

**Embodying the Music: A Survey of Choral Music Educators
on Conducting Injury and Wellness Techniques**

by Ryan W. Sullivan, Colleen McNickle, Brianne Wehner, and Stephanie Li

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Abstract

The purpose of this exploratory study was to identify the most common choral conducting related injuries and determine the ways conductors completing the survey have adapted their physical gesture to accommodate or avoid pain and discomfort. Utilizing a researcher-designed online survey, we asked choral music educators to identify and describe musculoskeletal and vocal injuries sustained throughout their careers, and the effects of these injuries on their conducting and teaching practices. Results from respondents (N = 75) indicated a high prevalence of upper-body repetitive stress injuries amongst participants caused by classroom ergonomics, misuse and overuse, poor technique, and tension. In response to their injury or injuries, participants reported altering alignment, change of technique, rest, and avoid-

ance. Preventative responses included classroom modifications and therapy and/or treatment. We discussed the workplace culture of the typical American choir conductor, the state of wellness education in pre-service teacher training, and considerations for future research. Such findings could help inform conductors, teachers of conducting, and medical providers to understand more about injury prevention and management for conductors.

Researchers have established that choir ensemble directors (used interchangeably here as choral directors, vocal music teachers, or choral conductors) encounter a wide range of physical rigors including repetitive motion of conducting (Daley et al., 2020), standing for multiple hours on hard floors (Cham & Redfern, 2001), functional voice disorders (Byeon, 2019; Naqvi & Gupta, 2022), and other occupational risks such as moving equipment and student-inflicted injury (Schofield et al., 2017). Practitioner articles have instructed music educators in a variety of injury response and prevention including stretching and breathing (e.g., Wis, 2021), body mapping (e.g., Johnson, 2008), vocal health (e.g., Salvador, 2010), and self-care (e.g., Kuebel, 2019). There are extensive bodies of extant literature within performing arts medicine research regarding musician injury and prevention and specifically vocalist injury and prevention. Empirical research addressing injury and prevention for choral conductors, however, is less prevalent.

Conductor Performance-Related Injuries

Ensemble conductors, like other musicians previously discussed, are also susceptible to injury. Due to “the facilitative nature of the conducting instrument, the lack of practiced movement patterns, and the environmental and occupational stresses inherent in the role” (Daley et al., 2020), very few scholars have examined choral conductor injury. In a 1985 pilot study of 153 choral conductors, Simons found that choral conductors suffered from mental stress, general fatigue, and vocal strain. Twenty-seven percent of respondents also reported back and shoulder problems that affected their conducting.

Prevention and Treatment Strategies

To date, most osteopathic research for performing arts medicine has emphasized the diagnosis and treatment of the musculoskeletal system (Shoup, 2006). Shoup explained that “performing artists require near perfect function of the musculoskeletal system to meet the high demands of performance” (p. 854). Therefore, an osteopathic approach considers all causes of injury and provides a rational and multi-disciplined treatment plan to prevent or treat injury. This treatment plan may include approaches such as medication, physical therapy, surgery, lifestyle modifications, examination of practice habits, osteopathic manipulation, yoga, and deep muscle massage among other treatments (Shoup, 2006). Osteopathic treatment often combines several manipulative modalities in order to obtain the best results. Although playing-related injuries pose a real threat to musicians, Bosi (2017) reported that musicians often ignore the symptoms, sometimes hindering their own recovery. Franklin (2016) noted a “surprising lack of an empirically verified method of teaching healthy movement of the body in music making, especially at a young age” (p. 2). As conductors often do not learn conducting technique until they are adults (Daley et al., 2020), this is counter to the culture of many disciplines where technical skills and knowledge of risk/ injury prevention are developed simultaneously. Furthermore, employees with positions in manual labor (warehouses, construction, line production, etc.) typically receive training every three years to maintain a safe workplace environment (Training Requirements in OSHA Stan-

dards, 2015). No such broadly implemented education or employer-based training in choral conducting is known to these authors or has been reported by previous researchers.

There have been a few different prevention models that have been introduced over the last decade to help conductors avoid vocal and physical injuries. Diaz (2021) posited body mapping as a method to prevent injury and address quality of movement for instrumentalists, singers, and conductors. A somatic method designed for musicians, Body Mapping encourages individuals to explore their perception of their bodies through anatomical information, self-observation, and self-inquiry (Diaz, 2021). An incorrect map of a body, Diaz explained, can produce rigid or uncoordinated movements that may lead to injuries. The Alexander Technique is another method to approach injury prevention and learn about the physiology of the body (Franklin, 2016). A psychophysical method, the Alexander Technique led to the most efficient use of the body while conducting through “directed thinking activities and heightened kinesthetic awareness” (p. 4). Physiology and knowledge of how to utilize their bodies to communicate is of the utmost importance, as choral conductors rely heavily on nonverbal methods of communication.

Taylor’s (2016) practitioner guide to injury prevention and wellness for music educators, *Teaching Healthy Musicianship*, stressed the importance of ergonomics for musicians and music educators. Its five rules of ergonomics were to maintain good posture, avoid repeated twisting and reaching, avoid hunching, create a comfortable environment, and move continuously (Taylor, 2016). Music educators should consider their desk and computer ergonomics, the height of the conductor’s stand and podium, the size and weight of their baton, and ergonomics within the music library, car, and home. One full chapter of the book was dedicated to conductor back and shoulder pain, as Taylor said, “pain disorders of the shoulder and back are a common problem for conductors” (p. 135). Taylor addressed conductor injury, causes, and preventative and reactive stretches to address the pain. MacDonald (2004) encouraged choral conductors to care for their voices through awareness of spinal alignment, core muscle groups, coordinated breaths, and ease and flow

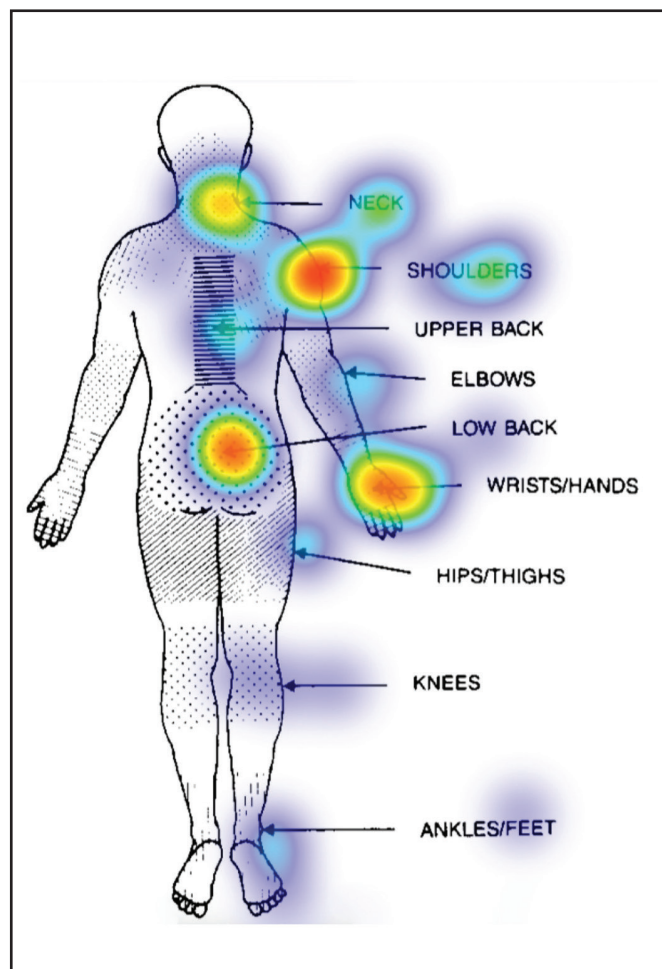
of phonation. Care for the voice is not limited to the singing voice; rather, care for speaking habits is equally important for a choral conductor. MacDonald cited additional vocal abuse factors such as daily stress, environmental conditions, allergies, psychological factors, and diet and exercise.

When prevention of vocal injury is no longer possible, the modality of treatment needs to be discussed. For individuals already experiencing a vocal injury, vocal rest is an “effective therapeutic option” if a full recovery with or without therapy is expected (Haben, 2012, p. 166). However, Haben advised that vocal rest is a short-term solution that often prevents singers from addressing the underlying problem. The author called

for more clear guidelines regarding voice rest regimens for singers. The decision to seek therapy or resort to vocal rest can sometimes be controversial because of the difficulty to determine the efficacy of voice therapy with its wide array of symptoms and treatment methods. However, Carding et al. (1999) found strong evidence supporting direct treatment for patients with non-organic dysphonia, which was caused by overuse or misuse and a frequent diagnosis for vocal music teachers. In response to the specific healthcare needs of performing artists like choral conductors, the Performing Arts Medicine Association (PAMA) was founded in 1989 (Performing Arts Medicine Association, n.d.). Through this association, medical professionals, artist educators, and music administrators collaborate to work toward the goal of improving health care for performing artists. PAMA members treat performing artists, serve as medical consultants, showcase research, and serve as a resource for performers who need healthcare and support. The organization’s website, artsmed.org, houses a variety of resources including webinars, online courses, articles, and information about their annual international symposium (PAMA, 2024).

Although several researchers have examined the liability of musician or teacher injury and practitioner articles have provided injury-response advice to music teachers, no studies have investigated patterns of injury and prevention by choral conductors. Therefore, in this study, our team of two music teacher educators, one osteopathic physician, and one osteopathic medical student sought to identify the most common choral conducting-related injuries and determine the ways conductors completing the survey have adapted their physical gesture to accommodate or avoid pain and discomfort. Research questions included (a) What injuries did choral conductors experience throughout their careers?; (b) How did conductors adapt their gesture to account for injury?; and (c) What preventative responses did conductors utilize as a result of their injury?

Figure 1.
Participant Responses to Nordic Musculoskeletal Questionnaire (NMQ)



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