

# Voice CPR/Triage

We are Talking, Laughing, Cheering,  
Coughing, Beat-boxing, Grunting, and  
Singing our VOICES TO DEATH!

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# Voice Health

## **Why is a Speech-Language Pathologist (a.k.a Speech Therapist) speaking to you????**


- Part of my training involves study into the anatomy, function and rehabilitation of the vocal mechanism.
- I'm like your car mechanic for certain voice problems.
- I see teachers, singers, preachers, and salesmen in my practice with broken-down voices.
- I see patients upon referral from a physician, mostly ENT, and submit reports to him and the patient's insurer. I have only a limited number of sessions to help these patients.
- I am not a voice teacher. Although I do address singing with many of my patients, I primarily target their speaking voice.
- I am currently the only SLP who treats outpatient voice patients in a large area of W. TN.
  
- My lifelong "voice" interest.



# Voice Health

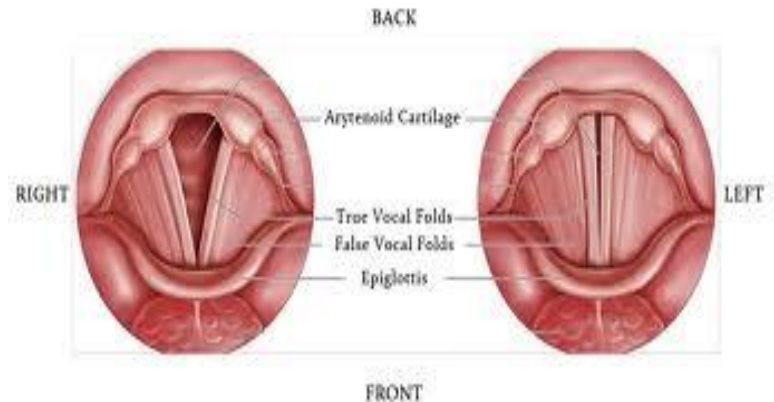
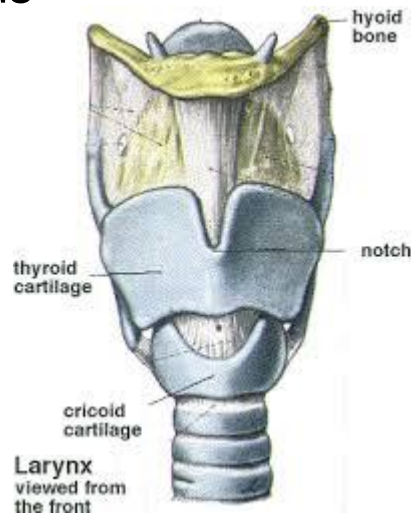
## **Voice Machine:**

- Wind Instrument: Respiration – diaphragm and rib muscles
- Stringed Instrument: Vocal Folds
- Percussion: Resonating chambers of throat, nasal and sinus cavities and mouth. Articulators of tongue, teeth and lips.

 You vocalize with your ENTIRE BODY. It's not just a throat thing.

# Voice Health

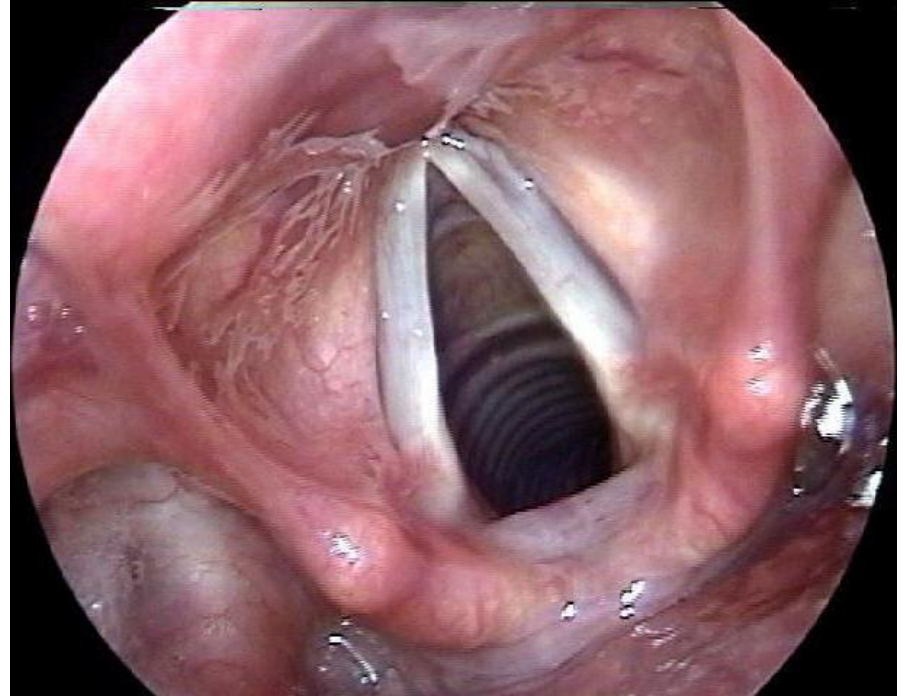
- Vocal Folds are housed in the Thyroid Cartilage (Adam's apple)
- VFs are a valve that protects the airway.
- Vocal 'cords' have 2 base layers of muscle and a specialized 3-layer cover. (think of a 3-layered water bed with differing viscous fluids in each layer) (think of a set of lips with a super-vibrating 3-layer cover.)
- To vibrate the muscles approximate so that the covers touch each other. An undulating 'mucosal wave' sets in motion.
- To raise pitch the cords stretch and lengthen.



# Voice Health

- [Normal voice video](#)
- (www.ent.usa)

- Different levels of voice users:
- Everyday
- Professional
- Elite Athletes



# Professional Voice Users

- 10% of Americans rely on their voice as their primary tool of trade
- There are more than 7 million TEACHERS. Largest group of pro users.
- Teachers speak loudly for long periods without sufficient breaks.
- Noisy classrooms, repeat exposure to URIs as well as mold and dust.
- 11% of teachers (700,000) report a current voice disorder.
- 58% of teachers report a hx of a voice disorder
- Decreased job satisfaction, performance, and attendance
- At greatest vocal risk are teachers of music, drama, performing arts, and coaches
- Website dedicated to Teacher's Voices:  
<http://www.uiowa.edu/~shcvoice/>



# Professional Voice Users

Robert Sattaloff's "10 Good Ways to Abuse Your Voice"

- #9. Conduct: Amateur choral conducting is especially hazardous to the singing conductor. They end up singing all of the parts at a volume louder than the group!
- #10. Teach Voice: Dangerous! Singing for prolonged periods while sitting and in poor posture and often out of their tessitura. Must view the 'student' as hazardous to your singing health.



# VOICE (Vocal Hygiene) SAVERS

## **WATERWATERWATERWATERWATERWATERWATERWAT**

- Stay hydrated. Drink 6-8 glasses/day. 60-80 oz.
- Superhydrate prior to rigorous activity. Stay ahead of your thirst.
- Don't drink more than two cups/glasses of dehydrating fluids, which contain caffeine and/or alcohol. For each additional dehydrator, add one glass of water.
- Avoid smoke and chemically-filled environments.
- Make sure your living area has adequate humidity.
- Monitor your hydration levels and adjust as needed. Signs of dehydration include dry mouth and thirst, darker yellow urine rather than pale urine, excessive body cramps.
- Breathe at rest, through your nose.





# Vocal Hygiene

**SING WET.....**

**PEEEEE PALE.**



# Vocal Hygiene

- Keep breathing when engaging in vigorous weight lifting. No breath holding! No GRUNTING!
- When conserving your voice, limit amount of talking time. And do not talk loudly for long periods of time.
- Limit production of sound effects, weird voices, funny animal noises, and beatboxing, especially if it aggravates your voice. [Beat](#) boxing
- Just because you can make a certain sound doesn't make it a good idea to do it.
- Practice excellent posture: standing or sitting.



# Vocal Hygiene

- Breath adequately deep enough for the setting. Do not have a habit of running out of air at end of sentences.
- Have proper amount of vocal **Warm Ups**, whether preparing to speak or sing for an extended time. And Cool Downs.
- Speak/sing with a relaxed voice. Do not squeeze.
- When resting your voice speak quietly in a '**confidential voice**' and not a whisper. You CAN show much emotion in a quiet voice.
- If need to speak/sing louder, breathe deeper. Learn to breathe with diaphragm vs upper chest.
- Do not yell, cheer, scream unless to save a life! Show your enthusiasm with clapping, whistles, obnoxious noise-makers.
- If acutely hoarse or painful to talk, don't talk/sing thru it!



# Vocal Hygiene

- Speak/Sing in tessitura (comfortable range) 4<sup>th</sup> note from bottom. (ENT literature is full of cases of professional singers who trash their voices not when singing, but when they are talking!)
- Do not over sing! If you're in a choir, blend with the others. Even if you were recruited to 'help' the church choir, blend and don't dominate.
- Rest your voice when it feels tired. Be a SMART voice user.
- When trying to gain group attention, use something other than your voice, such as a clap, whistle, turning lights off and on, raise your hand etc.
- When in a vocally demanding career, build rest times into the work day. 5-10-15 minute breaks. And rest your voice after hours and on the weekend!
- Sleep well! 8 hours. You can't argue with sleep studies.



# Vocal Hygiene

- **AMPLIFICATION SYSTEM** where applicable
- FM wireless system
- Good quality head microphone
- Let the electronics make your voice louder.
- You get what you pay for. Not karaoke machine.
- Best if you could have dual speakers and monitor.
- Studies show that teacher's damaged voices respond best with use of amplification and voice therapy.
- Studies also show that students pay better attn.



# Vocal Hygiene

- Do not suck on mints. Suck on other hard candies to lubricate voice.
- Manage stress. Stress localizes in the voice.
- Engage in regular aerobic exercise to improve breath quality.
- Manage weight and do not eat to full satiation. Instead eat only to the first signs of fullness.
- Avoid foods and liquids which upset the stomach or which cause belching. Refluxed acid in VFs is deadly.
- Brush teeth, tongue, cheeks, and roof after every single meal and floss regularly. For pulmonary health.
- Use the “Buddy System”. You usually do not notice your own harmful vocal habits, you may need someone else to tell you. Friends don’t let friends trash their voice.
- No one has a set of Steel Cords. Treat them well.



# Vocal Hygiene

## MEDICAL

- Aggressively manage nasal sinus, throat, allergy, and digestive illnesses. Reflux acid is a voice killer.
- Manage chronic coughing and throat clearing by increasing fluids to thin mucous (can use expectorants) and use the **Silent Cough** technique. Or cough/throat clear as quietly as possible.
- Aspirin or medications that affect blood flow or clotting may contribute to VF hemorrhage.
- Caution with drugs that can cause **dryness** to the VFs: antihistamines and decongestants commonly found in cold and allergy meds. Try to switch to nasal steroid, to reduce drying.

Medications for high blood pressure, diuretics, antidepressants, anxiety, antidiarrhea (Lomotol), some Parkinsons meds. And local anesthetic spray – Chloroseptic.



# Medical Intervention

- See a doctor if :
- Hoarse more than 1-2 weeks in the absence of a cold or flu.
- Sudden loss of voice in absence of cold or flu.
- Sore throat that last more than a week.
- There's been a significant change in your voice quality that persists. (you can first speak with your voice teacher if you have one)
- You are having ongoing symptoms of REFLUX





# 10 Good Ways to Abuse Your Voice

A Singer's Guide to a Short Career – Robert Sataloff MD 1985

- 1. Do not warm up before using your voice.
- 2. Do not study singing
- 3. Do not exercise.
- 4. Speak as you would never dare sing.
- 5. Wear yourself out
- 6. Sing the wrong music.
- 7. Sing in noise.
- 8. Speak in noise.
- 9. Conduct
- 10. Teach Voice



# Voice Health

- Many causes of medically-based Voice Disorders from cancer, cysts, papillomas (warts), paralysis, MS, Parkinsons, CP, thyroid dysfunction...
- The vast majority of the patients seen for voice treatment with an SLP acquire their voice problem through misuse of the vocal mechanism.
- ‘Short garden hose’ analogy.



# Abusive Vocal Behaviors

- Too Loud (VF nodules, polyps)
- Too Much Talking/Singing (nodules, polyps)
- Too Tight and Squeezed (muscle tension dysphonia)
- Too Staccato. Hard glottal attack. (“Eat Eggs And Ice.”)
- Too little Breath Support, too little Air Flow (Glottal Fry, MTD) [Creaky](#)
- Too Low of Pitch (Contact Ulcers, Granulomas)

Most of the above vocal behaviors will create a problem gradually over time.

- Acute laryngitis from yelling or URI can occur in a short period of time. Swelling of the VFs.
- VF hemorrhage can have a sudden onset.



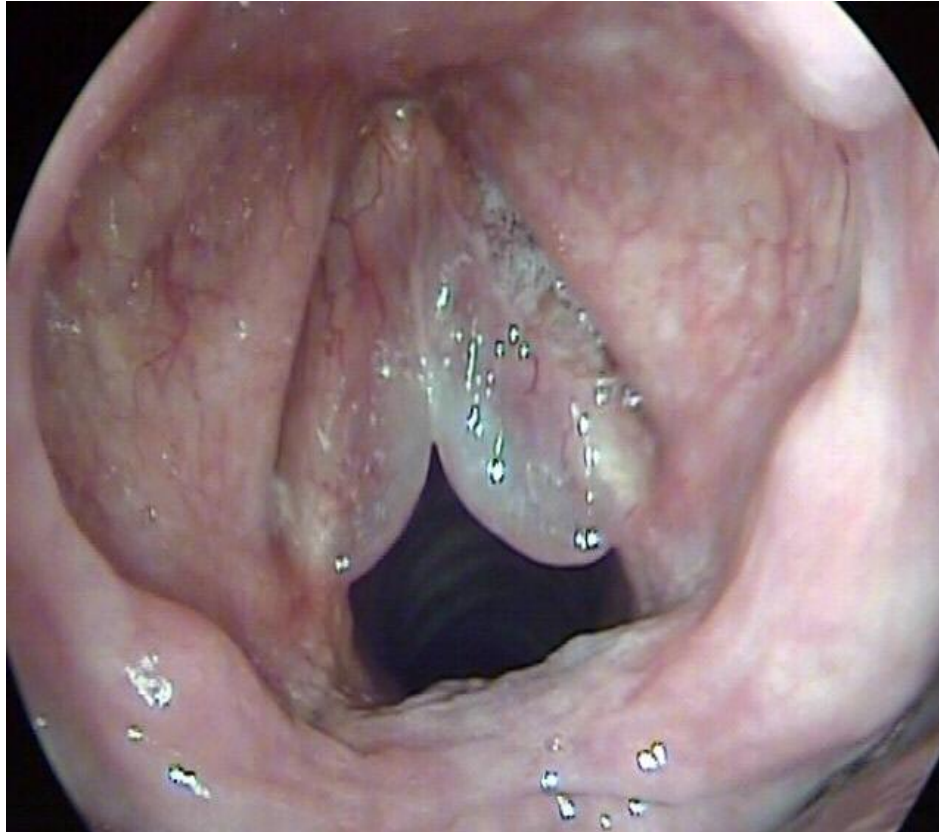
# Voice Health

- VF Nodules



# Voice Health

- VF Polyps
- Smoker
- Surgery



# Voice Health

- VF Granuloma
- reflux



# Voice Health

- Normal VFs with a problem.
- Guess?



# Voice Health

- **REFLUXREFLUXREFLUXREFLUXREFLUX**
- GERD's effect on voice is serious. Health risks! Cancer risks!
- 10% of diagnosed reflux pts have GERD (highly acidic reflux)
- 90% have NERD (non-erosive or low-acidic)
- 1<sup>st</sup> line of treatment is Lifestyle Change (this often works well)
- 2<sup>nd</sup> line of treatment is prescription meds. (PPI - Prevacid, Nexium, Protonix, Prilosec) (H2 blockers – Zantac, Efferdose)
- 3<sup>rd</sup> line of tx is surgery
- Chronic dry mouth should be treated as an emergency. You have to be producing saliva and not just sip on water.
- Performers (vocalists and wind instrumentalists) commonly have LPR (laryngopharygeal reflux – to the VFs)
- LPR major influence on granulomas, chronic coughing, hasten onset of nodules and polyps, and compound all voice disorders.

