



**Texas Bandmasters Association  
Convention/Clinic July 26-28, 2018**

**Health and Wellness Concerns for  
Marching Band**

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**HENRY B. GONZALEZ CONVENTION CENTER  
SAN ANTONIO, TEXAS**

# **Health Considerations for the Marching Arts**

## *Texas Bandmasters Association Convention*

### July 28th, 2018

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#### Abstract:

As marching band directors, we have a unique task set before us - to combine music education with the physical activity of marching band. Recent additions to the 9-12 Music TEKS state that students must apply health and wellness concepts related to music. In addition, many of our students receive their only high school physical education course credits through the marching band substitution. So how do we as music educators provide appropriate health and wellness information in the context of a marching rehearsal? How do we work towards creating a physically dynamic and exciting marching band production, while also ensuring the safety of our students and reducing risk of injury? This lecture will present information from the field of performing arts medicine, which views various medical specialties through the lens of the performer, and the author's own research in marching band epidemiology.

#### Objective:

The 9-12 Music TEKS states that students are to “*apply health and wellness concepts related to music practice such as body mechanics, hearing protection, vocal health, hydration, and appropriate hygienic practices*”. This lecture will provide context for the origin of these TEKS standards and research-based information on hearing loss and musculoskeletal injuries, as well as provide best practices for the high school marching band.

#### Outline:

1. Origin of health and wellness TEKS in the Music curriculum
2. Musculoskeletal Injuries in Marching Band
  - a. Pain
  - b. Overuse injuries
  - c. Risk factors for musculoskeletal injury
    - i. Force
    - ii. Posture
    - iii. Time

3. Ways to Reduce the Risk
  - a. Interdisciplinary cooperation with athletic training staff
  - b. Physical training blocks
  - c. Stretching
  - d. Body Mapping Technique and Marching Band Posture
4. Noise induced hearing loss
  - a. Anatomy of the ear
  - b. OSHA Permissible Noise Exposure
  - c. Ways to reduce noise exposure
5. Other health concerns
  - a. Dehydration
  - b. Taking breaks - the importance of rest
  - c. Dietary concerns
  - d. Instrument hygiene
  - e. Concussions

#### Clinician Biography:

Melissa Lewis is the Associate Band Director at Lone Star High School in Frisco ISD. Prior to coming to Frisco, she taught at Keller Middle School, in Keller, Texas. She is a proud graduate of the University of North Texas, where she played clarinet and graduated summa cum laude with honors. Mrs. Lewis is also actively involved in the marching band activity, working at various programs around Texas during college and also serving as the Head Field Technician, Athletic Bands Librarian, and Student Assistant to the Director of the UNT Green Brigade Marching Band. Most recently, she served on the visual staff at the Guardians Drum and Bugle Corps in Open Class and the Pioneer Drum and Bugle Corps in World Class in 2015 and 2016.

Following a series of performance related injuries, Mrs. Lewis became interested in performing arts medicine research. She has won numerous awards for her research on marching band, and her first published work appeared in the Medical Problems of Performing Artists journal in 2013. Her area of research interest lies in maximizing performance and reducing injury in marching band. Mrs. Lewis is currently working towards her Graduate Certificate in Public Health at the University of North Texas Health Science Center. Mrs. Lewis is a member of the Texas Music Educators Association and Performing Arts Medicine Association.

## Noise Induced Hearing Loss

<b>Limits for Permissible Noise Exposure (According to OSHA)</b>	
8 hours	90 dB
6 hours	92 dB
4 hours	95 dB
3 hours	97 dB
2 hours	100 dB
1.5 hours	102 dB
1 hour	105 dB
30 minutes	110 dB
15 minutes	115 dB

### Ways to Reduce NIHL in Marching Band:

1. Encourage students to wear earplugs at pep rallies, in the stands at football games, etc. Provide them for free to students or include the cost in their band fees!
2. Require that members of the drum line and those students running the metronome wear earplugs at all times.
3. Utilize dynamics! Research shows that varying the decibel level in a rehearsal can significantly impact the overall sound exposure (Chesky, 2010)
4. Include reps where students count, sing, push air, etc.

### **Hydration Tips and Fluid Guidelines:**

*UIL Safety Training, 2016*

1. Drink regularly throughout all physical activities. An athlete cannot always rely on his or her sense of thirst to sufficiently maintain proper hydration
2. Drink 16 oz of fluid two hours before physical activity
3. Drink another 8 to 16 oz fifteen minutes before physical activity
4. During physical activity, drink 4 to 8 oz of fluid every fifteen to twenty minutes
5. After physical activity, drink 16 to 20 oz of fluid for every pound lost during physical activity to achieve normal hydration status before the next practice or competition

### **Concussion Symptoms and Signs:**

*UIL Safety Training, 2016*

1. Concussion can produce a wide variety of symptoms
2. Symptoms reported may include: headache, nausea, balance problems, dizziness, double or fuzzy vision, sensitivity to light or noise, feeling sluggish, feeling foggy or groggy, concentration or memory problems, confusion
3. Signs observed may include: appears dazed or stunned, is confused about what to do, forgets plays [or drill in the case of band], answers questions slowly, loses consciousness, can't recall events prior to getting hit, can't recall events after getting hit
4. Any one or group of symptoms may appear immediately and be temporary, or delayed and long lasting
5. The appearance of any one of the above mentioned symptoms should be cause to alert to a possible concussion

### **Response to Suspected Concussion:**

1. The student should be immediately removed from rehearsal
2. Have the student evaluated by an appropriate health care professional as soon as possible
3. Inform the parent and guardians about the possible concussion
4. If it is determined that a concussion has occurred, the student will not be allowed to return to participation that day regardless of how quickly symptoms resolve
  - a. In addition, they are not to return to participation until a physician indicates they are symptom-free and are cleared to return to activity
  - b. A coach [or director] is not authorized to clear a student to return to play

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*Compiled by Steven Rock, 2015*

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