



by **Marta T. Becker, MD**

**Your voice has become scratchy and still isn't normal. Why?**

The answer to this question can be as different as different people and may have to do with illness, voice-use habits, allergies, stomach acid, medications that you take, among many other possibilities. Sometimes several influences act together to produce the problem. Your primary care doctor or otolaryngologist often can help you figure out why your voice is horse and get you on the road to sounding more like yourself.

**How your voice works**

To understand vocal hoarseness, it helps to understand first how the voice is generated. The larynx (or "voice box"), which contains the vocal "cords" (we also call them vocal folds), is located at the top of your windpipe. When you breathe in, the vocal folds open up like a pair of gates to let the air into your lungs. When you want to speak, shout or sing, they squeeze together; then you force the air through them and they vibrate to make the sound of your voice. Your throat, tongue and lips form the sound into words.

For good vocal function, all aspects of the system must be in good working or-

# Your Hoarse Voice

der. Hoarseness results when one or more parts of the system breaks down. Some common sources of voice loss are described here.

**LARYNGITIS.** *Laryngitis*, which literally means "inflammation of the larynx," is the most common cause of voice loss. The term *laryngitis* encompasses inflammation from many causes, including viral infection, bacterial infection, irritation from stomach contents (i.e. from reflux), and irritation from tobacco smoke.

When the vocal folds themselves become swollen, they lose their elasticity and do not vibrate properly. Imagine two plump sausages trying to vibrate — it just doesn't happen. When the vocal folds are swollen and cannot vibrate, the sound of the voice is affected.

**VOCAL TRAUMA.** Trauma also can cause the vocal folds to become swollen and lose their elastic properties. Many of us have had the experience of being hoarse after talking too much at a loud party. This usually has happened because the effort to talk over noise has caused swelling of the vocal folds. Coughing also can traumatize the vocal folds and make us hoarse. The swelling from vocal trauma usually resolves after several days, provided we do not continue to strain the folds.

Sometimes an intense vocal event can cause more serious injury to the vocal fold. For example, very loud shouting or cheering may cause a blood vessel to burst under the surface of the fold. This can cause a collection of blood that affects the voice and takes much longer to resolve. If the collection fails to resolve completely, the

voice could be chronically affected.

**CHRONIC TRAUMA.** Chronic voice abuse can be a big problem for those who use their voices heavily at work, at home, or socially. Teachers of young children make up a large cohort of my patients with chronic voice problems. Many of these people continually strain to produce a voice with vocal cords that are already swollen. The initial event can be from an illness, from reflux or from vocal trauma, but the continuing strain of the vocal cord sets up a new situation: callouses can develop on the vocal folds at the area where they vibrate against each other. These callouses (also known as *vocal nodules*) interfere with the normal closure and vibration of the vocal folds, and cause the voice to have a "husky" quality. Although nodules sometimes are surgically removed, the usual treatment is vocal rest and intensive education to help the person re-learn how to use their larynx without damaging it.

**GROWTHS ON THE VOCAL FOLD.** A growth on the vocal folds, whether benign or malignant, can interfere with the folds' ability to close and vibrate. Almost every hoarse patient that I see me worries that there may be a growth on their vocal fold and that this is the cause of their hoarseness.

Recent high-profile cases of laryngeal cancer have raised awareness of this disease, enhancing patients' anxiety. However, the vast majority of cases of laryngeal cancer occur in smokers or those with a family history of head and neck cancer. Smokers often develop benign masses called *vocal polyps*.

Smokers are also at risk for lung cancer, which can cause hoarseness by paralyzing nerves that pass through the chest on the way to the vocal fold. Anyone — but especially a smoker — who has been hoarse for more than a couple of weeks should see an otolaryngologist to have their larynx checked.

**Treatment**

When a patient visits an otolaryngologist with a voice problem, the doctor inserts a tiny fiberoptic endoscope in the patient's nose, moves it to the back of the nasal cavity, and looks down. When the patient is sitting up straight and breathing smoothly through the nose, the doctor will be able to directly visualize the vocal cords with minimal nasal discomfort. Usually patients do not experience gagging or choking sensations since the endoscope hovers above but does not actually touch the larynx. In my practice, we may also use an instrument

larynx in action. Videostroboscopy helps to photograph abnormalities and also allows me to find more subtle defects that contribute to voice loss.

**Recovery**

Serious and even life threatening causes of voice loss usually can be ruled out during the first office visit. However, the additional goal of any visit is to answer the question: why am I hoarse and how do I make my voice better? Causes such as reflux or vocal nodules may be evident at the first visit, and treatment can be started immediately. Sometimes the cause of the hoarseness is more elusive and involves several causes. The first step to sounding better is a diagnostic evaluation to determine what is causing your vocal loss. Once we do that, we can work to eliminate or manage the problems, and get you back to feeling and sounding like yourself.

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