



CMAA 2021


**Maintaining vocal health
and preventing vocal injury**

Dr. MeeAe Cecilia Nam

mnam@emich.edu



What we discuss today:

- ▶ **A comprehensive overview of vocal health including risk factors for injury, vocal myths and truths, and how to manage vocal health and longevity.**
 - ▶ **Common issues with voice fatigue; how to identify, manage and prevent.**
 - ▶ **Learning variations of exercises with physiology concepts including when and how to use them at home or in rehearsal setting or anywhere appropriate.**
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Common Voice Disorders

- ▶ “A large number of people who have voice problems don’t try to look for treatment unless it’s really affecting their job,”




When should I see a doctor?

- ▶ http://www.earandvoicedoctor.com/article_12_2009.html



Aural indicators of vocal damage

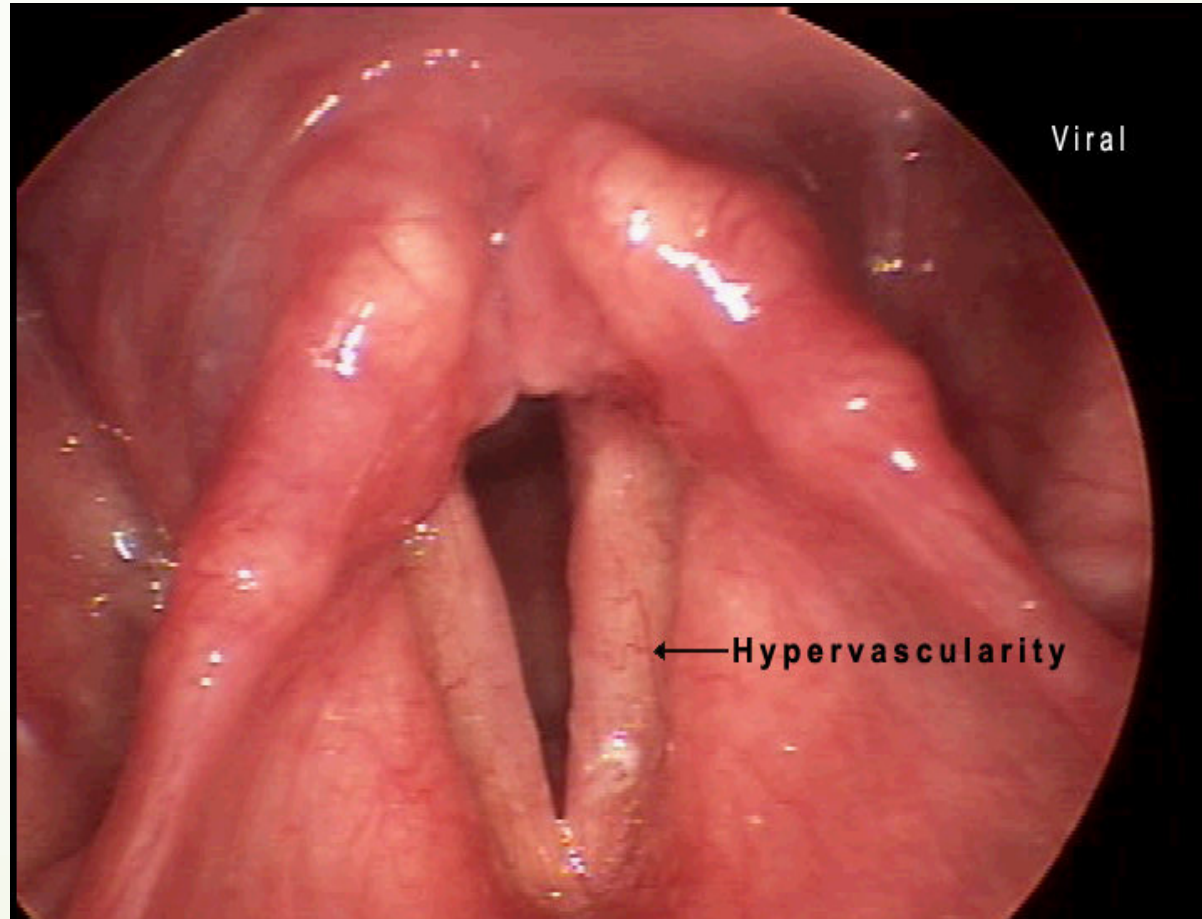
- Hoarseness
 - Sudden loss and gain of phonation
 - Delayed onset
 - Vocal fatigue
 - Breathily tone
 - Shortness of breath or noisy breath
- 

Healthy Vocal Cords



Laryngitis:

An inflammation of the larynx



Reflux laryngitis:



More information: <https://www.youtube.com/watch?v=I1jNSULtVHc>

Dysphonia:

An impairment of the speaking or singing voice

Muscle tension
Dysphonia

More info:
https://www.britishvoiceassociation.org.uk/voice_care_muscle-tension-dysphonia.htm





Vocal fold lesions

➤ Three primary forms of lesions:

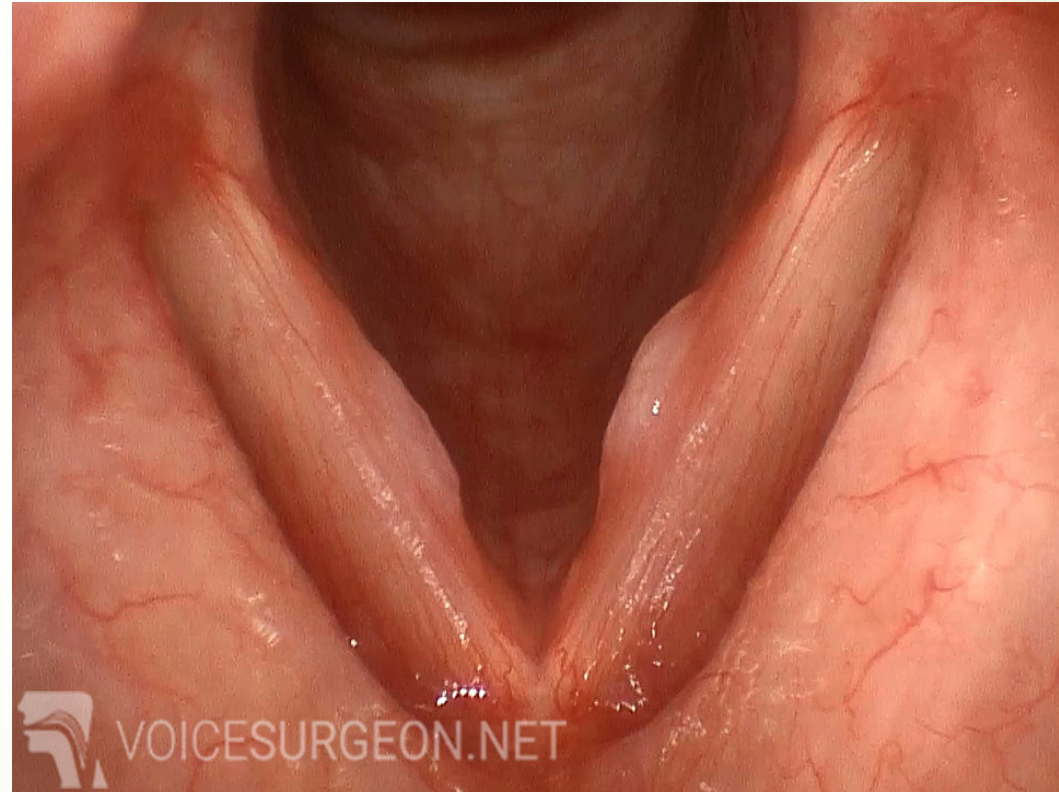
Nodules

Polyps

Cysts

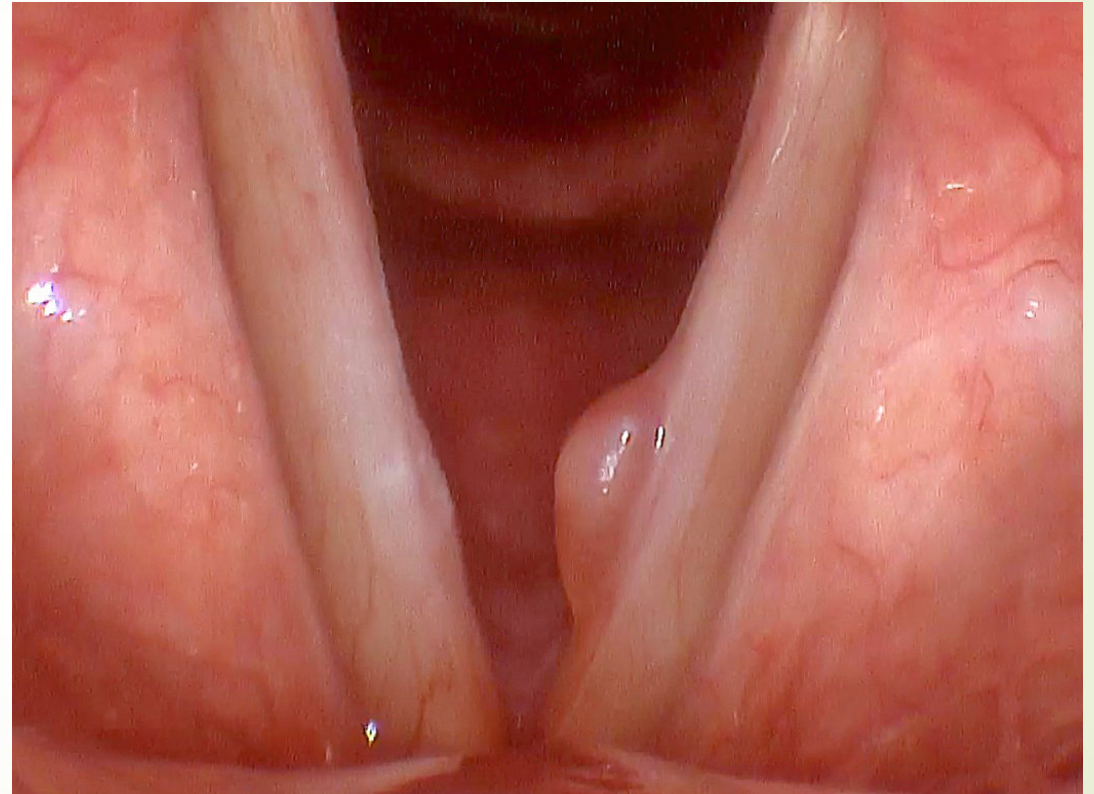
Vocal Nodules

Nodules are a calloused thickening of the stratified squamous epithelium (mucosal lining)



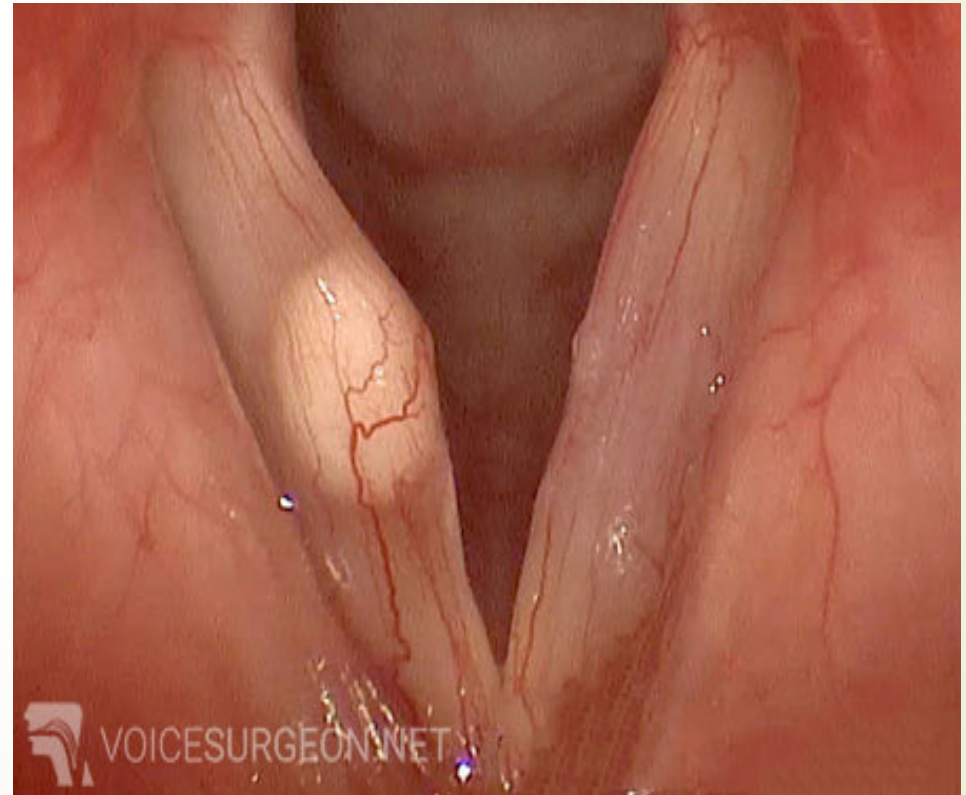
Vocal cords Polyps

polyps : blistering of the lining



Vocal cords cysts

cysts are entrapped cells in the superficial lamina propria (SLP).





What Causes Vocal Damage?





Vocal abuse

- Abusive behaviors include:
- Smoking and vaping, not drinking enough water, screaming and yelling, coughing, and frequent throat clearing.



Vocal misuse

- **improper use of the voice**
- Speaking at a higher or lower pitch than is natural,
- Vocal fry (also called glottal fry)
- Improper speaking/singing techniques



Vocal overuse

- Using the voice beyond normal capacity
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Cont.

- Vocal abuse, misuse, and overuse all can lead to strain and fatigue.
- It could be just one incident or screaming or yelling really loudly.
- Certain allergy and sinus infection medications, acid reflux, dry environments, and neurological disorders



Who Is at Risk for Vocal Damage?

- Educators
 - People working in noisy environments
 - Singers, actors, and other vocal performers
 - Salespeople
 - Podcast hosts
 - Pastors, preachers, priests
 - Fitness instructors
 - Sports coaches
 - Trial lawyers
- 




Treatment

- Voice therapy is the most common treatment of vocal disorders because they develop from overuse and abuse. Therapies include vocal hygiene modifications; increase in hydration, control and limit vocal loudness, humidify environment, and balance vocal demands with vocal rest.
- Surgery
- Voice rehabilitation therapies after surgery




Can Voice Therapy Help Vocal Damage?

- Laryngologist or voice-specialized otolaryngologist
 - Evaluate the vocal cords
 - Identify treatment options




Voice-specialized speech-language pathologists can offer support

- Finding motivation to care for the voice.
 - Understanding what good vocal technique feels like.
 - Offering guidance informed by medical research.
 - Learning how to reduce tension in the vocal tract.
 - Applying therapeutic lessons to everyday use.
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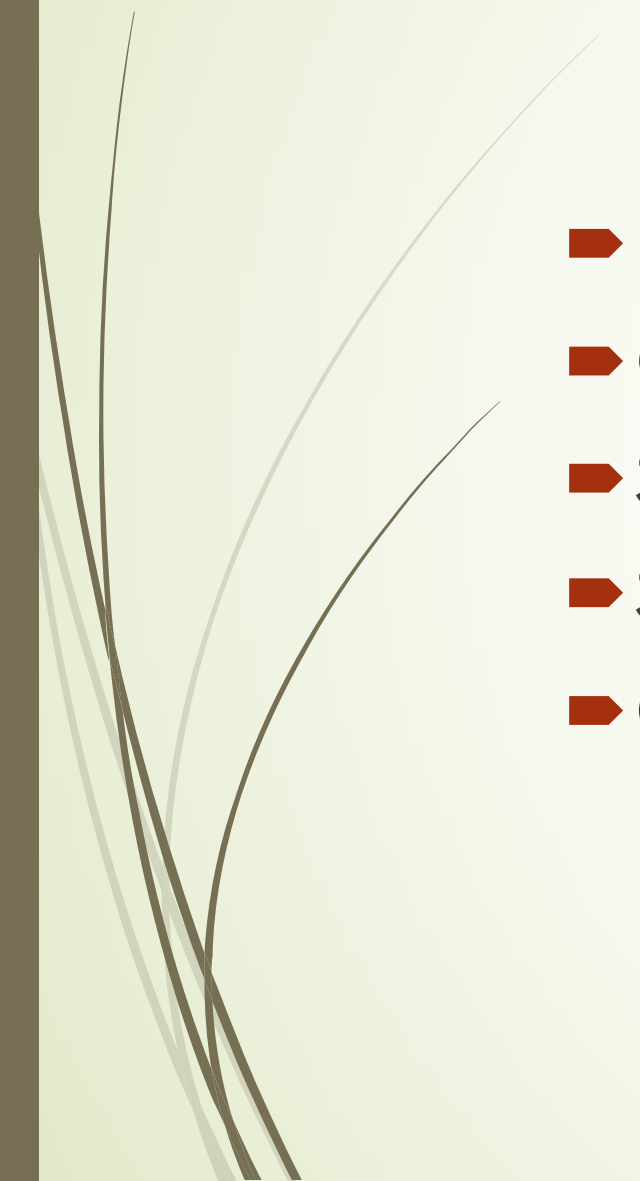


Best Practices for Vocal Health and Hygiene

- What can we do to develop daily practices to maintain vocal health and to prevent vocal injury:





Practice good health behaviors

- Eat well,
 - Get a healthy amount of exercise,
 - Stress management
 - Sleep enough
 - Cease any smoking or vaping behaviors
- 



Physical tension reduction exercises

- **Arriving at proper body alignment**
 - **Positioning the pelvis**
 - **Head and neck**
 - **Positioning the voice-box**
 - **Jaw & tongue**
- 



What is tongue tension? Why is this a problem?

➤ Tongue stretch:

<https://burtonvox.com/singing-technique/release-tongue-tension-while-singing/>

➤ Neck roll:

➤ Sighs and yawns:



Additional helpful links:

- ▶ **Dynamic stretches: before using the voice**

<https://www.youtube.com/watch?v=LDMJi4fauGA>

- ▶ **Articulation exercises:**

[https://www.youtube.com/watch?v=uRdFtrv2yGA
&t=6s](https://www.youtube.com/watch?v=uRdFtrv2yGA&t=6s)



Voice SPA

- **Maintain hydration.**

- Drink water: drink between 0.5 to one ounce of water for every pound you weigh

- **Nebulizer with saline**

- Reduce consumption of caffeine, soda, and alcohol



Voice SPA Cont.

Dr. Dan Gould's gargle recipe

- ½ tsp sea salt (or kosher salt)
- ½ tsp baking soda
- ½ tsp corn syrup, honey, or maple syrup
- 1 cup warm water
- Gargle silently, do not rinse for 5 minutes



Voice Yoga: Warm up and cool down

- **Lip trills:** Keeping your mouth closed, send air between your lips, allowing them to vibrate while making sound on any note. (Happy birthday song) – Balanced phonation
- **Resonant hums:** it resonates in the face, rather than the throat. (1-2 minutes).
- **Cup bubbles (straw phonation):** This exercise involves blowing bubbles through a straw into a water cup filled with water. Gather your supplies and look up “straw phonation vocal exercise” online for an instructional video.



Resonant Voice:

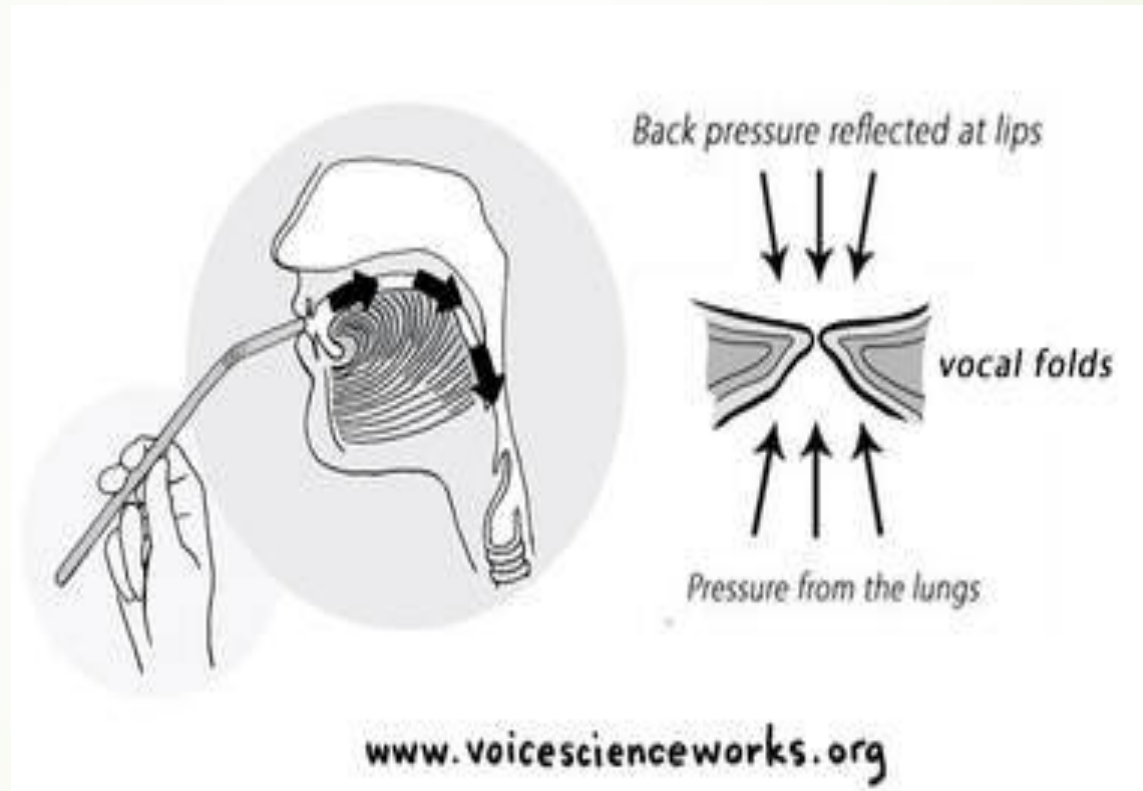
- <https://www.youtube.com/watch?v=qwylUxmUacQ>
- Goals: “achieve the strongest, cleanest possible voice with the least effort and impact between the vocal folds to minimize the likelihood of injury.
- Use nasal consonants like, “m,” “n,” and “ng” to facilitate the training of vibratory resonance - monitoring inappropriate tension (don't force the strong vibratory tone)



Straw phonation

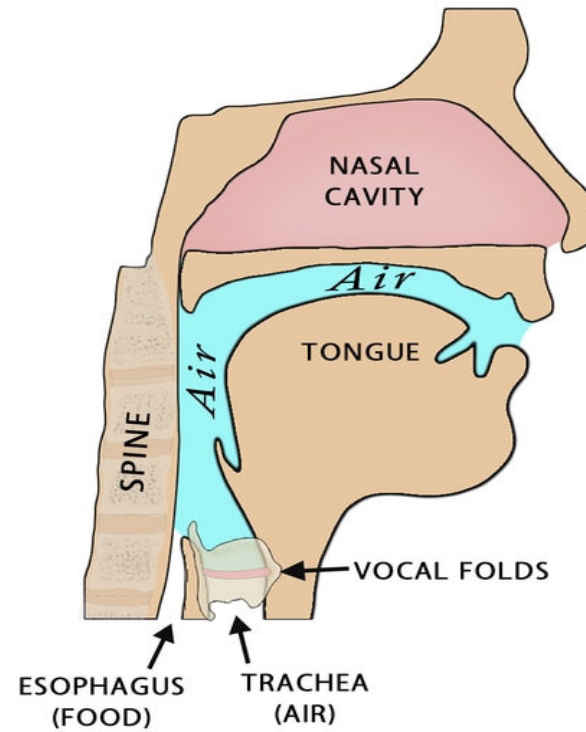
- ▶ Semi-Occluded Vocal Tract Exercises (SOVTE)
 - used for many years by singers and voice professionals as warm-ups
 - incorporated into therapeutic approaches by speech-language pathologists (SLPs) for people with voice disorders

Straw phonation



Vocal tract: vocal resonator

THE VOCAL TRACT





www.voicescienceworks.org



WHY SOVTE?

More pressure in the vocal tract
= less input needed from vocal folds
= more efficiency
= less fatigue

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- ▶ 15 minutes a day – use as a warm up or cool down or reset the muscles.
 - ▶ Go back and forth between SOVT exercises and open mouth singing
 - ▶ Helpful for smooth register transition
 - ▶ Make sure no air is escaping around the lips or through the nose




Cont.

- Nasal & non-nasal practice
- Watch out for Forceful vocal folds adduction or phonation
- Do not overdrive any of breath (hyper function) or vocal closure
- Avoid staccato, more stressful vocal adduction



Cont.

- Glide from a comfortable low note to a comfortable high note on an easy vowel: Repeat 2 times.
 - Glide from a comfortable high note to a comfortable low note on the word /knoll/. Repeat 2 times.
- 



Capitalize on breath support and airflow

- Getting loud by muscling from the throat causes a lot more strain and fatigue and trauma to the vocal cords
- Hissing
- Developing breathing techniques (“Breathe better” attachment)




Small adjustments to protect your voice

- Only use an effortful voice when needed.
- Speak to people in close proximity (e.g., a coach can use a hand gesture to have players gather around closely before speaking to the group).
- Reduce talk time before and after long speaking or singing engagement.
- Incorporate vocal rest into the day.
- Use a personal amplifier if possible
- Try to avoid coughing and throat-clearing



Maintaining Vocal Health

- Maintain good speaking and good singing posture.
 - Do not slouch or bend over when speaking or singing.
 - Sit or stand erect when engaged in voice use.
 - Maintain good breath support when speaking.
 - Optimize voice production strategies.
 - Use easy onset of voicing.
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Questions ?

