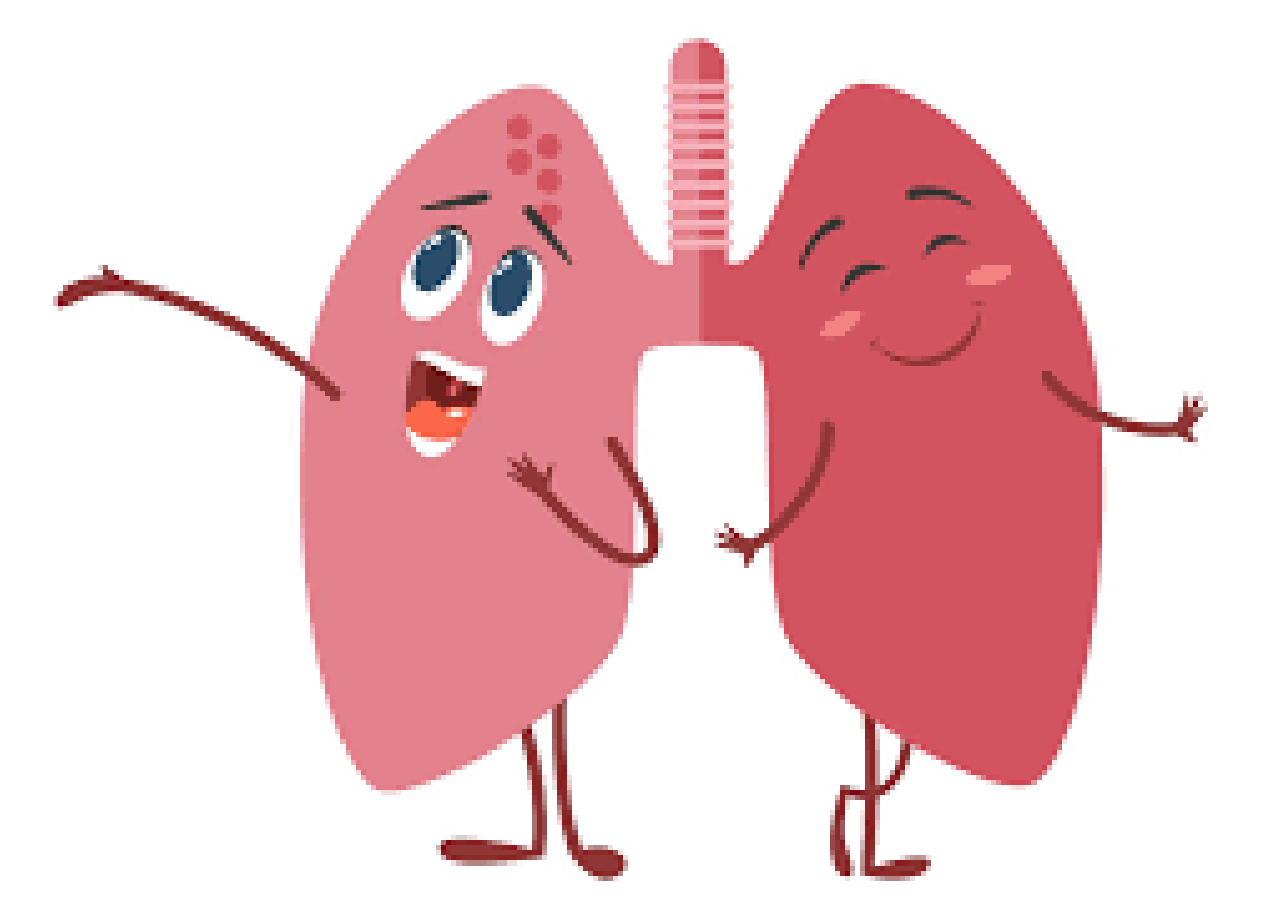


# The Relationship Between Inspiration Duration, Total Lung Volume, and Resting Expiratory Level Utilizing Respiratory Inductance Plethysmography



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## Context

### Demands of Vocal Repertoire:

- Long Phrases
- Catch Breaths or Limited Time to Breathe
- Sometimes Both!

### How Does Inspiration Duration Affect Singing?

## Methods

### Participants:

- 3 treble-voiced graduate students

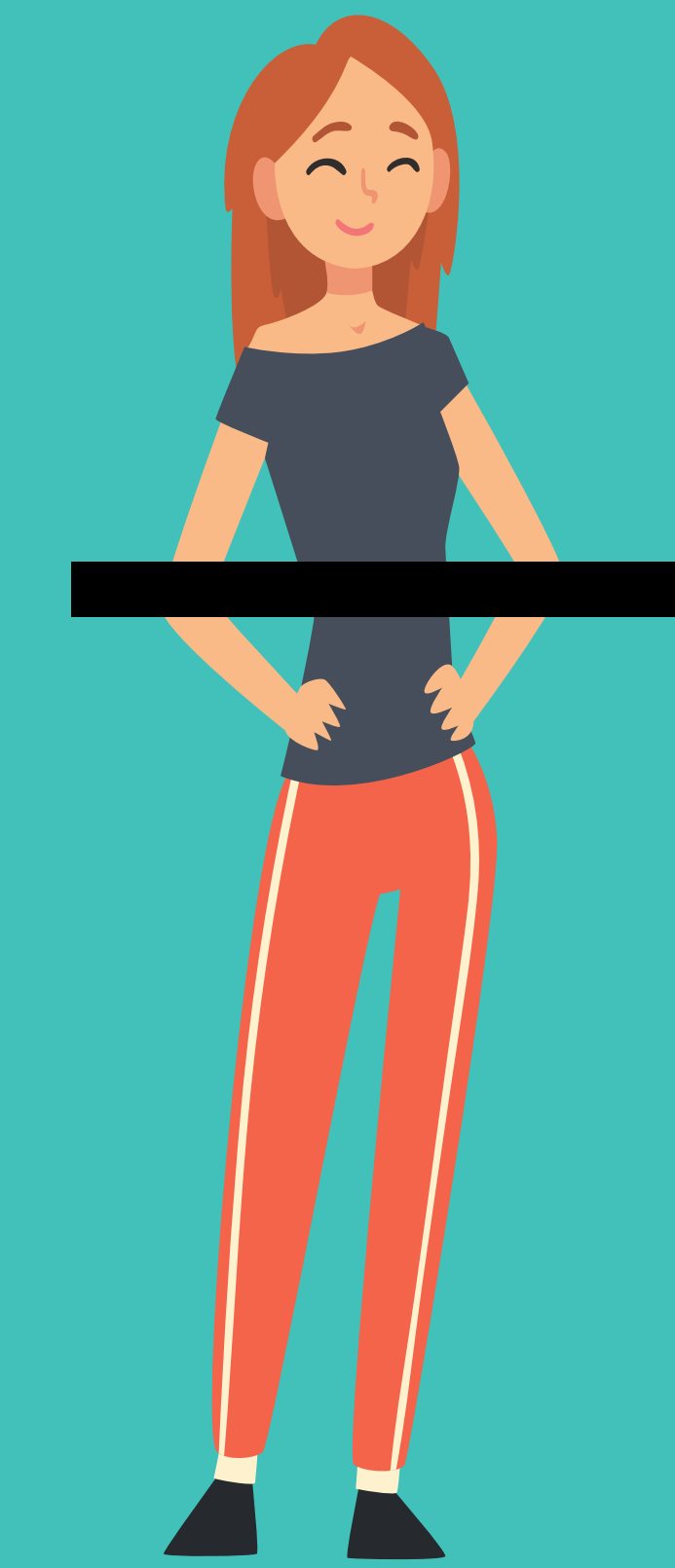
### Maximum Phonation Time:

- [a] vowel on A3 and C5 for as long as possible
- Unlimited Time vs. Limited Time vs. Catch Breath

### Repertoire Excerpt:

- "Edelweiss" from *The Sound of Music*
- 3 beats of inhalation vs. Catch Breath

## Circumference of Respiration Quotient (CRQ)

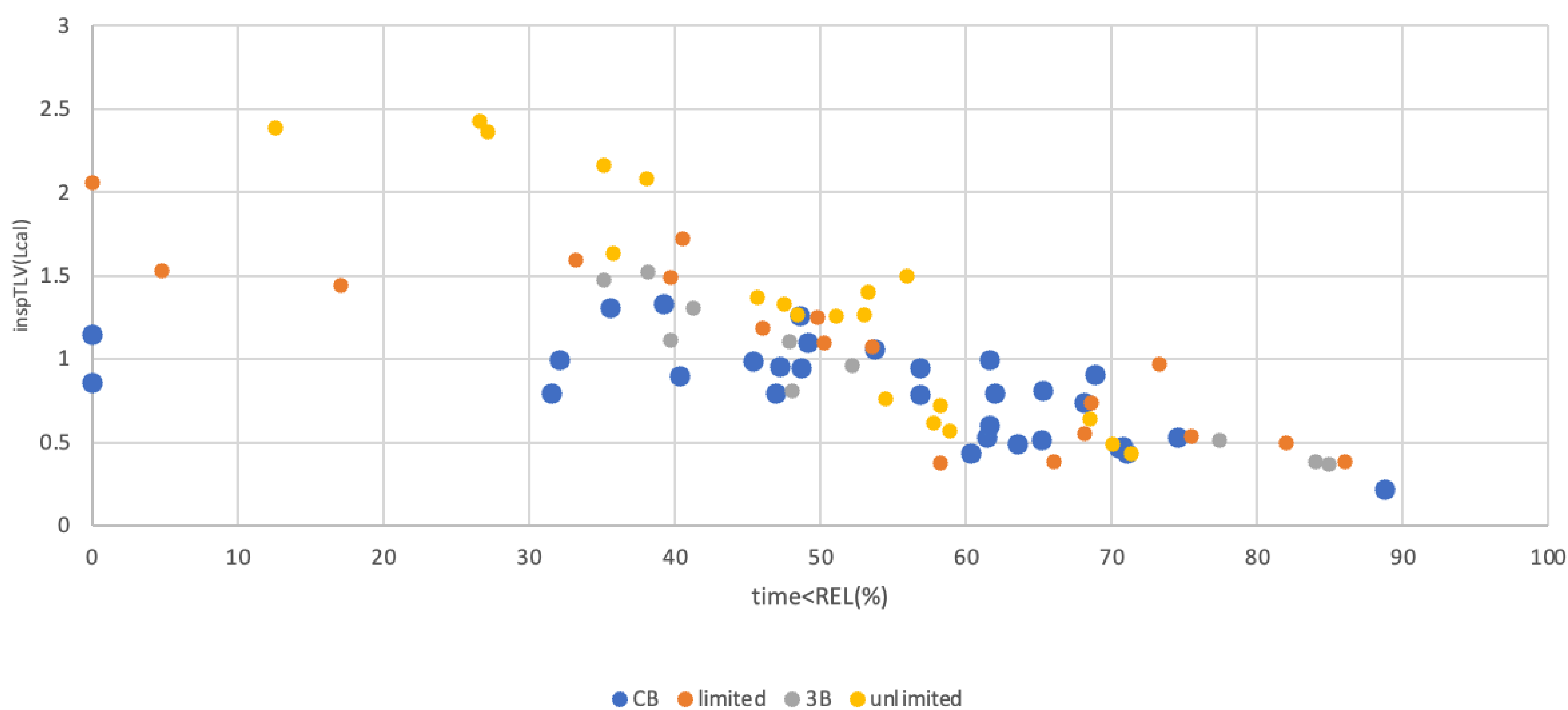


Rib Cage Expansion



Abdominal Expansion

Inspired Lung Volume Compared to Percentage of Time Below REL



The **more** inspired total lung volume a singer has, the **less** time they spend below REL during phonation



A **ribcage dominant** breath allows for **greater inspired lung volume**, especially when given unlimited time to breathe



An **abdomen dominant** breath results in a **lesser inspired lung volume**, regardless of the time allotted for inhalation

Inspired Lung Volume Compared to Circumference of Respiration Quotient

