

Conductor Related Injuries: Do They Exist?

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### **Introduction**

Currently, there is no documented research that focuses on conducting related injuries. This raises many questions on its own; recently, research has been conducted on musician health, wellness, and injuries. Researchers have shown that musicians develop musculoskeletal issues due to poor posture, overuse, and other pedagogical issues. These issues are painful, can be chronic, and can prevent musicians from performing (Zaza, Charles, and Muszynski, 2013). Where do conductors fit in? Do conductors experience injuries? Conductors have aches, pains, and injuries just as other musicians and athletes do, but are they related to the same musculoskeletal issues? Have conductors tried to figure out if their injuries were related to the physical functions of their conducting? All of these questions need to be addressed in order for conductors to have healthy and long lasting careers.

Researchers that focused on musician injuries discovered, that music teachers find aspects of their jobs to be very demanding (Wiklund, Brulin, and Sundelin, 2003). The everyday physical demands on music teachers and musicians can be difficult on the body. Providing accessible healthcare would assist in preventing and treating musician injuries (Chan, Driscoll, and Ackermann, 2013). Even with this research, we do not have definitive information whether or not conductors actually experience injuries. Since musicians and music teachers experience injuries, one could infer, that conductors experience injuries as well. However, it is optimistic to see researchers that prove that injuries to the upper arm, shoulder, and neck region of professional musicians may be preventable and maintainable with physical therapy (Chan, Driscoll, and Ackermann, 2013).

Some conductors in the field believe that there are in fact conducting related injuries. These injuries could be caused by poor posture, tension, size of gesture, or even overuse. If trained properly conductor injuries may be avoided. Injuries can only be prevented with the knowledge of what the injuries are and how we can train to prevent them.

### **Related Literature**

#### *Injuries*

Musicians have sustained injuries from overuse, poor posture, and poor technique. Overuse stems from repetitive or continuous movement that could be a hindrance to the musician's playing (Dawson, 1988). Dawson (1988) found that 27 out of 41 musicians studied, sustained injuries from overuse by playing their instruments. For example, musicians such as violinists are experiencing injuries from repetitive lateral movement of the bowing arm or neck issues from the chin rest. Conductors move their upper extremities in repetitive lateral and vertical movements, which would infer they could sustain injuries like violinists do.

Researchers found that musicians experience musculoskeletal problems in the upper shoulder and neck region (Fjellman-Wiklund, Brulin, and Sundelin, 2003). The issues can be from poor posture and technique. Music teachers should teach proper playing technique and posture in order to maintain a musician's playing career. Long hours of playing can cause fatigue and musculoskeletal problems to the upper shoulder and neck region (Fjellman-Wiklund, Brulin, and Sundelin, 2003). This can be prevented if technique classes were created to train musicians at an early age. Musicians who have performance injuries from poor posture and technique should be compared to conductor posture and technique. It is possible for conductors

to have poor posture and technique. In order to correct the issues, we must obtain research that can identify the problems and can educate future conductors.

Ackermann, Driscoll, and Kenny (2012) conducted a study examining the pain or injuries experienced by professional orchestral musicians in Australia. They reported and analyzed data based on body part, details of the body part, and the type of instrument they played. They found that 84% of the orchestral musicians experienced pain or injuries that affected their performance on their instruments. They also found that there were many identified or perceived causes of musicians' injuries. Some issues included poor posture, poor physical shape, fatigue, stress, increased practicing time, increased technicality of the music and more (p. 186). If Ackermann, Driscoll, and Kenny can collect data and correlate the reason why musicians are experiencing issues, then we should be able to do the same for conductors as well.

### *Musician Health*

Runners train for months and even years before their big race. They not only practice but they also stretch and use a work out regimen to strengthen and develop their muscles. Musicians practice individually before group rehearsals or performances. We can only wonder if musicians include stretches or a workout regimen to strengthen their muscles. How do conductors practice? Stretching and a workout regimen may be beneficial to conductors given the physical nature of their work. Chan and Ackerman (2014) believe that musicians should be considered musical athletes and train the same way an athlete would. They should participate in cardio as well as strength conditioning activities. Like an athlete, this will help conductors build endurance for lengthy rehearsals and concerts. Further research will need to be conducted to identify the type of exercises needed to strengthen the muscles that are used as a conductor.

If a runner sustained an injury to their leg, which is the main limb needed to perform, they would seek a healthcare provider to receive treatment. This treatment could be in the form of physical therapy and followed up with an exercise regimen to help prevent further injuries. Just like athletes, musicians and conductors need to seek healthcare providers as well. It is important to get physician's feedback in order to identify and legitimize their injuries (Zaza, Charles, and Muszynski, 2013). Unfortunately, musicians that sustain injuries find it difficult to find a healthcare provider that specializes in diagnosing, preventing, and recovery (Guptill, 2011). It is difficult to find a healthcare professional that understands that performance is their livelihood and that most cannot take time off because they do not get sick pay or leave (Guptill, 2011). The healthcare profession has grown in regard to athlete injuries but has not made much progress on musician specific healthcare. Not only is it important that we find ways of preventing injuries in musicians, it is also important to find ways to treat these injuries as well. If musicians find it difficult to find healthcare providers that understand their injuries, conductors may be suffering as well. Further research is needed to identify if there are more healthcare providers that have experience with working with musicians.

Conductor and musician injuries should be categorized together for physicians. Healthcare providers need to become knowledgeable of performing arts related injuries so that they can identify, treat, and provide important consultation. When structuring a physical therapy program for a musician, the physician needs to be specific and have the musician bring their instrument with them to tailor the exercises to the instrument (Chan and Ackermann, 2014). This can and should be applied to conductor related injuries as well.

Ackermann, Adams, and Marshall (2002), conducted a study to evaluate how an exercise regimen can affect undergraduate musicians. They also believe that musicians are compared to

athletes in regard to the physical demands of their performance. They designed a short-term program that would determine if the effects of an exercise regimen could assist in strengthening and lengthening the endurance in musicians. They found positive results and found that an exercise regimen is the best way to strengthen and assist undergraduate musicians. Conductors could benefit from an exercise regimen as well. Stretching and strength conditioning could prolong conductors' physical endurance and posture. Research will need to be conducted to identify the best way to implement an exercise regimen or physical therapy into a musicians' busy schedule.

### *Summary*

The above literature is focused on musician related injuries. There is no documented research that focuses on conductor related injuries. If conductors do in fact experience conducting related injuries, we need to identify the issues and examine them. Once examined, training programs and exercise regimens may be developed to prolong conductors' careers and prevent surgery.

### **Purpose of Study**

The purpose of this study is to exam current band directors to identify and discuss if they experience conducting related injuries. The central question is, do conducting related injuries exist? The predicted hypothesis is that conducting related injuries do exist as injuries in musicians exist. Once the injuries are identified they will then be categorized for future research.

Additional questions being addressed are:

1. Who is experiencing conducting related injuries?
2. Can the conducting related injuries be identified?
3. Is there a correlation between the number of hours a band director conducts and if they identify with having conducting related injury?

### **Methodology**

Data will be collected from band directors across the country through an emailed survey. This study will generate quantitative data that will be categorized by injury, body location, and length of time conducting. The survey will be emailed to the membership of College Band Directors National Association and National Band Association. The band directors contacted will also have permission to forward this survey to other band directors. This “snow ball effect” of distributing the survey will hopefully generate a large response pool. Band directors will have the option to provide their information and to give permission to be contacted for further research. Further research may include interviews, video analysis, and testing an exercise regimen. This survey is a base study to collect information for further research.

Sample questions for the email survey will be as followed:

1. What level of band do you teach?
  - A. Elementary School
  - B. Middle School/Junior High School
  - C. High School
  - D. College

E. Other. Please Explain: _____
2. How many hours a day do you conduct? A. 0-3 Hours Per Day B. 3-6 Hours Per Day C. 6-9 Hours Per Day D. Other: Please Explain: _____
3. Have you ever experienced any pain during or following conducting your ensemble? A. Yes B. No
4. What type of pain did you experience? Please be specific with location or body part of you conducting issue. _____ _____
5. Do you stretch prior to conducting? A. Yes B. No
6. Do you have an exercise regimen that you follow? A. Yes B. No
7. Have you ever seen a medical professional for your conducting related issue? A. Yes B. No
8. Would you like to be contacted to assist with further research? A. Yes B. No
Please provide you contact information: _____ _____

### **Discussion and Further Research**

Musicians and athletes sustain performance related injuries. If musicians sustain injuries then it can be predicted that conductors sustain injuries as well. It is expected that the conducting related injuries would be to the shoulder, neck, and upper limb. Responses from the survey will help determine if conducting related injuries exist and it will identify who will be contacted for future research. Further research will be conducted through interviews and video analysis with the volunteers from the survey. This research will potentially lead to finding preventative measures such as, an exercise regimen and physical therapy. The goal is to use this survey as a base study for future research. The long term goal is to educate conductors about conducting related injuries and preventative measures that can prolong and protect their conducting careers.

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