, swelling of the vocal folds, a sensation of postnasal drainage or phlegm in the throat; and they can alter sensation (ability to feel) in the larynx. These irritative behaviors can, in turn, result in vocal fold trauma and predispose to the formation of other vocal fold pathologies. The best way to minimize refluxing during vocal performance is to avoid eating meals or filling the stomach with liquids for at least three hours before performance, even in those who have no symptoms of reflux at all. Everyone has the potential to reflux when intraabdominal pressure increases, especially the amount of abdominal pressure needed to support healthy phonation.

Breath Support
Proper breath support is a key element of proper voice technique in all forms of voice use and vocal performance. The lungs and related muscles of the chest, abdomen, and back are the power source for phonation and can be used to produce and modulate sound with minimal impact on the vocal folds themselves. It is important when breathing to remember that the lungs are three dimensional. Accordingly, expansion of the lungs should be both down into the abdomen and out on all sides. Inhalation should involve relaxation of the abdomen and back muscles, and exhalation should involve a sustained and controlled contraction of the abdominal and, perhaps to a lesser extent, the back muscles. Phonation occurs during exhalation and should be supported by an adequate, inhaled breath prior to phonating. Proper posture with an erect spine, along with relaxation of the shoulders and muscles related to the collarbones and shoulder blades must be maintained.

Resonance
In addition to adequate breath support, proper positioning and alignment of the vocal tract aid in vocal projection and in minimizing trauma to the vocal folds. The positions of the tongue, jaw, larynx, and palate participate
in the resonance of the voice as it leaves the larynx. Maximizing the effect of the resonator on the voice aids in vocal projection and minimizes the need for increased effort at the level of the vocal folds. The optimal position of each of these elements of the vocal tract varies depending upon the sound being produced, but in general, a more relaxed tongue, larynx, and jaw and an elevated palate produce a configuration of the vocal tract that helps to maximize vocal projection while minimizing vocal fold trauma.7

**BASELINE LARYNGEAL EVALUATION**

Early during one's career, every vocal performer should have a baseline laryngeal evaluation. The purpose of such an examination should be to evaluate the movement of the vocal folds and to diagnose any subtle abnormalities that may contribute to the development of vocal difficulties if left unattended. The presence of mild vocal fold paresis is very common and is often thought of as the laryngeal equivalent of mildly poor vision.8 Like mildly poor visual acuity, one can function reasonably well without correction; however, in some people this problem can be debilitating and cause excess compensatory strain, especially in those who are not aware that they have the problem. Techniques as simple as vocal fold strengthening exercises and retraining of the involved muscles can help prevent the development of other pathologies in these individuals and can help improve vocal performance.9 Other subtle laryngeal abnormalities, such as reflux, that may have long-term effects on the voice also can be diagnosed and treated during a screening examination. For example, other more serious problems also may present as laryngeal or voice problems and should be identified early. Moreover, if asymptomatic abnormalities are present, it is important to be aware of them. Otherwise, if they are recognized first during a period of vocal problems, they may be diagnosed incorrectly as the cause of the complaint.

In some individuals, hoarseness and other vocal difficulties may develop as a result of illness. In these instances, it is useful to know if there were any preexisting pathologies and the relative contribution of these pathologies to the current vocal problem. Some individuals function well even in the presence of mild vocal fold weakness, small vocal fold polyps, nodules, or cysts and are unaware that these lesions exist unless they have had a baseline examination.10 If a new vocal difficulty arises, particularly after an illness, it is helpful to know that these conditions were preexisting and likely not contributing significantly to the current vocal problem. Such knowledge even can help prevent the performance of unnecessary vocal fold surgery on benign lesions when vocal difficulties do arise.

Maintaining longevity of the voice involves attention to training and proper hygiene of the vocal folds throughout one's career. Daily stretching, attention to diet and hydration, and the use of proper voice technique in all vocal situations are essential components of prolonged vocal health. Awareness of the health and state of one's larynx at baseline also can prove useful in preventing future problems and helpful in identifying the cause of new problems as they arise.

**NOTES**

4. Ibid.
10. Sundberg.
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