



A Union of Professionals

## WORK SHOULDN'T HURT

# Your Voice Is a Tool of Your Trade

Teaching is one of the most vocally demanding professions. Think about how much you're required to speak each day and how little you get to rest your voice. Then consider how you compete with all that environmental noise—multiple classroom sounds, street noise, and ventilation operations. Crowded classrooms and behavior issues make matters worse. All these conditions can lead to increased vocal strain.

Studies consistently show that teachers are at higher risk for occupationally related voice disorders than the general public for both short-term and chronic conditions. The [Voice and Swallowing Institute](#) at Mt. Sinai Hospital in New York City estimates that about 58 percent of teachers will develop a voice disorder in their lifetime, compared with 20 percent of people in the general population—and the prevalence of voice issues among teachers has been increasing over the years.

## How much talking does it take to teach?

Judging by their frequency as voice center clients, teachers have long been identified as professionals at “high vocal risk.” A number of factors explain why teachers have more voice problems than other workers, but it is clear that at the top of the list, teachers simply must use their voices frequently to get the job done.

To study occupational voice use in a methodical way, researchers at the National Center for Voice and Speech developed technology to determine just how much teachers talk. Nearly 100 teachers in the Denver, Colo., area schools volunteered to wear a specially programmed device to measure their voice use. This device, called a dosimeter, uses a wire attached to the teacher's throat to transmit volume, pitch and duration of speech to a specially programmed pocket PC.



While researchers are still sifting through the results, their suspicion that teachers' vocal folds get a rigorous workout each day is confirmed. The dime-sized vocal folds of teachers go through more than 1 million cycles of vibration each day. That translates into about 1-1/2 hours of pure voicing time in a 12-hour period. But don't teachers speak for more than 1-1/2 hours each day?

Consider that the dosimeter measures only the time that the vocal folds are in vibration. That means that pauses between words, at the end of sentences or while listening aren't accumulated by the dosimeter. Surprisingly, those small time gaps add up. Consider that in a one-minute monologue, the vocal folds are in vibration only 33.6 seconds—or about half the monologue.

According to the study's lead investigator, Dr. Ingo Titze, the cumulative speaking time of 90 minutes within a 12-hour day does, indeed, show that teachers use their voices more rigorously than other professionals: “Consider that if we counted the vibrations of the vocal folds as distance traveled, this could easily exceed 1 kilometer per hour of pure voicing.”

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The **American Federation of Teachers** is a union of 1.7 million professionals that champions fairness; democracy; economic opportunity; and high-quality public education, healthcare and public services for our students, their families and our communities. We are committed to advancing these principles through community engagement, organizing, collective bargaining and political activism, and especially through the work our members do.

Randi Weingarten  
PRESIDENT

Fedrick C. Ingram  
SECRETARY-TREASURER

Evelyn DeJesus  
EXECUTIVE VICE PRESIDENT



Teachers can learn to care for their speaking voices at the [Voice Academy](http://www.voiceacademy.org): a cost-free, virtual school created solely for the vocal health of teachers ([www.voiceacademy.org](http://www.voiceacademy.org)).

## What are the symptoms of a voice disorder?

Any condition that leads to abnormalities of voicing is considered to be a voice disorder. Examples include acute laryngitis, muscle tension dysphonia, vocal cord paralysis, laryngeal cancer and vocal fold nodules.

Symptoms include:

- Dry mouth;
- A need to clear your throat;
- Hoarseness;
- "Scratchy" or raw feeling;
- Achy feeling in your neck;
- Feeling winded;
- A general feeling of weakness when speaking;
- Frequent breaths or running out of breath;
- Reduced volume on high or low pitches; and
- Tension in the neck, shoulders and upper chest.

## What can you do to reduce vocal strain?

As with many disorders, prevention is the key to staying healthy. Doctors from the Voice and Swallowing Institute recommend the following:

- Keep your vocal cords hydrated by drinking six to eight glasses of water a day.
- Rest your voice when it's not necessary to use it.
- Spread out the demands on your voice throughout the day by using quiet work time or group assignments.
- Use non-vocal cues to gain students' attention, whether that's raising a hand, clapping or ringing a bell.
- Know your voice and pay attention to changes. When you feel like you're getting hoarse, curtail the use of your voice and share speaking responsibilities with a student or teaching assistant.
- Perform warm-up and warm-down exercises at the start and end of the day.
- Steer clear of menthol, eucalyptus and mint lozenges; they might provide relief in the short term, but are actually damaging to the voice.

- Use a personal microphone and speaker.
- Get examined once a year by an ear, nose and throat physician or a laryngologist to ensure that your vocal folds are healthy—and to discuss and identify risk factors before real problems develop.

## Solution Driven Unionism

Voice disorders can seem like a personal, individual problem. But the fact is that it's a work-related condition that is most likely shared by many of your colleagues. The union can be an important ally in getting some vocal help in the classroom.

- First, alert your union representative of the problem. The union can inquire about any programs or accommodations provided by the district such as personal microphones. The union may also consider surveying your colleagues to find out the prevalence of voice disorders in your school or district.
- Those results might support a campaign to get a good comprehensive program established in the district to support teachers in the classroom and improve acoustics and air quality.
- Some forward-thinking districts provide training conducted by a speech-language pathologist, who can provide substantial practical education on the healthy use of the voice and instruction in proper voice techniques.
- Discuss creating a working group with your union to brainstorm ideas for managing environmental noise.

For more information, contact the Health Issues Health and Safety team at [4healthandsafety@aft.org](mailto:4healthandsafety@aft.org) for assistance.

### Quiz

1. Has your voice become hoarse or raspy?
2. Does your voice suddenly sound deeper?
3. Does your throat often feel raw, achy or strained?
4. Has it become an effort to talk?
5. Do you find yourself repeatedly clearing your throat?

If you answer "yes" to any of these questions, you may be experiencing a voice problem and should consult an otolaryngologist, the physician and surgeon who specializes in ear, nose and throat disorders. He or she can determine the underlying cause of your voice problem. You may also need to see a speech-language pathologist who can help you with improving the use of your voice and avoiding vocal abuse.