



Breaking the Sound Barrier - Speaking Through the Mask

Voice Care Workshop

Irene Feher DMus

Introduction



I am a singer, singing voice teacher,
and improvisation facilitator

Member of NATS since 2003

Training in:

Singing Pedagogy: Classical,
Musical Theatre, and Contemporary

Vocology: care and habilitation
of the singing voice

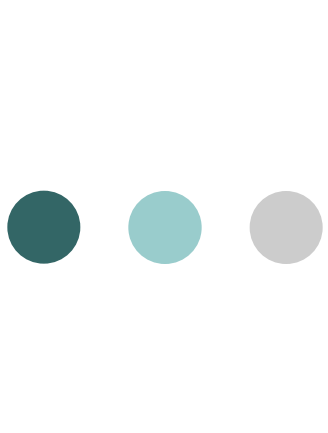
LMRVT (Lessac-Madsen-
Resonant-Voice-Training)

Stage speech, narration, and
voice-over



Handouts

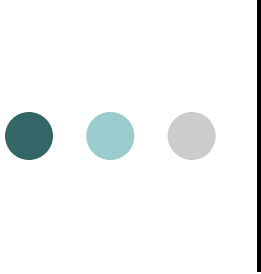
- **References to online resources and helpful books**
- **List of awareness reminders**
- **Copy of this PowerPoint**
- **Recording of today's session**



Professional Voice Users

Singers, actors, DJ's, lawyers,
politicians,

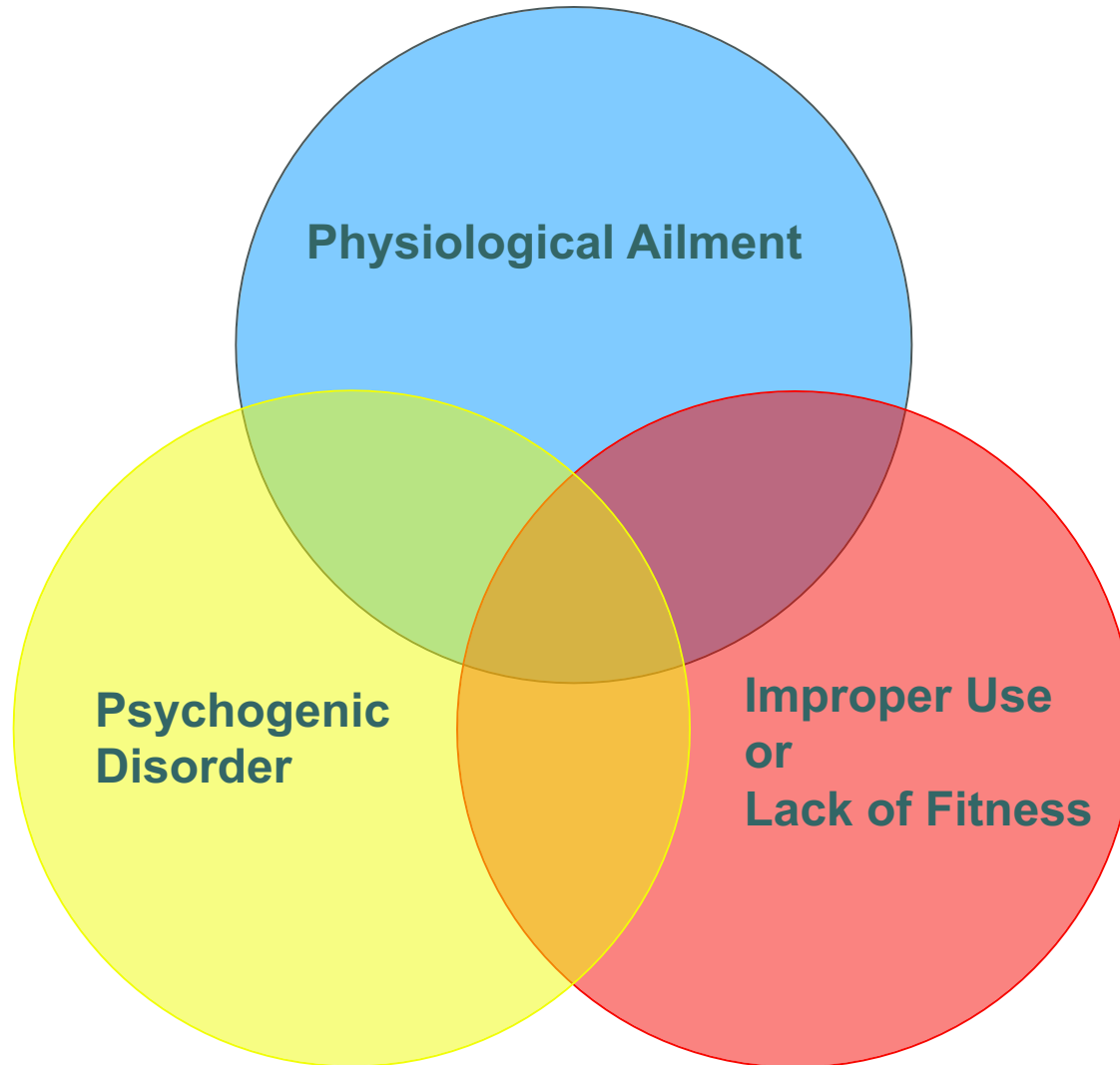
Teachers



Back in the classroom after almost 2 years and speaking through a mask!

- Does your voice feel tired after teaching or at the end of the day?
- Do you experience hoarseness in the morning or from time to time?
- Does it feel like hard work to project your voice in the classroom?
- Exercise science – reversibility
- "Don't use it – you lose it..."

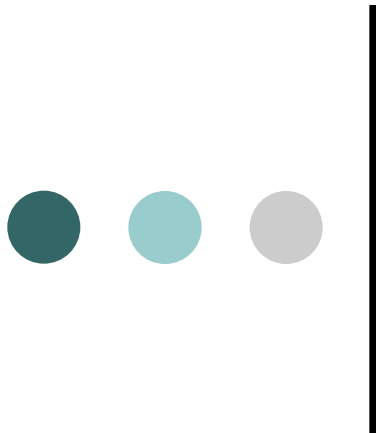
Vocal Fatigue and Hoarseness - 3 Main Causes





Outline of Session

- **Basic physiology and acoustics of the speaking voice**
- **Common voice problems**
- **Good vocal hygiene and preventative measures**
- **How to use your voice well and project it**
- **Vocal fitness**
- **Exercises: warm up and cool down**



Basic physiology, anatomy, and acoustics of the speaking voice

Like a musical instrument:

- Power Source (respiratory system)
- Sound source - vibrating object (two vocal folds housed inside the larynx)
- Resonator (vocal tract: larynx, pharynx, mouth and nasal cavities)



Power Source: The Respiratory System

- Lungs
- Diaphragm: Primary Muscle of Inspiration
- Elastic recoil of the ribcage
- Muscles of expiration

Diaphragm

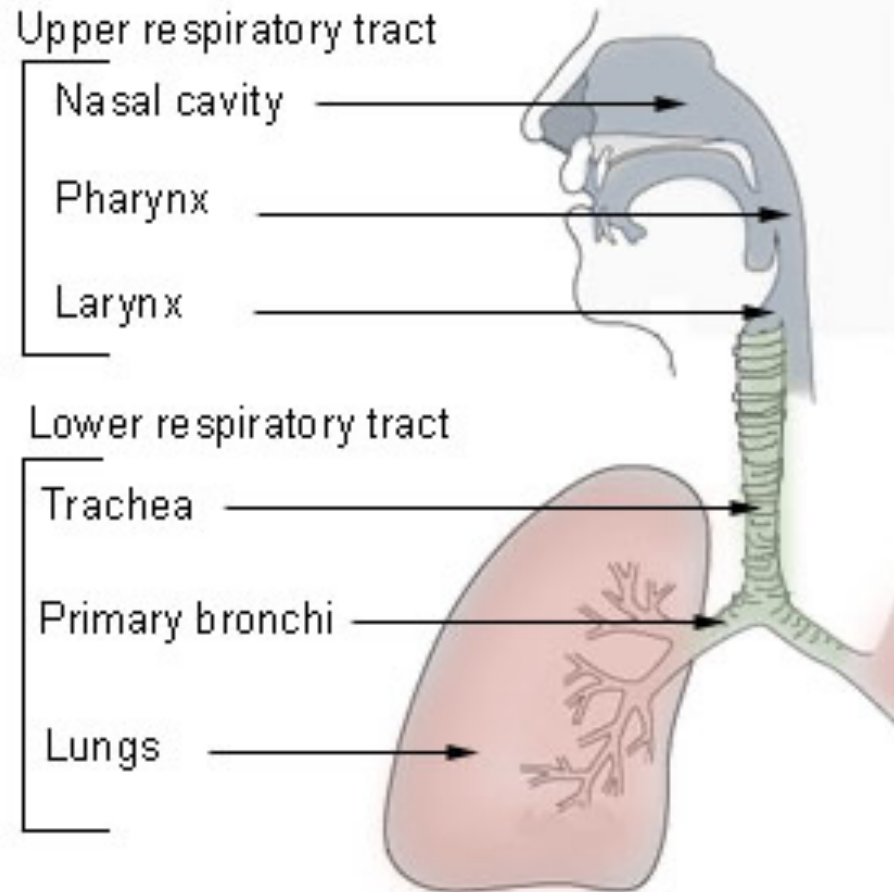


The diaphragm
is shaped
like a parachute



The larynx as part of the Respiratory System

Conducting Passages

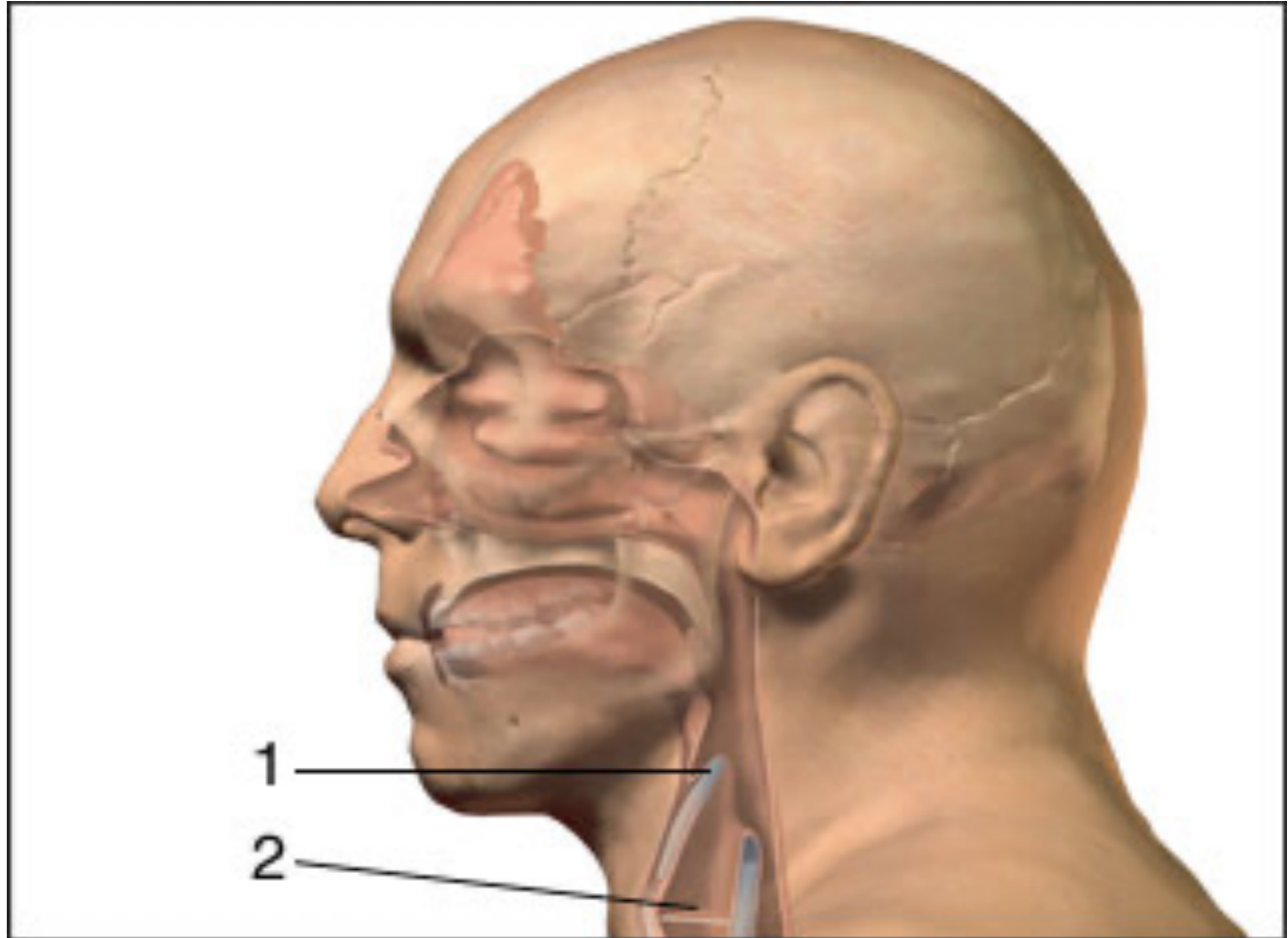




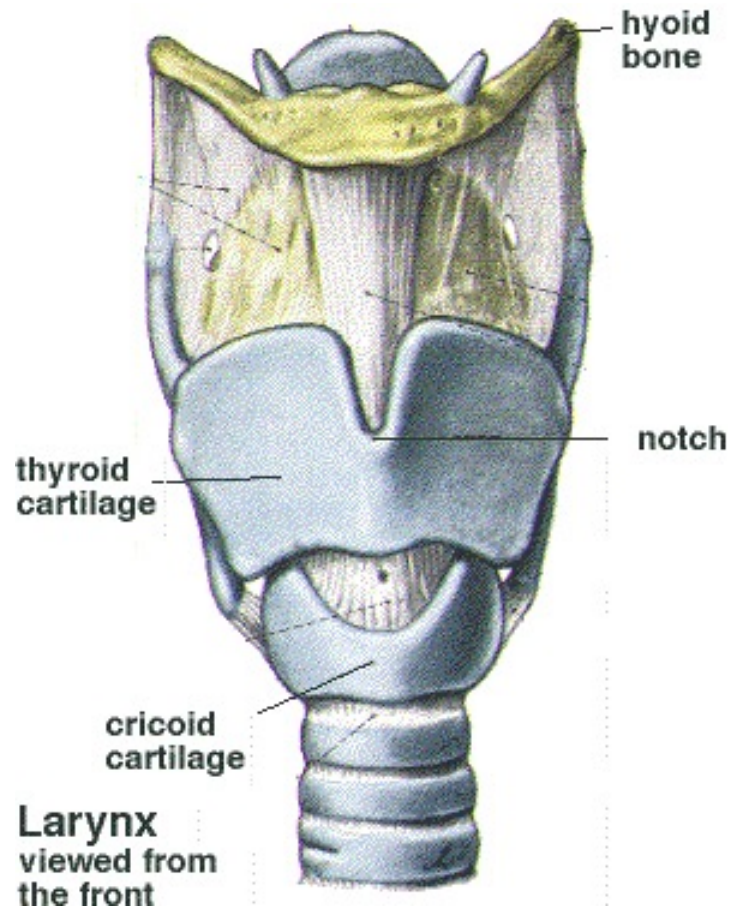
Basic physiology of the speaking voice

- **Where and what is your larynx?**
 - Sphincter that sits at the top of the trachea
- **Functions of the larynx are:**
 - To protect airways from objects in the air or when swallowing food
 - Phonation
 - Closes to raise intra-abdominal pressure for heavy physical activity, defecation, and childbirth.

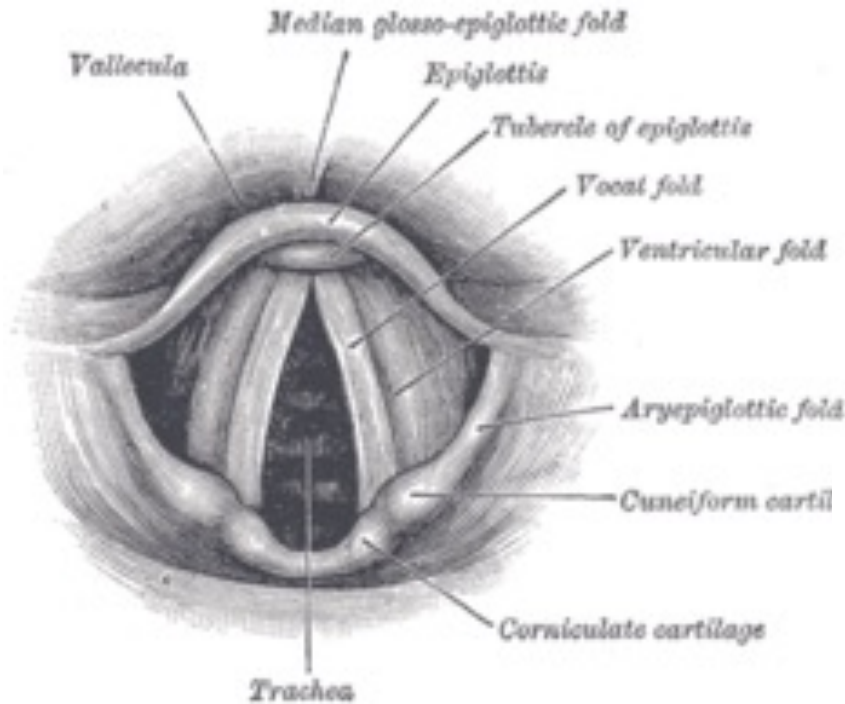
The Larynx and Esophagus



Basic Anatomy of the Larynx



Sound Source – two vocal folds Inside the larynx



Vocal cords
abducted
to breathe



Vocal cords
adducted
to speak

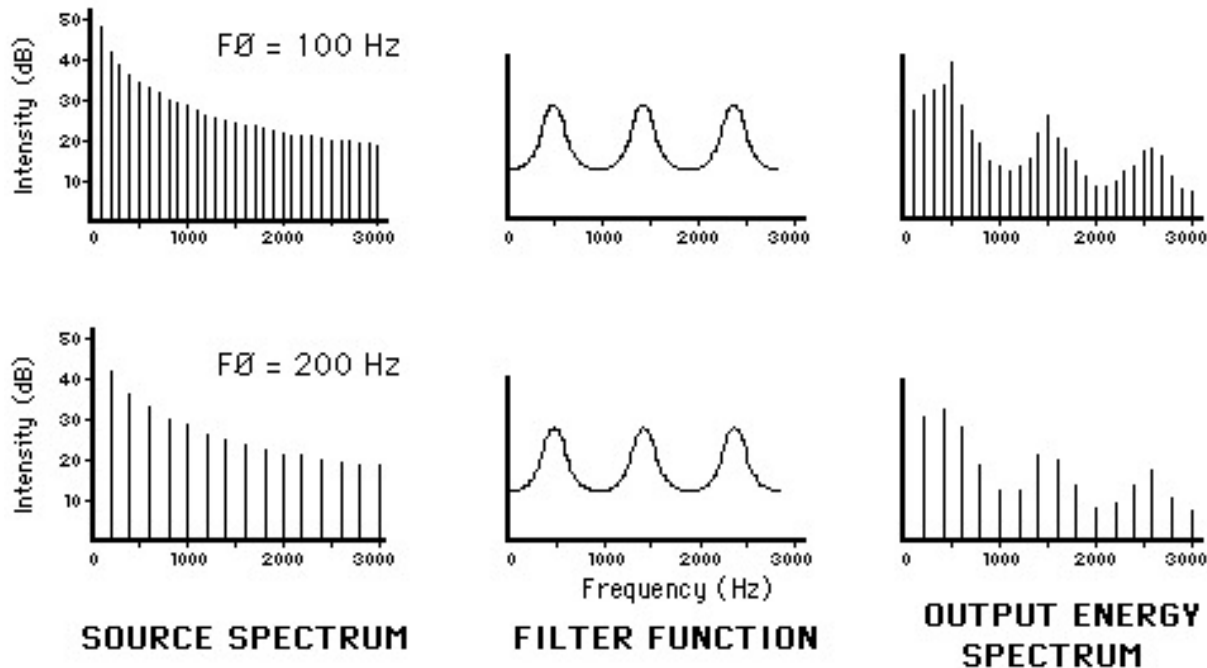


Resonator – The Vocal Tract

- Oral, pharyngeal, laryngeal and nasal cavities
- With articulation we create the sounds of speech
 - Vowels
 - Consonants

The Acoustics of the Speaking Voice

○ The Source-Filter theory





Common voice problems



Common Complaints

- Having vocal difficulties or phonotrauma is very common among professional voice users
- Fatigue and dryness
- Vocal tract discomfort
- Pressure in the throat



Common Causes of Vocal Discomfort or Hoarseness

- **COVID19**
- **URTI/URI:** Common cold, sinusitis, pharyngitis, tonsillitis, ear infection, laryngitis
- **LRI:** pneumonia, acute bronchitis
- **Allergies**
- **Hormonal change during the female menstrual cycle**
- **Some medications**



Chronic Voice Problems

- Acid Reflux

- **LPR**

 - Laryngopharyngeal Reflux

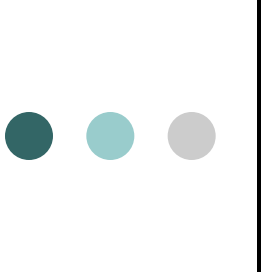
- **GERD**

 - Gastroesophageal Reflux Disease



Suggested Lifestyle Changes

- **Watch what you eat: Avoid Large Meals**
 - **Avoid fatty foods**
 - **Avoid spicy foods**
 - **Eat fewer acidic foods, such as citrus and tomato-based food**
 - **Limit alcohol, caffeine, and carbonated beverages**
 - **Limit chocolate, peppermint, and dairy products**
 - **Limit garlic and onions**

- 
- **Stop smoking**
 - **Lose weight if overweight**
 - **Elevate the head of the bed by placing 4- to 8-inch blocks under the bed posts at the head of the bed (adding additional pillows is insufficient)**
 - **Avoid wearing tight-fitting clothes**
 - **Avoid eating within 3 to 4 hours of napping or bedtime**
 - **Avoid medications that decrease the lower esophageal sphincter pressure (theophylline, anticholinergic agents, alpha-adrenergic antagonists, beta-adrenergic agonists, calcium channel blockers, nitrates)**



Phonotrauma

○ Conditions that may result:

- **Erythema or redness**
- **Vocal fold polyps** are enlarged areas of the vocal folds
- **Vocal nodules**, commonly referred to as nodes, are callous formations on the vocal folds.
- **Vocal fold Haemorrhage** acute condition that can result from a coughing or shouting

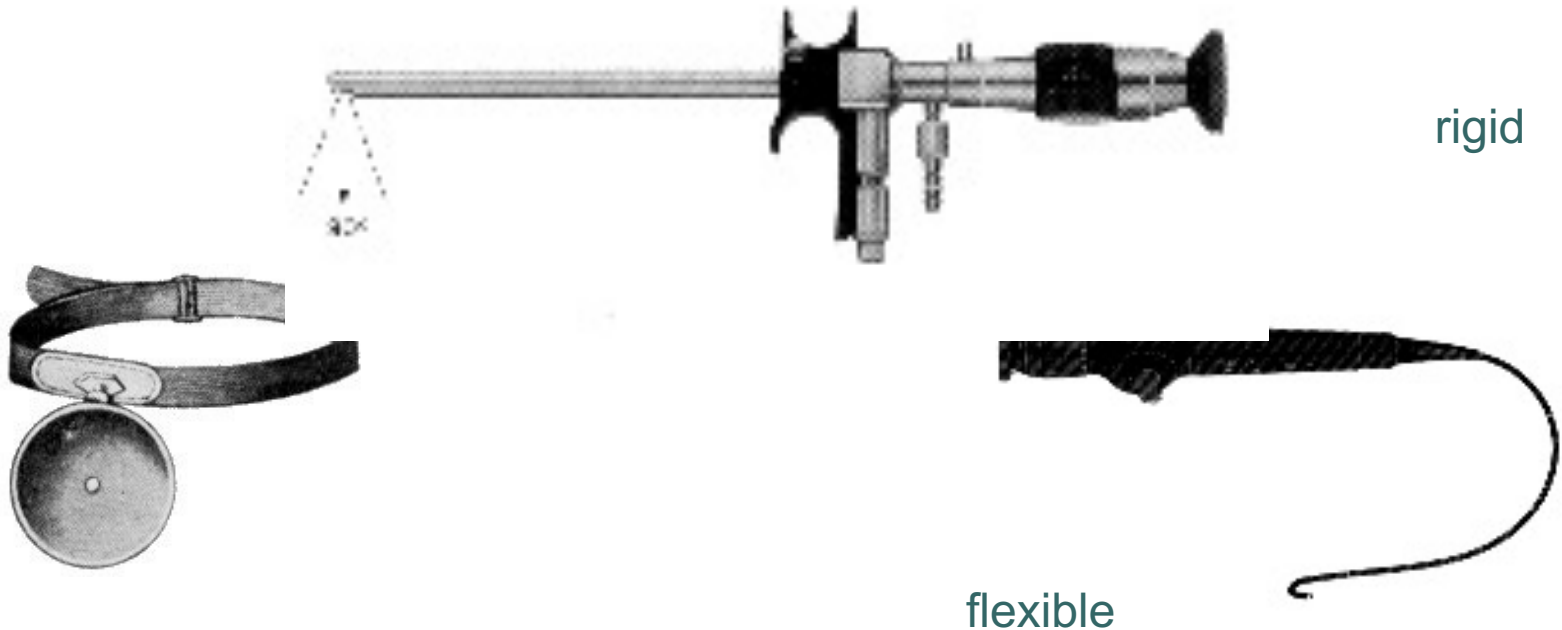


The Voice Care Team

- It's best to consult a professional if you are still feeling vocal fatigue or hoarseness after 14 days
 - Singing Voice Teacher or Acting Voice Coach
 - Speech language pathologist
 - Otolaryngologist or laryngologist

A visit to a laryngologist otolaryngologist or ENT

How do they examine your larynx?
Indirect and direct laryngoscope



- ● ●

What the doctor (and you) can see



stroboscopy



<https://voice.weill.cornell.edu/voice-evaluation/how-are-vocal-folds-and-larynx-examined>



Good vocal hygiene and preventative measures

Some DO'S and DON'TS



DON'T

- x **Clear your throat vigorously**
- x **Yell, cheer, or scream**
- x **Talk a lot in noisy environments**
- x **Lecture or speak to large audiences without the aid of a sound amplifier**
- x **Sing beyond comfortable pitch and loudness ranges**
- x **Try to sing loudly at any high pitch that you cannot manage at a quiet volume**



DON'T

- x **Grunt during strenuous physical exercise**
- x **Speak beyond a natural breath cycle: avoid squeezing out the few words of thought without sufficient breath**
- x **Whisper and make "special effects" sounds with your voice (i.e., motor noises, cartoon voices, very high or low pitch sounds, etc)**



DON'T

- x **Use your voice extensively when you have a cold or when you feel tired**
- x **Expose your throat to excessive pollution: cigarette smoke, chemical fumes, etc. Avoid alcohol**
- x **Ignore prolonged symptoms of vocal strain, hoarseness, or throat pain**



DO

- **Drink frequent sips of water to clear mucus and moisturize your throat**
- **Use a cold air humidifier or saline nebulizer**
- **Use non-verbal noises (such as clapping or ringing a bell) to attract attention**
- **Move close enough to the person you are talking with to be heard without yelling.**
- **Reduce background noise.**



DO

- **Always face the person(s) you are talking to**
- **Use a microphone for public speaking**
- **Breathe out slowly or purse your lips to hold your breath**
- **Speak slowly, pausing often, at natural phrase boundaries. Don't forget to take a breath!**



DO

- **Use a soft voice instead of a whisper**
- **Rest your voice, with the rest of your body, when you're ill or tired**
- **Maintain proper moisture in your throat. Smoke dries the throat**
- **Drink plenty of non-caffeinated, non-alcoholic beverages**
- **Consult your doctor if you experience throat discomfort or hoarseness for more than fourteen days**



DO

- **Use a K95 or N95 mask when you lecture**
 - They are more comfortable as they don't cling to your mouth
 - They serve as excellent protection for others
 - They serve as excellent protection for you



How to use your voice well

Steps you can take



Postural Alignment

- **Good posture = a dynamic and balanced body**
- **Eastern movement arts (yoga, tai chi, qigong)**
- **Somatic education (Feldenkrais, Alexander Technique)**



The Alexander Technique

- **The neck is free, the head moves forward and up as the torso lengthens and widens, and the knees move forward and away**



Correct Posture



Hollow Back



Flat Pelvis



Slumping Posture



Military Posture



Round Shoulders



Correct



High Shoulder



High Hip



Head Tilt



Severe Scoliosis



Breathing

- **Balanced and coordinated**
- **Yoga**
- **Accent method: developed by Danish professor Svend Smith (1907-1985) who taught and researched at The Danish Institute for Speech and Hearing.**
- **Mindful breathing practices: ex. Gamma breathwork**



Pitch and flexibility

- High voice / thin vocal folds
- Low voice / thick vocal folds
- Tone inflection
- Finding your correct pitch range



How to project your voice

Projecting is not pushing

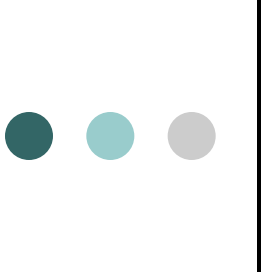
o The Lombard effect

- Discovered in 1909 by Étienne Lombard, French otolaryngologist



Speaking with an open dynamic posture will:

- release unnecessary muscle tension
- reduce vocal effort
- give your voice more body and resonance
- allow you to breathe easily and fully
- increase the effectiveness of communication



CAPP: Curiosity, Awareness, Persistence, Patience

- The key to developing good speech habits: be open to vocal exploration
- Inclusive Awareness: being aware of yourself and the surrounding environment
- This is achieved through the senses: sight, hearing, kinesthesia, proprioception



Vocal Fitness

- Keep your body in shape
- Keep your voice in shape with:
 - Proper and regular use
 - Exercises
 - Warm ups
 - Cool downs
 - Singing



Let's Explore

- Functional Vocal Exercises
 - <https://youtu.be/SkFYIrIIMGs>
- SOVT – Semi-Occluded Vocal Tract Exercises
[https://www.nats.org/ Library/Event Documents/Semi -Occluded Exercises Vocabulary.pdf](https://www.nats.org/Library/Event Documents/Semi -Occluded Exercises Vocabulary.pdf)
- Experiencing resonant speech