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**HEALTHY CHOPS**

# **HEALTHY CHOPS:**

**The science behind why our chops behave as they  
do and evidence-based practices  
for chop management**

This is a non – pro session

What is a non -pro player?

What is chops?

# Healthy Chops – what's that mean?

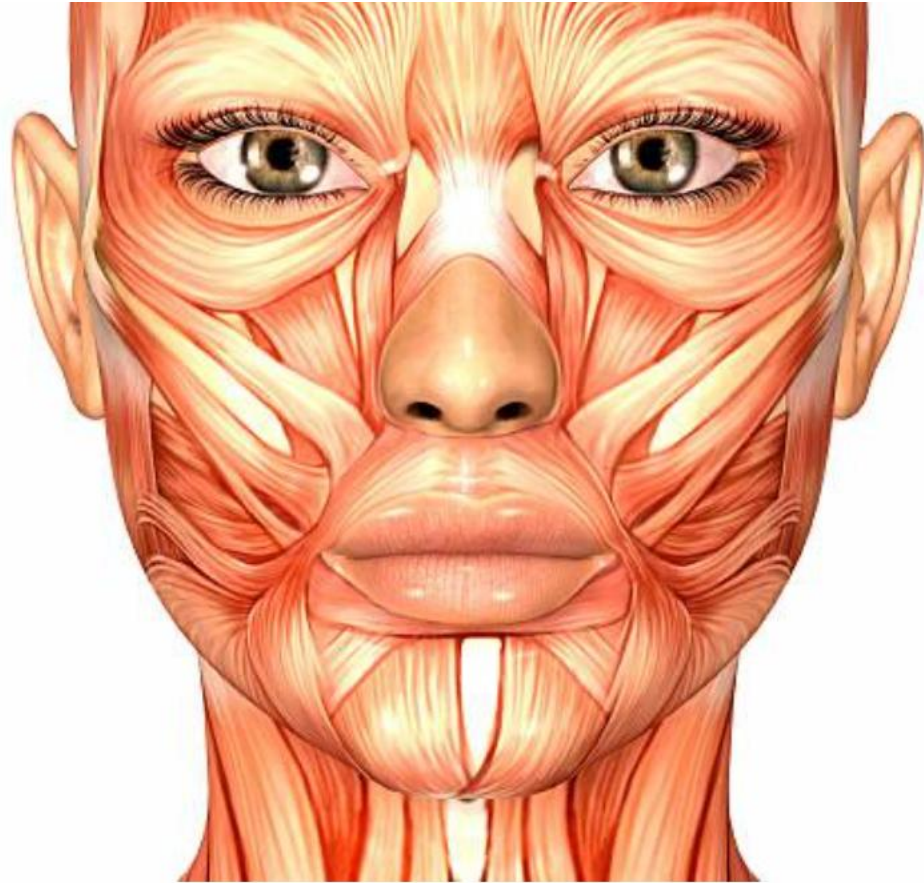
Endurance  
Reliability  
Longevity

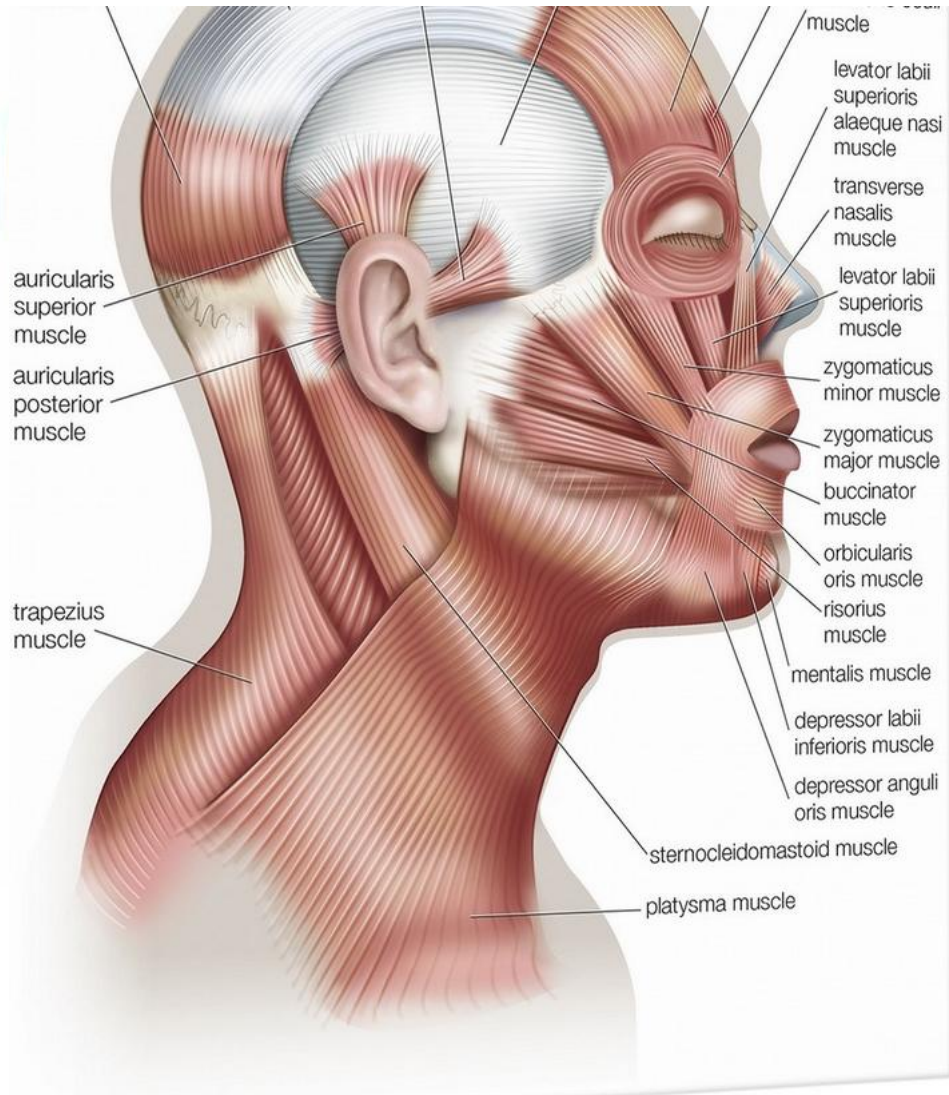
Embouchure = Lips, Face muscles, Tongue, Air speed  
When they don't work...

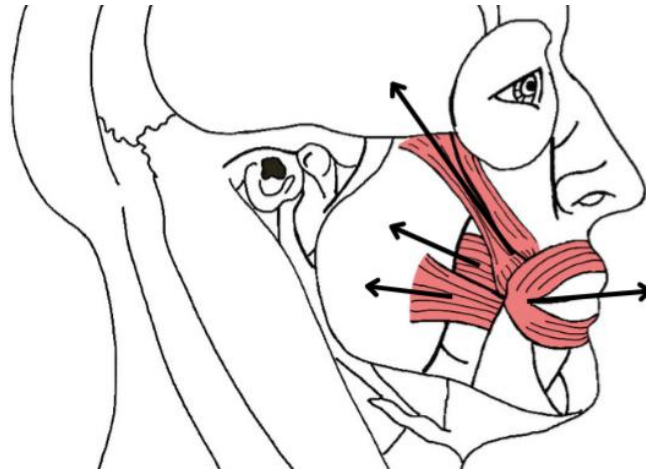
- Pain
- Bruising
- Nerve pain

Fix it with:

- Rest
- Figure out the cause
- Make a change







Kayla Solomon

Trumpet Embouchure Injuries: Restructuring Practice Habits for a Longer and Healthier Career

# Mouthpiece Pressure

- Too much TOP LIP mp pressure = swelling
- Not enough mp pressure = accessory muscles = unbalanced embouchure



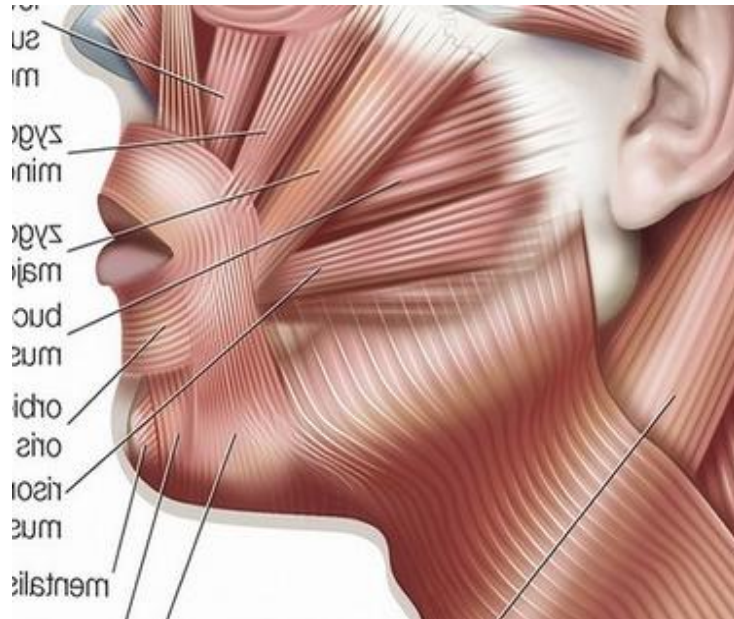
unbalanced embouchure is NOT efficient -  
don't have endurance, reliability, longevity



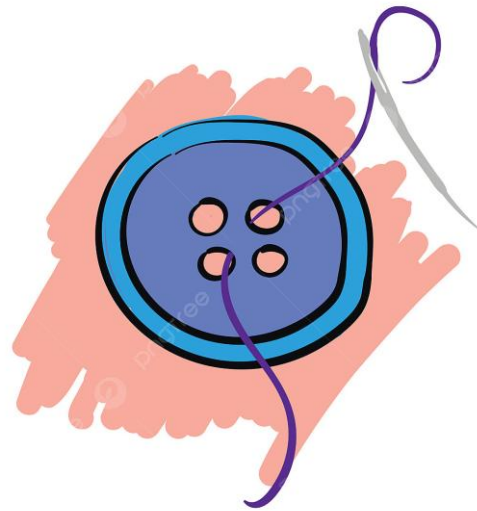
# Balanced Embouchure

Anchor mp on lower lip

needs to be more on the LOWER LIP– bc that tissue doesn't swell as fast



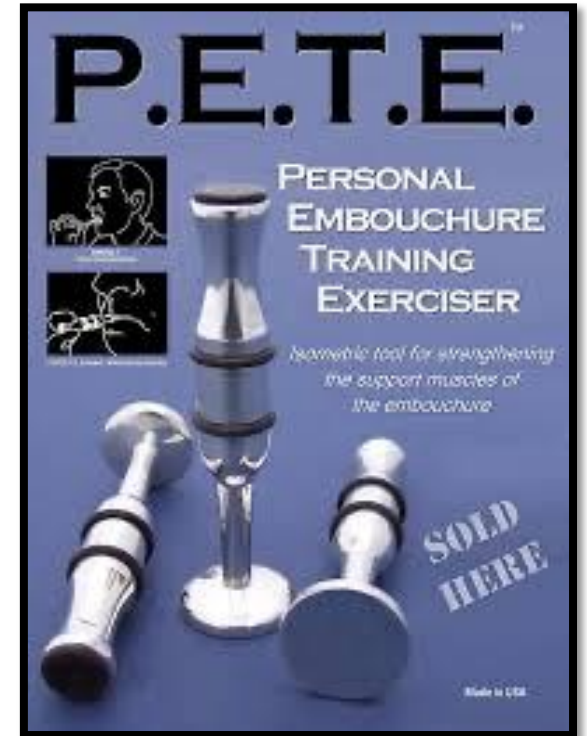
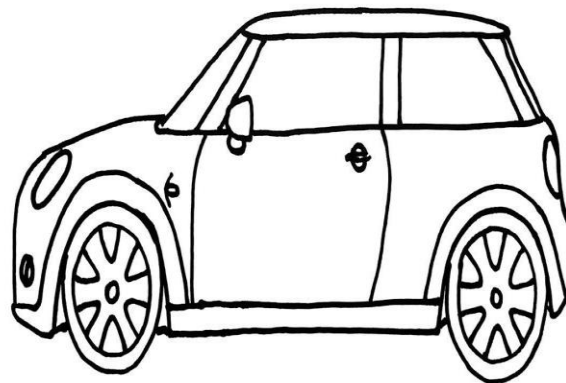
# Strengthening muscles away from the horn

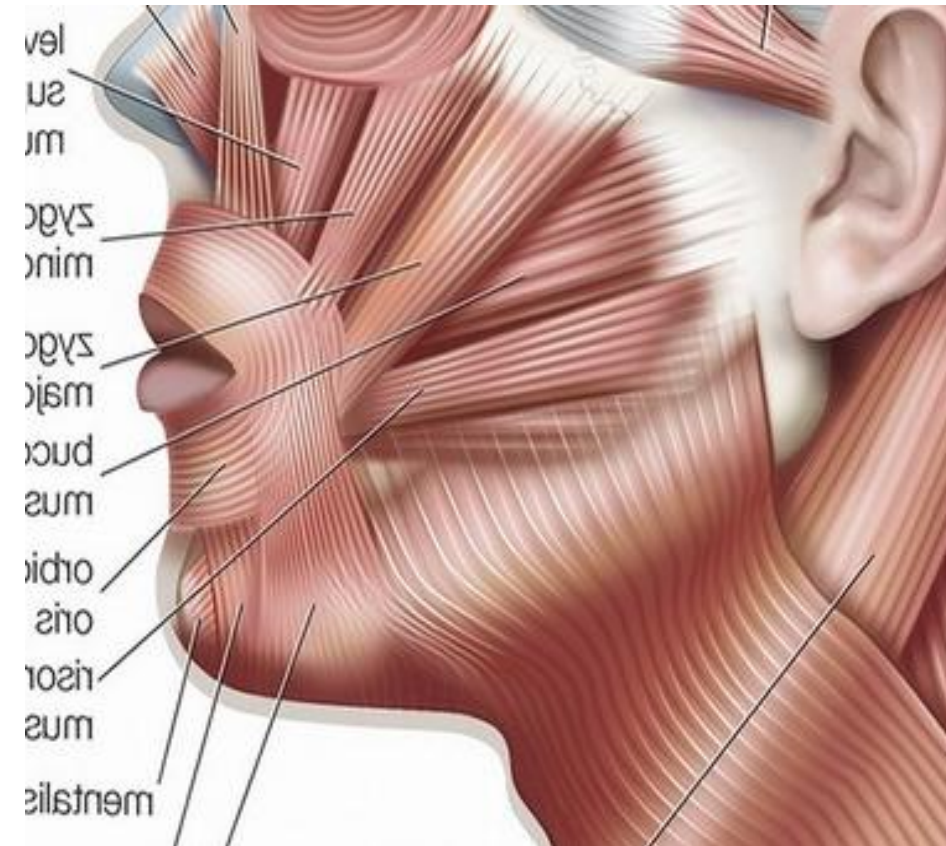


DEMO – BUTTON ON A STRING

DEMO CAR WARM-UP

reminder - buccinator, obic oris, zygomatic







take a deep breath

Balance  
&  
Strength  
&  
Pressure





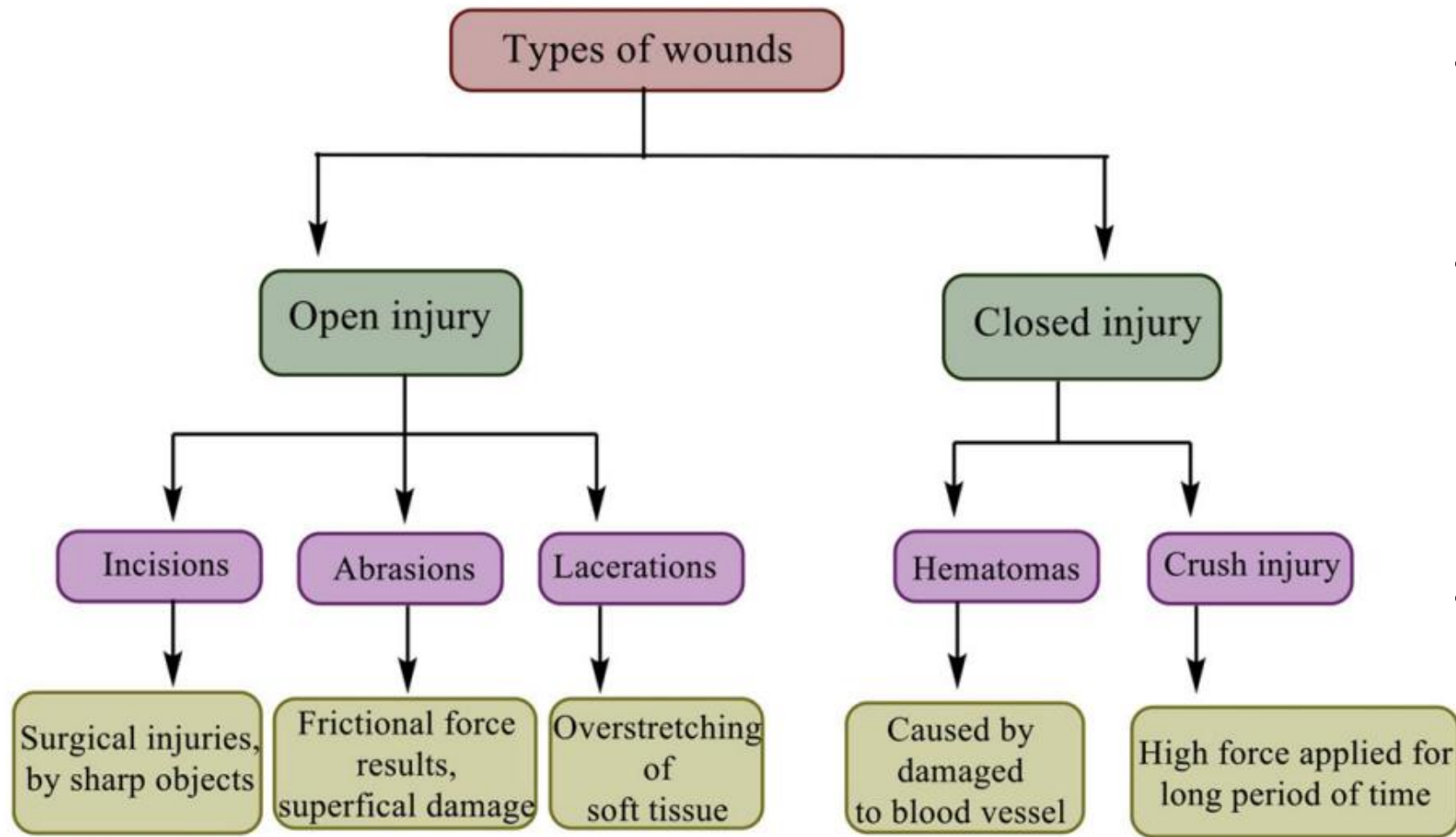
Why Chops Swell



Too much Mp pressure = injury = not healthy chops

Pressure on the lower lip (doesn't swell like top lip – and it is variable bc it's moving)  
bruised chops story – pennsylvainai dairy farmer/ms teacher during covid  
– had chop pain x 2 years. We shifted the mp pressure to lower lip  
“I just played a church gig - the wHOle thing without pain!”

She achieved this by getting mp pressure off top lip



- Mouthpiece  
Pressure results in a tissue injury
- Injury makes white blood cells and fluid rush in to fix it....= swelling
- Closed Injury –  
Crush Injury (high force over a long period of time)
- bruising =  
hematoma –  
damage to a blood vessel



**Tissue Injury**

**Inflammation**

*Swelling*

**Tissue Repair**

*Lymphatic System*

**Tissue Remodeling**



Both ice and ibuprofen interrupt the inflammation cycle

Remember – inflammation is necessary, as it is the first step in the cycle for tissue healing



# ***The R.I.C.E Protocol is a MYTH:***

## ***A Review and Recommendations***

The Sport Journal.

**\*\*\*Link to article in Whova app\*\*\***

Rest – no

Ice – no

Compression – no

Elevation - no



## R.I.C.E.

This protocol has been the preferred method of treatment for acute musculoskeletal injuries since its origin in a 1978 publication entitled “*Sports Medicine Book*” by Dr. Gabe Mirkin. These guidelines have been used by coaches and healthcare providers for over four decades with the intent of expediting the recovery process and reducing inflammation. Although popular, the implementation of this protocol to attenuate the recovery process is unsubstantiated.

There is, however, an abundance of research that collectively supports the notion that ice and rest does not enhance the recovery process, but instead delays recovery, and may result in further damage to the tissue.

Research in regard to compression and elevation is inconclusive, diluted and largely anecdotal. Definitive guidelines for their application have yet to be purported. As a result of the subsequent research that examined the validity of the protocol, Dr. Mirkin recanted his original position on the protocol in 2015.

ICE inhibits the immune system, may damage tissue

**Inflammation**



*Swelling*

**Tissue Repair**

*Lymphatic system*

**Tissue Remodeling**

LYMPHATIC SYSTEM MOVES THE STUFF THAT CREATES SWELLING - GENTLE MUSCLE MOVEMENT STIMULATES THE LYMPHATIC SYSTEM (EX: LONG TONES)

Things that accelerate the healing process



Long tones and face movement for lymphatic stimulation

Warm salt water

Lymphatic massage – gua sha

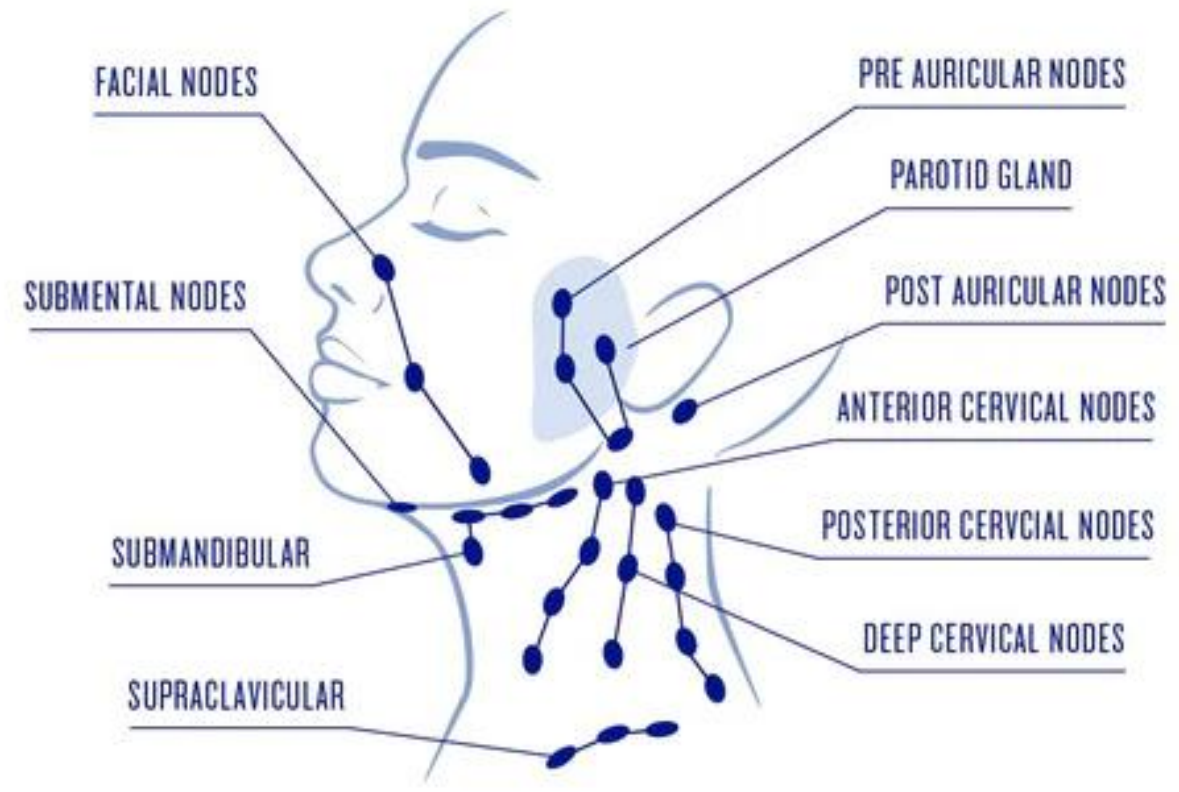
Robinson's remedies, essential oils, as you wish

NSAIDS interrupt the immune cycle ☹️

anything that reduces inflammation reduces healing

Take TYLENOL for pain

# FACIAL LYMPHATIC SYSTEM



PROVINCE  
APOTHECARY





(FROM PINTREST)

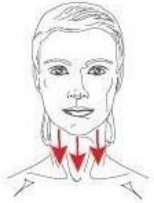
**Step 1: Clavicular Notch**

Beginning half-way down the neck, stroking downwards into the notch area.



**Step 6: Neck front**

Tilting the head up, stroking from under the chin on center and right and left sides.



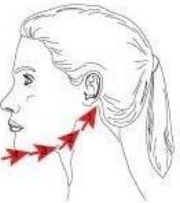
**Step 2: Clavicles**

Starting at the outer most point of the clavicles, angling towards the clavicular notch.



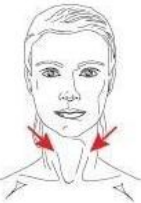
**Step 7: Jawline**

Beginning near the ear, three slow strokes in four areas down the jaw on each side.



**Step 3: Neck - Sides**

Beginning under the jawline, angling towards the clavicular notch.



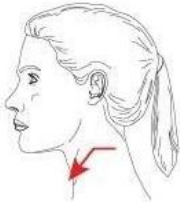
**Step 8: Cheeks**

Starting with the lower cheek area then repeating in the upper cheek area.



**Step 4: Spinal Chain**

Starting close to the spine, across the neck and angling to the clavicular notch.



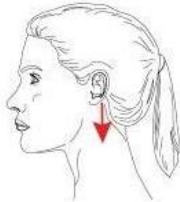
**Step 9: Forehead**

Beginning in the middle of the forehead, angling down towards the temples.



**Step 5: Water Wheel**

Beginning behind the ear lobe, stroking straight down the neck.



**Step 10: Finish**

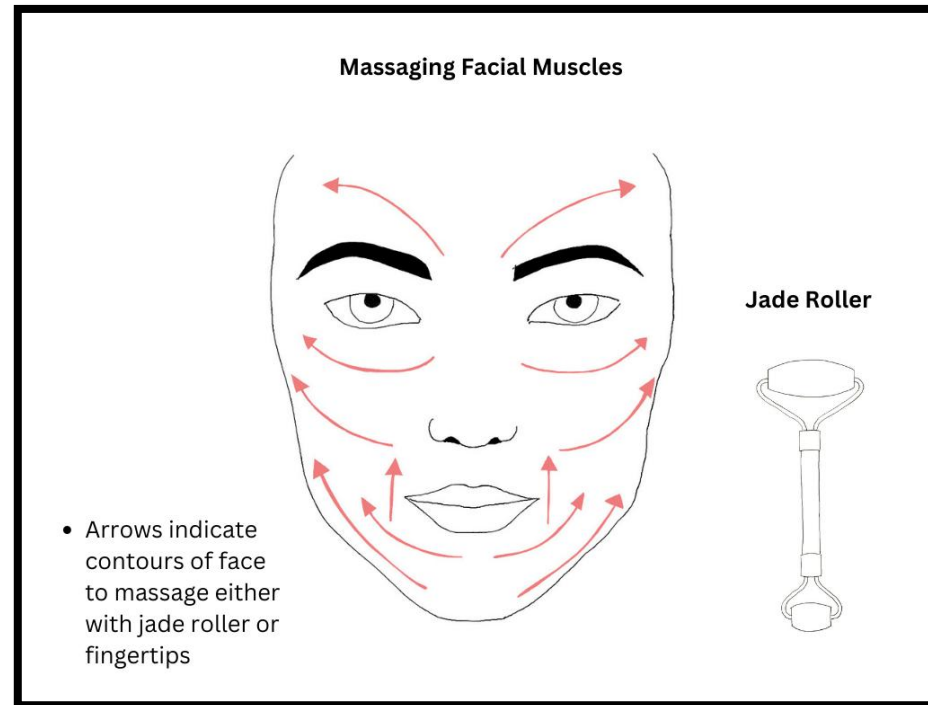
Starting at the sides of the neck, then the center angling towards the clavicular notch.



LDT is not recommended for individuals who have a history of circulatory difficulties or cardiac concerns.

©AWOW



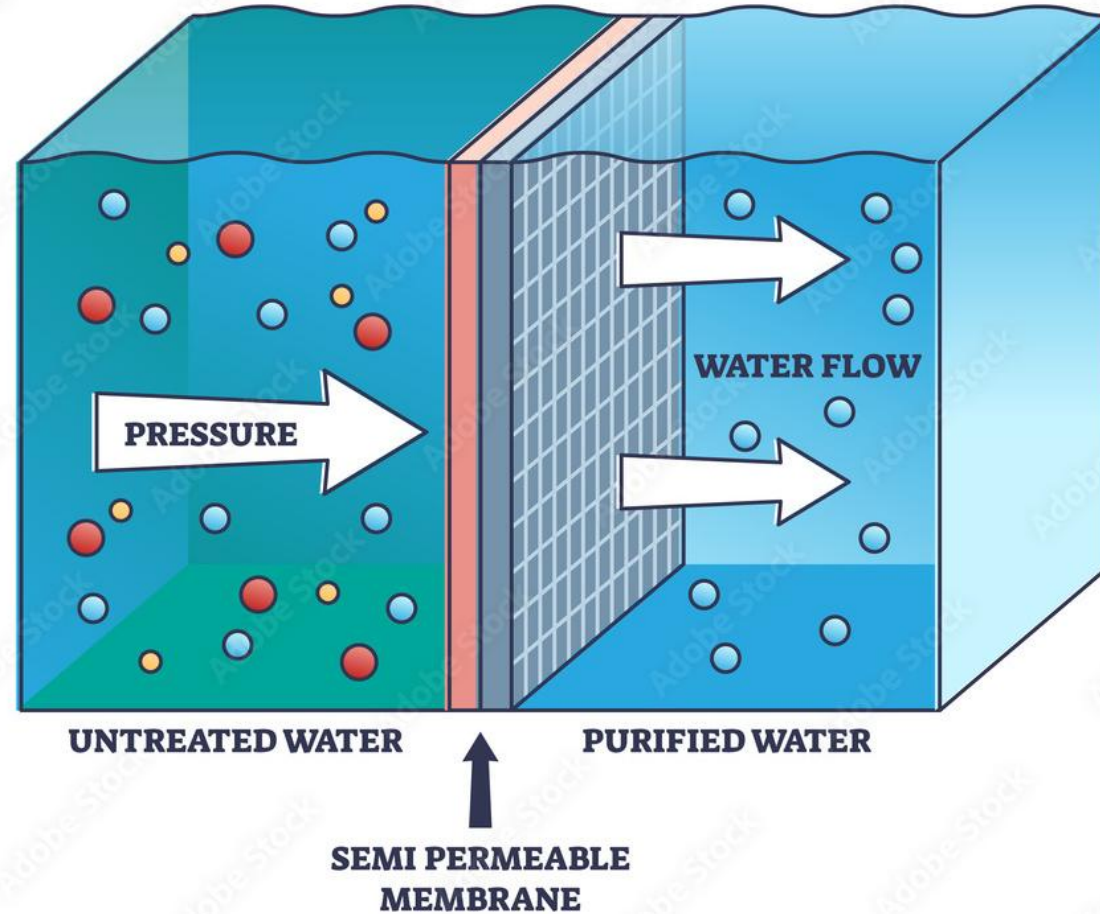


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# Osmosis

warm salt water

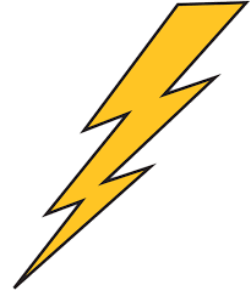


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Swelling of chops / Dental pain / Canker Sores / Injury

A musical score for a string quartet, consisting of four staves. The music is written in treble clef with a key signature of one flat (B-flat). The score is divided into two systems of two staves each. The first system contains measures 1 through 12, and the second system contains measures 13 through 24. Each measure is marked with a measure number at the beginning. The music features a consistent rhythmic pattern of quarter notes, with a central measure in each system containing a whole rest. Long horizontal lines above the notes indicate phrasing or slurs. The notes are primarily quarter notes, with some half notes and eighth notes. The key signature is B-flat, and the time signature is not explicitly shown but appears to be 4/4 based on the note values.

# Nerve Pain



Sharp, Quick Stabbing pain (STOP playing immediately)

Nerves get inflamed – from overuse, misuse, injury

What to do to fix it?

evaluate your embouchure playing technique

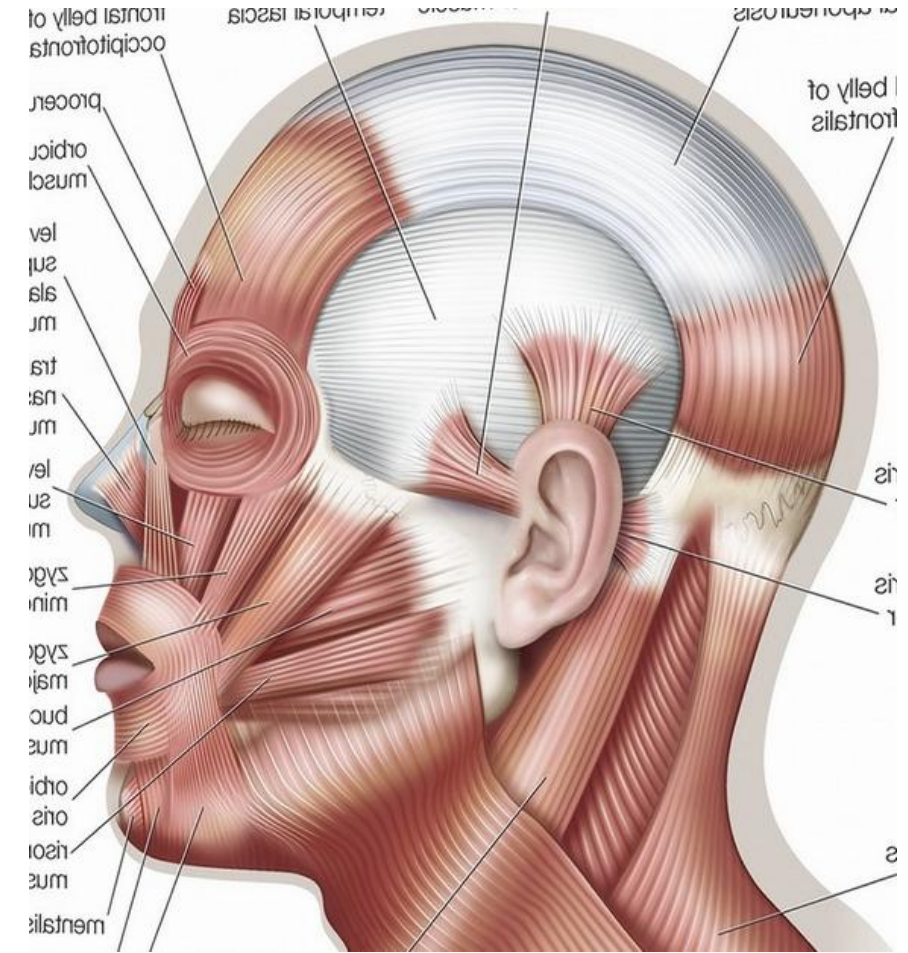
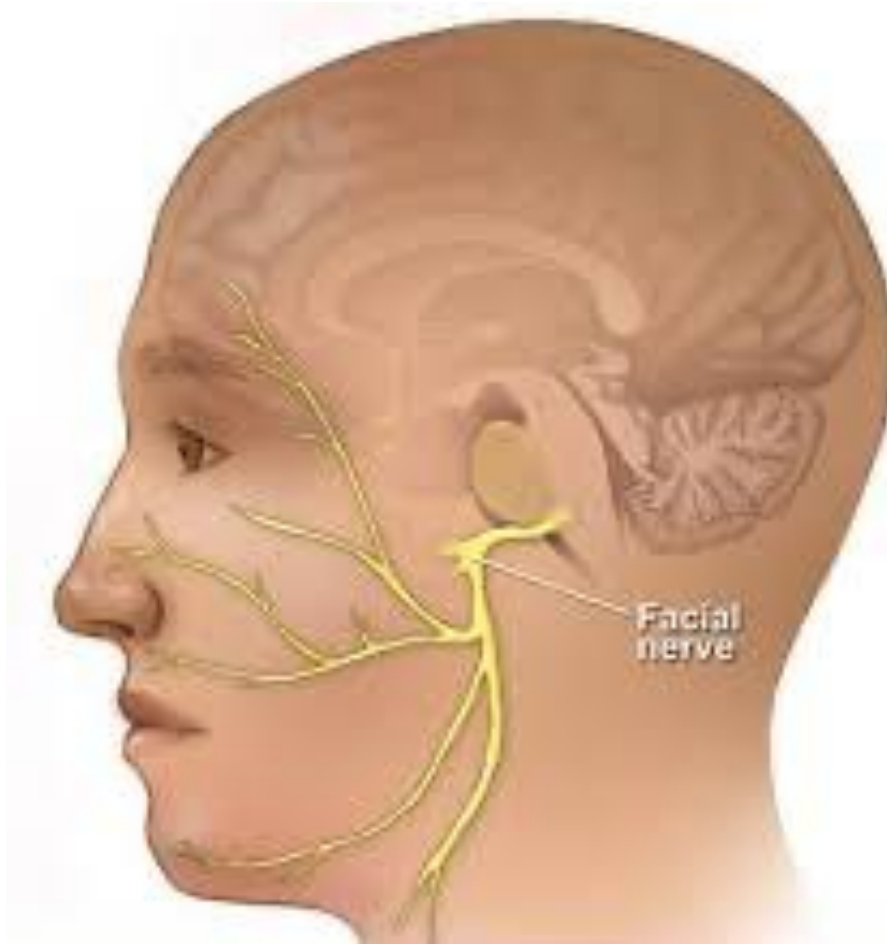
- is it unbalanced?

- is it tight?

massage to release tight, overzealous muscles

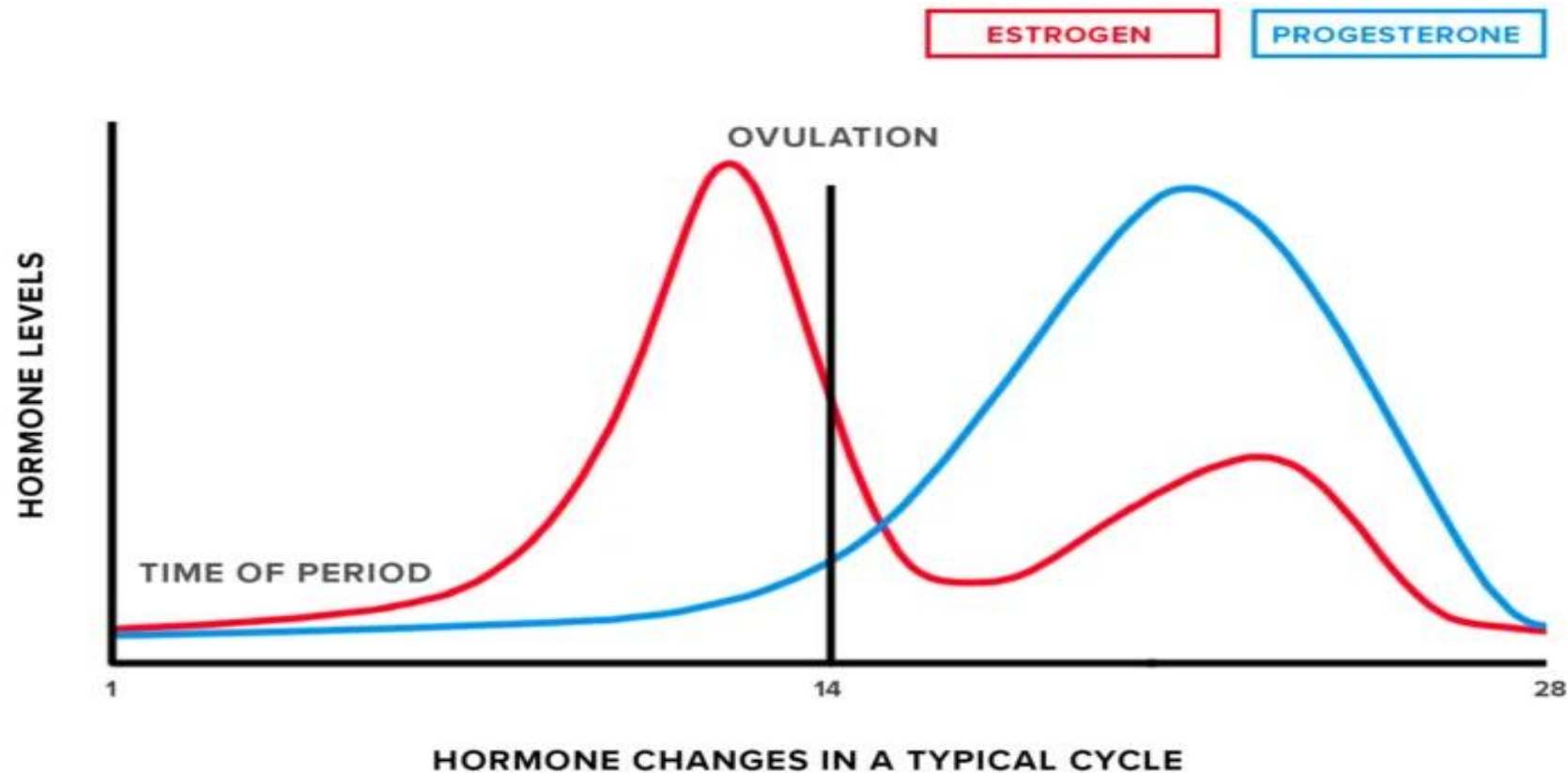
lymphatic massage to release lymph nodes & swelling

# Nerve Pain & Nerve Compression



# Your Chops and Hormone Fluctuation

- Tissue Resilience decreases with age
- Hormone Replacement
- For cis women, the menstrual cycle can lead to puffy chops









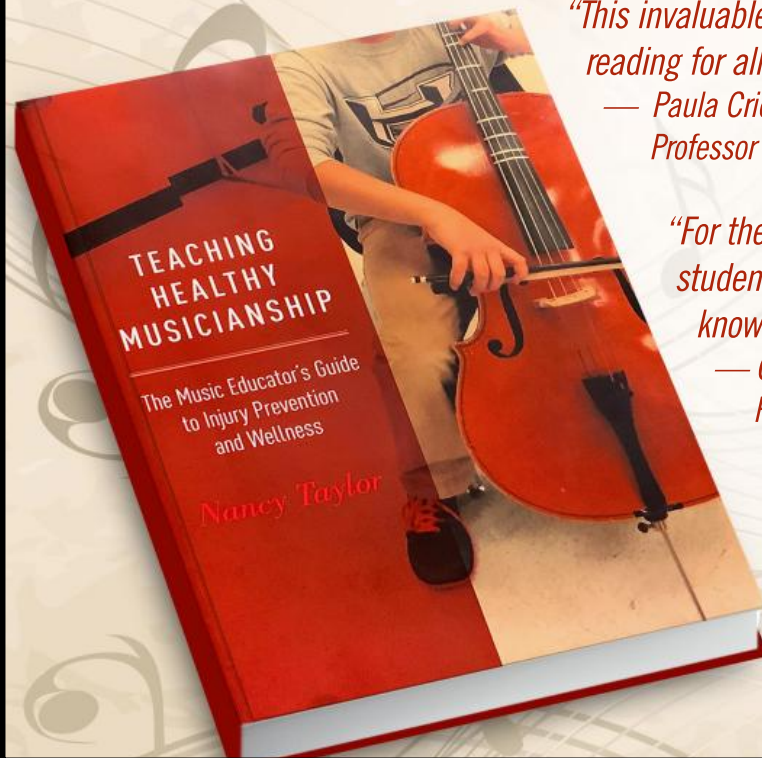
# Keep your Chops Healthy

- Balanced embouchure
- Strength
- Optimal mouthpiece pressure
- Self-Awareness

PLEASE FEEL FREE TO EMAIL ME AT NETAYLOR@UTEP.EDU

# Wellness is all the buzz!

Discover the key to teaching actionable strategies for recognizing and preventing injury while promoting wellness through practical habits.



*“This invaluable resource... should be required reading for all music educators!”*

— Paula Crider  
Professor Emerita, University of Texas

*“For the lifelong benefit of yourself and your students, read this book and spread this knowledge to every musician you know.”*

— C. Callan  
Freelance musician

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Author, Dr. Nancy Taylor is a professional musician, educator, and Board-Certified Occupational Therapist. She combines her expertise to provide a practical and scientifically sound guide for teaching injury prevention to musicians. A former member of “The President’s Own” United States Marine Band, Dr. Taylor is an Associate Professor at the University of Texas at El Paso, Principal Trumpet with the El Paso Symphony Orchestra, and an internationally recognized clinician for her work in musician’s wellness.