


How NOT to Sound Old.

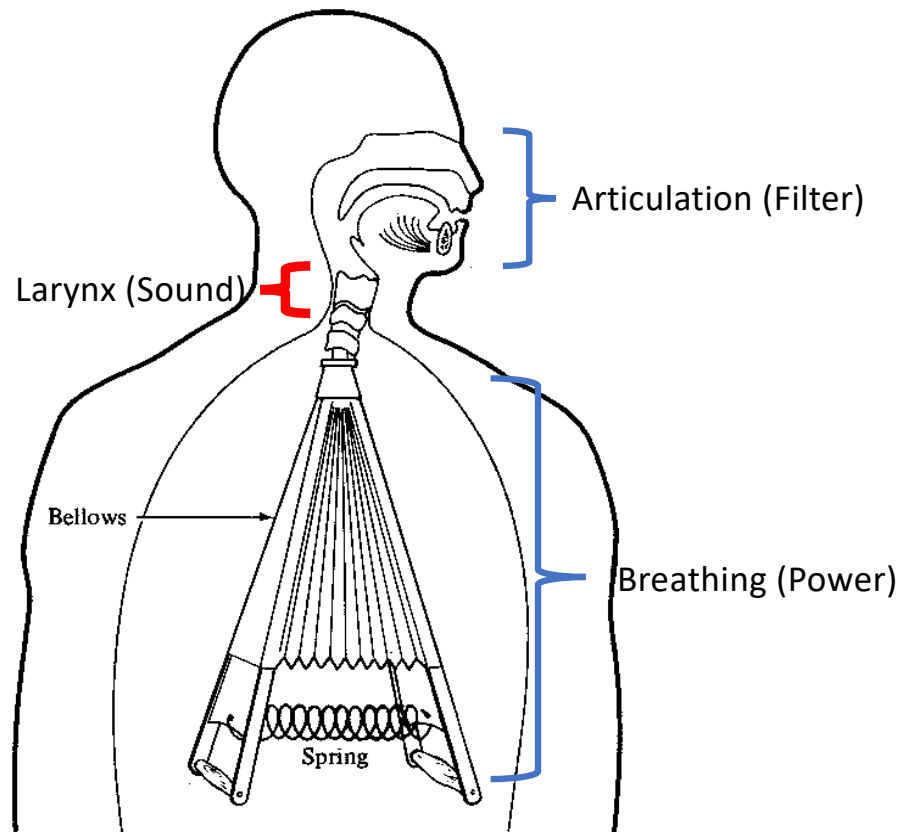
UMRA Workshop
Peter J Watson, Ph.D.

Caveats

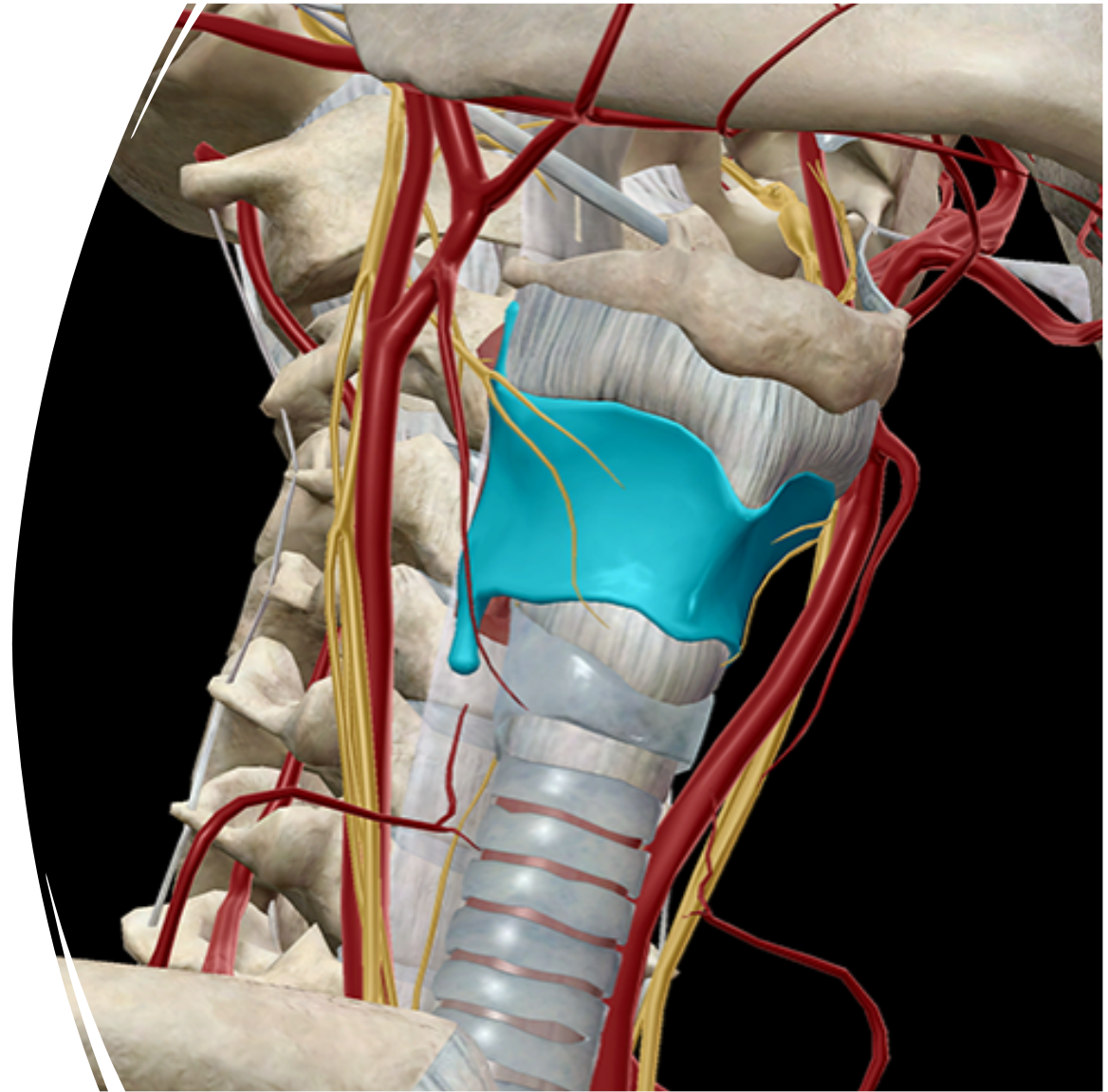
What we will cover today.

- Voice production
- What happens to the voice production system as we age
- Things that you can do to alter the aging of your voice.

Voice Production System



Sound
Source:
Larynx



Phonation

- Laryngeal output variables

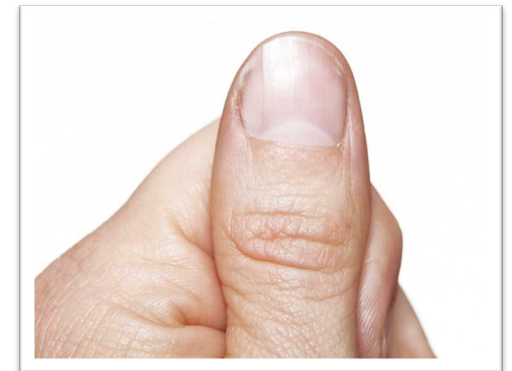
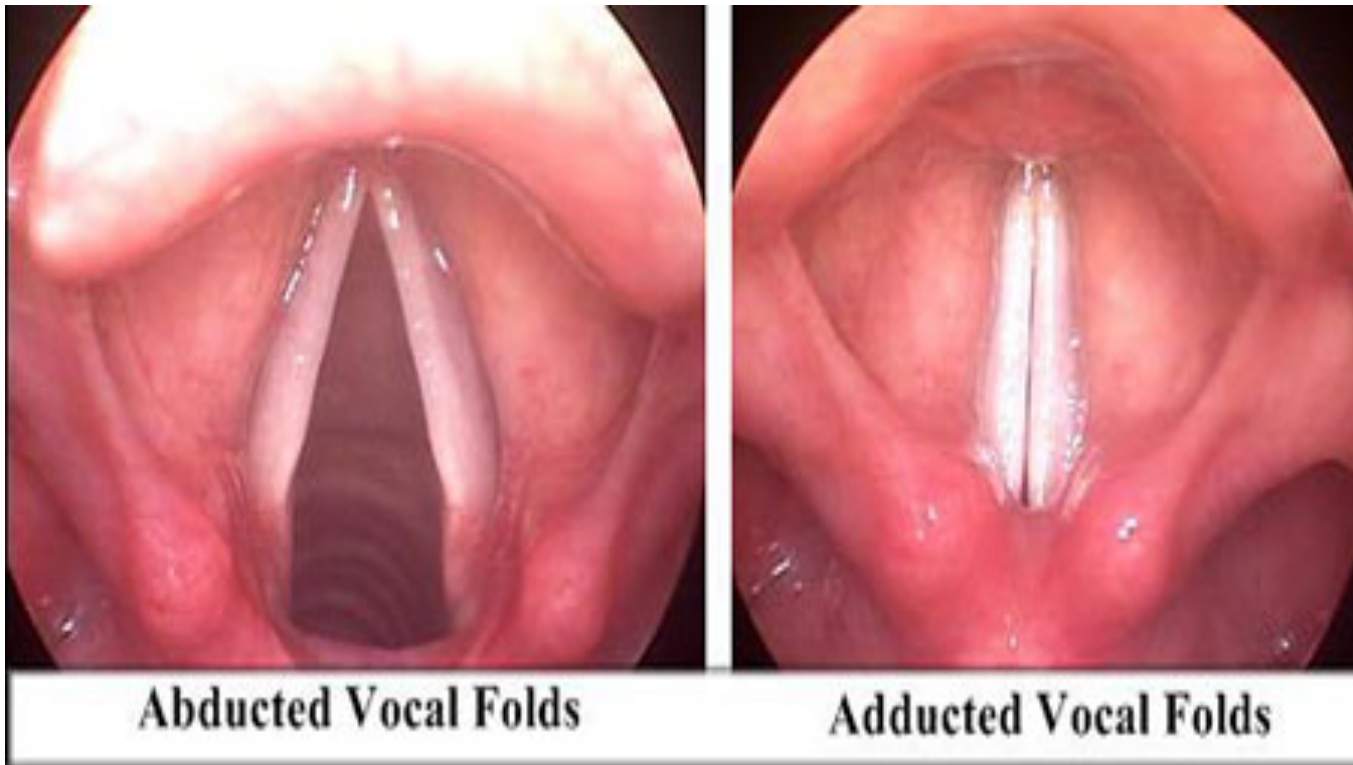
Perceptual Variables

Pitch

Loudness

Quality (Timbre)

Vocal Folds (Cords)



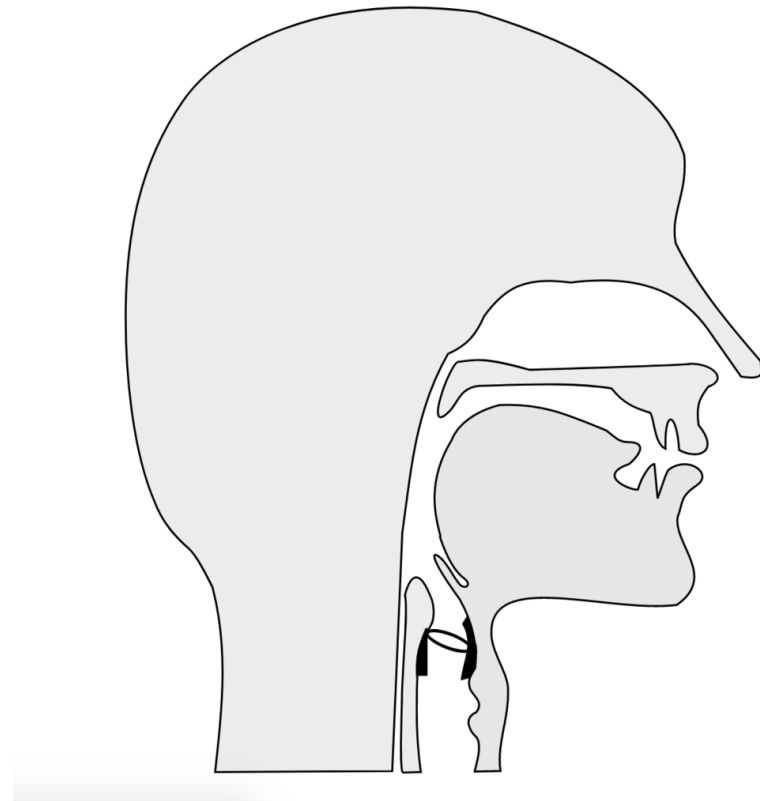
Imaging

Rigid-Oral

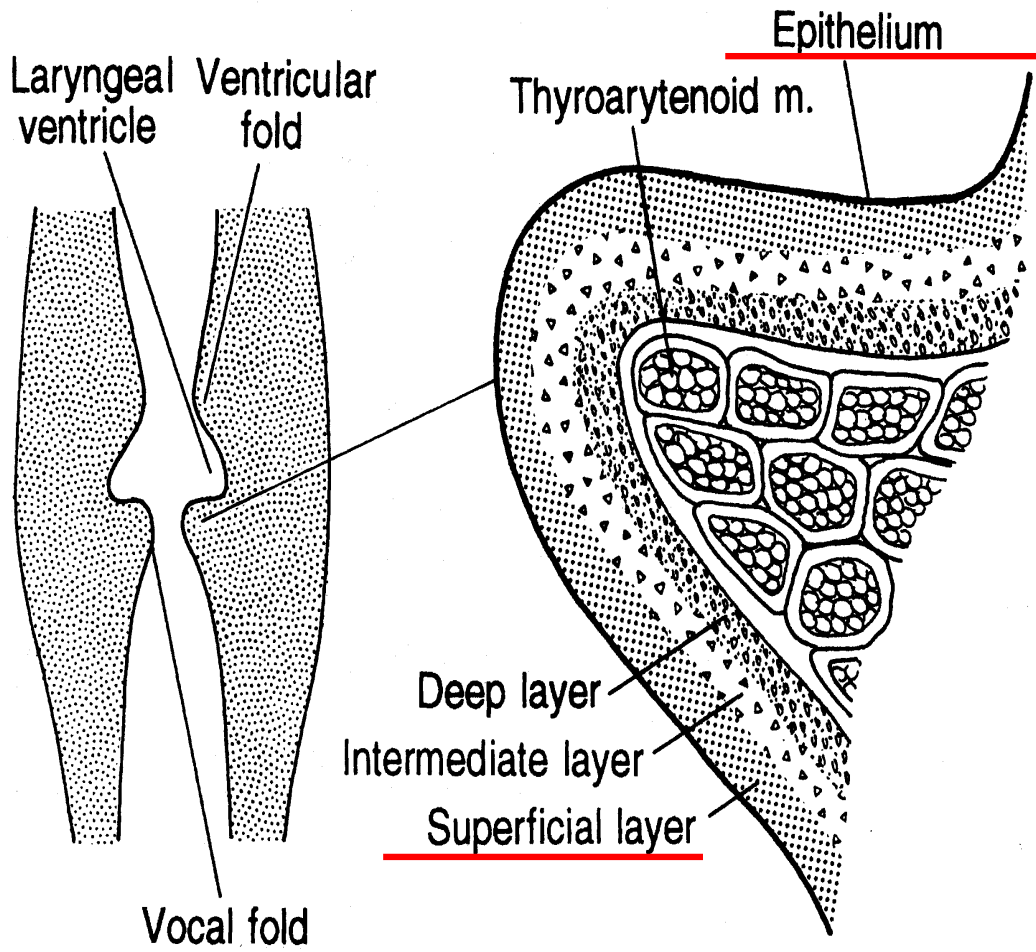


Vocal Tract: Filter

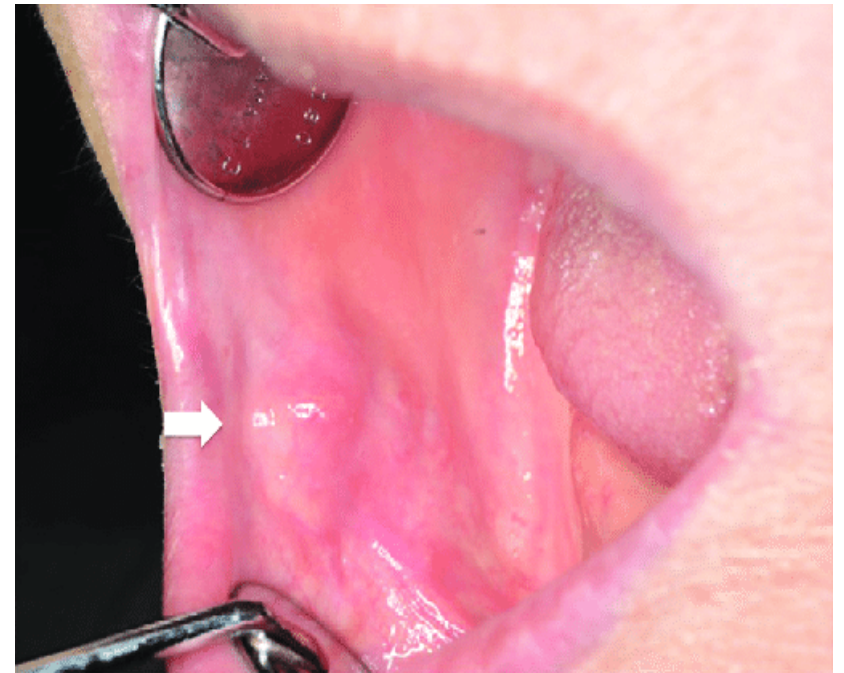
- Output Variables
 - Length
 - Cross-sectional Area



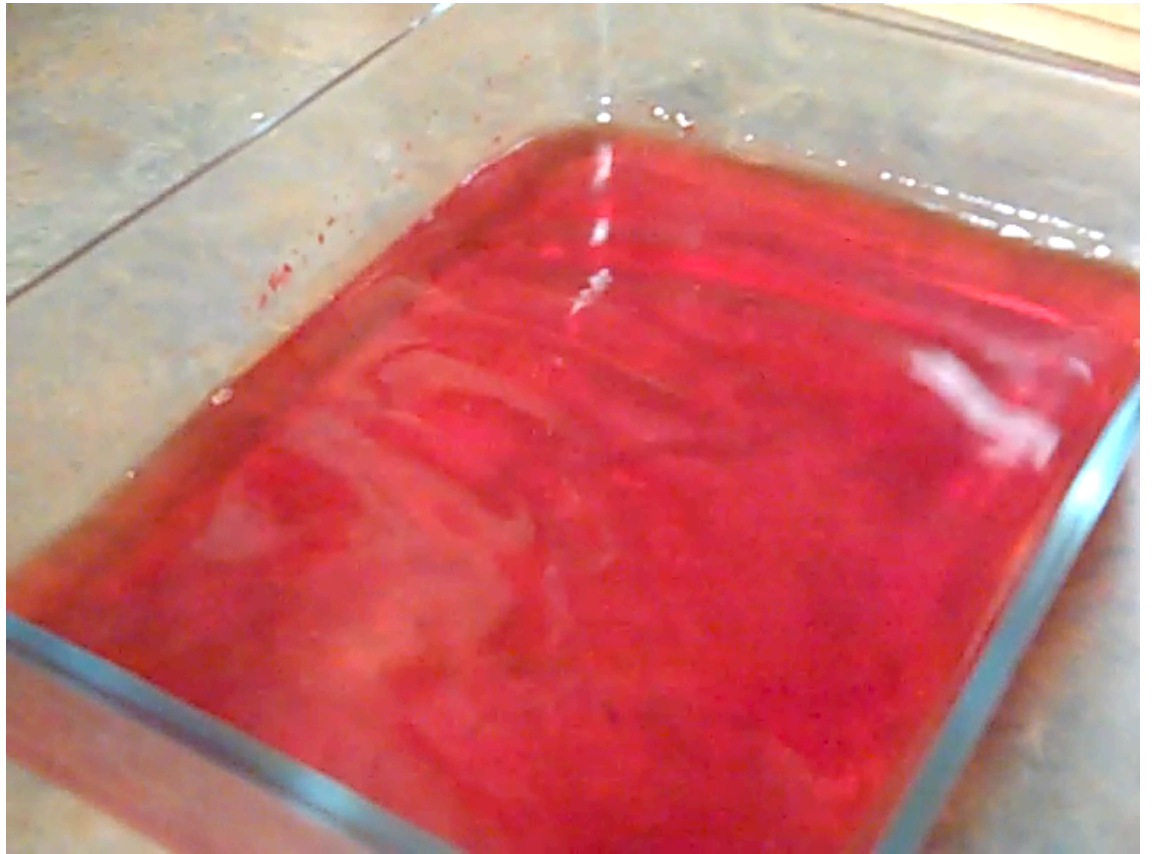
GETTING OLDER IS
JUST ONE BODY PART
AFTER ANOTHER
SAYING, 'HA HA, YOU
THINK THAT'S BAD?
WATCH THIS.'



LARYNX, ANTERIOR VIEW



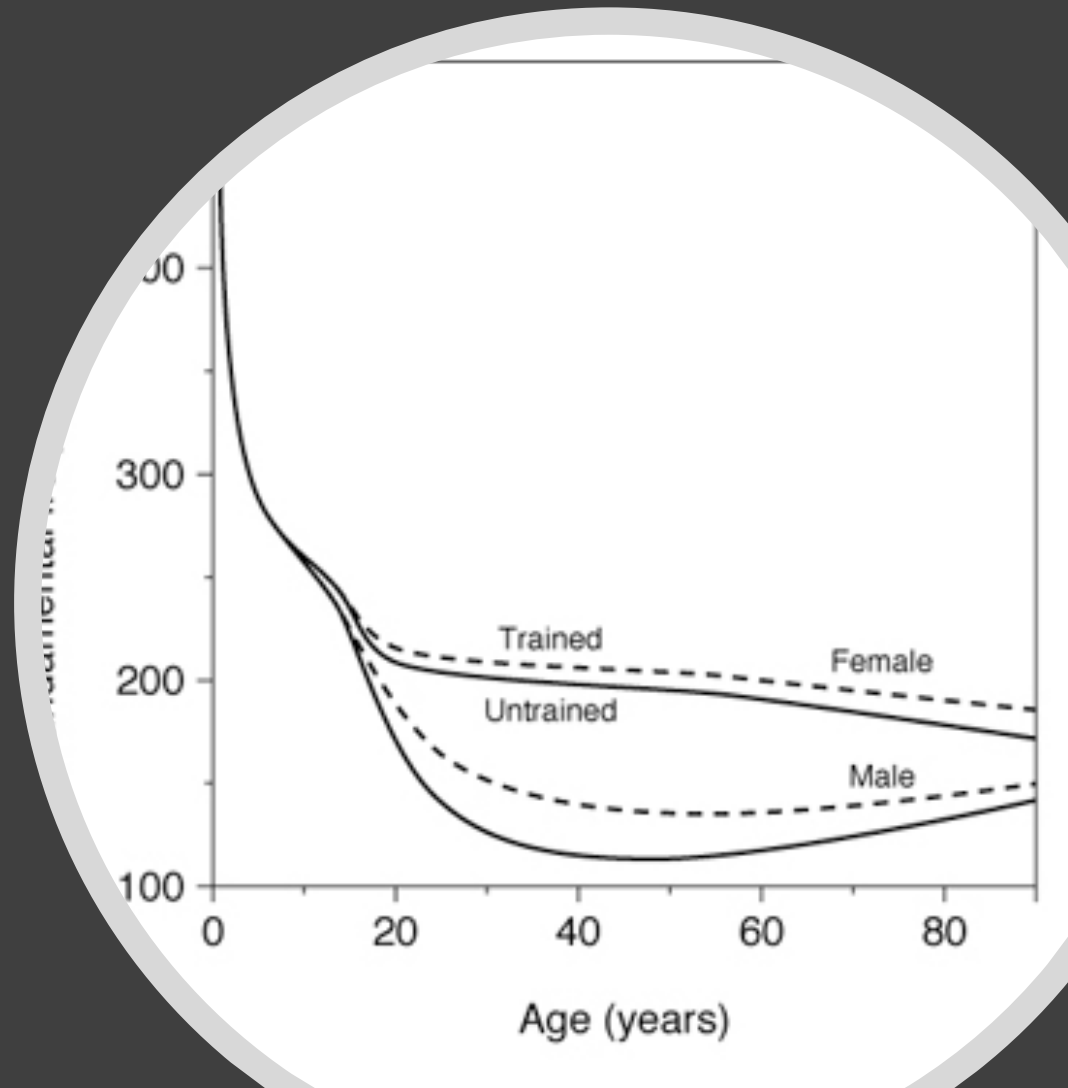
Viscosity and
the Cover



Voice Changes with Age:

- Presbylaryngis
 - Physical changes to Larynx
 - Loss of vocal fold mass
 - Reduction of collagen
 - Muscle
 - Arthritis in the laryngeal joints- lack of closure
 - Vocal fold bowing - lack of complete closure
- Presbyphonia
 - Speaking Pitch
 - Women – decrease
 - Men – increase
 - Loudness and Quality Change
 - Softer, breathier, rougher

Pitch



Presbyphonia

Right cord
adducted →

←
Left cord
adducted

Vocal Fold
Bowling

What can you do?

- Health habits
 - Systemic hydration
 - Maintain healthy environmental humidity (40% or more)
 - Adequate sleep
 - Avoid drying agents (e.g., alcohol, caffeine)
 - Stop smoking
- Be physically fit
 - Biological age vs Chronological age
- Increase Loudness
 - Take in more air
 - Increase mouth opening
- Increase closure
 - "Speak with intent"
- Sing
 - Join a choir
 - Take singing/voice lessons

Vocal Exercises

- Sustaining the vowels “eeee”, “ahhh” while pulling or pushing
- Pitch glides up and down.

THANK YOU



QUESTIONS?

