



VOICE DISORDERS

During Better Hearing and Speech Month, Southwest Rehab Hospital is focusing health information on disorders of vocal abuse and misuse.

What Are Vocal Abuse and Misuse?

Vocal abuse is any behavior or occurrence that strains or injures the vocal folds (or vocal cords). This may include excessive talking, throat clearing, coughing, inhaling irritants, smoking, screaming, or yelling.

How Is Voice Produced?

Voice is produced by vibrations of the vocal folds. The vocal folds are two bands of smooth muscle tissue that lie opposite each other. They are located in the larynx or voice box. The larynx is positioned between the base of the tongue and the top of the trachea (windpipe), the passageway to the lungs.

When at rest, the vocal folds are open to allow an individual to breathe. To produce voice, the brain precisely coordinates a series of events. First, the folds come together in a firm but relaxed way. Once the folds are closed, air from the lungs passes through them, causing vibration and thus making sound. The sound from this vibration then travels through the throat, nose, and mouth (resonating cavities). The size and shape of these cavities, along with the size and shape of the vocal folds, help to determine voice quality.

Variety within an individual voice is the result of lengthening or shortening, tensing or relaxing the vocal folds. Moving the cartilages, or soft, flexible bone-like tissues to which the folds are attached, makes these adjustments possible. For example, shortening and relaxing the vocal folds makes a deep voice; lengthening and tensing them produces a high-pitched voice.

Who May Be at Risk for a Disorder of Vocal Abuse or Misuse?

Disorders of vocal abuse and misuse are the most prevalent and preventable of the types of voice disorders. Anyone, from infants to the elderly, who uses his or her voice excessively may develop a disorder related to vocal abuse. Lawyers, teachers, physicians, nurses, clergy, cheerleaders, and professional voice users such as singers and actors often develop these types of voice disorders. Much of the chronic hoarseness experienced by children is caused by vocal abuse and misuse.

What Are Some of the Disorders of Vocal Abuse and Misuse?

The most common disorders resulting from vocal abuse and misuse are laryngitis, vocal nodules, vocal polyps, and contact ulcers. Health professionals who have training in voice and voice disorders often refer to these conditions as "Hyperfunctional voice disorders."

How Are Disorders of Vocal Abuse and Misuse Diagnosed?

Anyone who experiences vocal change or hoarseness for more than two weeks should be examined by a physician, preferably an otolaryngologist (a physician/surgeon who specializes in disease of the ears, nose, throat, and head and neck). While hoarseness is a common symptom of vocal abuse or misuse, it is also one of the first sign of cancer of the larynx. A physician's visit is especially important for people who smoke cigarettes, because smoking is closely associated with laryngeal cancer. The otolaryngologist will examine the individual's vocal folds and determine if a medical condition is causing the voice problem.

Following an examination, the otolaryngologist may refer the individual to a speech-language pathologist, a health professional trained to evaluate and treat people who have voice, speech, language, or swallowing disorders that affect their ability to communicate. The speech-language pathologist will evaluate the pitch, loudness, and quality of the person's voice, and will also assess vocal techniques such as breathing and style of voicing. A voice recording is often made, and trial therapy techniques may be used to test their effectiveness at improving the voice.

How Are Disorders of Vocal Abuse and Misuse Treated?

Most disorders of vocal abuse and misuse are reversible. The best treatment is to identify and eliminate the vocal behavior that created the voice disorder. In many cases, a brief period of voice therapy is helpful so that the individual can learn good vocal techniques such as proper breath support for speech or eliminating forceful voicing. In just a few sessions, most individuals can be taught the skills for a lifetime of good vocal health.

However, in some instances, eliminating the abuse or misuse and voice therapy are not enough. In these cases, medication to block the production of stomach acid may be helpful. In some cases, an operation may be necessary to remove growths from the vocal folds. Since most disorders of vocal abuse and misuse easily recur following surgery if the vocal misuse continues, another period of voice therapy by a speech-language pathologist after surgery may help prevent recurrence of the problem.

Children with disorders of vocal abuse and misuse are often the most difficult to treat because it is not easy for them to change their vocal behaviors. Fortunately, most children outgrow these disorders by the time they are teenagers. For these reasons, many surgeons do not operate on children who have disorders of vocal abuse or misuse. A period of voice therapy, however, may help the child to learn proper voice behaviors.

What Research Is Being Conducted on disorders of Vocal Abuse and Misuse?

Speech-language pathologists are studying the effectiveness of behavioral techniques including use of machines to help people relearn proper vocal techniques such as good breath support or efficient use of the larynx. Studies that will improve the treatment of hyperfunctional voice disorders in children are also in progress. Of special interest is the long-term impact of various treatments, especially medical and surgical treatments.

For further information on the treatment of voice disorders or other conditions related to speech or swallowing—contact Michelle Weston, MS CCC/SLP in the Speech-Language Department at Southwest Rehab Hospital, by calling 616-965-3206, Ext. 5711.

Southwest Rehab Hospital offers comprehensive therapy services for all age groups.
Our goal is to assist patients in attaining the highest functional level possible and
to enhance their quality of life through the rehabilitation process.
