



# GEORGE FOX UNIVERSITY

## Health and Safety Issues for Musicians

### A. Health and Safety Policy

The music department, per the standards of the National Association of Schools of Music, is required to inform students and faculty of health and safety issues, hazards and procedures inherent in practice, performance, teaching and listening both in general and as applicable to their specific specializations. This includes but is not limited to information regarding hearing, vocal and musculoskeletal health, injury prevention, and the use, proper handling, and operation of potentially dangerous materials, equipment and technology.

The music department actively seeks to guard against injury and illness in the study and practice of music, as well as to raise the awareness among our students and faculty of the connections between musicians' health, the suitability and safety of equipment and technology, and the acoustic and other health-related conditions in the university's practice, rehearsal, technology and performance facilities. The following resources will be of use to students seeking more information.

On this site you will find sections devoted to musicians' health and safety that contain helpful information. In addition, you will find links to important websites that are devoted to these issues. Three fundamental websites of particular interest and relevance are:

#### 1. [NASM-PAMA](#)

National Association Schools of Music-Performing Arts Medicine Association

#### 2. [Andover Educators](#)

An organization of music professionals who teach the anatomical basis for coordinate and healthy movement. Cynthia McGladrey of our vocal faculty is a certified Andover Educator and has more information about the organization.

#### 3. [The Brookhaven National Laboratory](#)

Environment Safety and Health Directorate

It is important to note that health and safety depends largely on personal decisions made by informed individuals. George Fox University has health and safety responsibilities, but fulfillment of these responsibilities cannot and will not ensure any individual's health and safety. Too many factors beyond the university's control are involved.

Each individual is personally responsible for avoiding risk and preventing injuries to themselves before, during, and after study or employment in the George Fox University Department of Music. The policies, protocols and operational procedures developed by the music department do not alter or cancel any individual's personal responsibility, or in any way shift personal responsibility for the results of any individual's personal decisions or actions in any instance or over time to the university.

## **B. Specific Safety Issues**

### **1. Equipment safety**

Safe lifting and carrying techniques, adapted from the [Brookhaven National Laboratory, Safety Requirement for a Safe Workplace](#).

#### **Points to Emphasize:**

- Carry heavy or awkward equipment as a team
- Bend to lift an object – don't stoop
- Lift with the strong leg muscles, not the weaker back muscles

Proper methods of lifting and handling protect against injury. Proper lifting makes work easier. You need to "think" about what you are going to do before bending to pick up an object. Over time, safe lifting technique should become a habit.

**Following are the basic steps of safe lifting and handling heavy music equipment or instruments.**

1. Size up the load and check overall conditions. Don't attempt the lift by yourself if the load appears to be too heavy or awkward. Check that there is enough space for movement, and that the footing is good. "Good housekeeping" ensures that you won't trip or stumble over an obstacle.
2. Make certain that your balance is good. Feet should be shoulder width apart, with one foot *beside* and the other foot *behind* the object that is to be lifted.
3. Bend the knees; don't stoop. Keep the back straight, but not vertical. (Tucking in the chin straightens the back.)
4. Grip the load with the palms of your hands and your fingers. The palm grip is much more secure. Tuck in the chin again to make certain your back is straight before starting to lift.

5. Use your body weight to start the load moving, then lift by pushing up with the legs. This makes full use of the strongest set of muscles.
6. Keep the arms and elbows close to the body while lifting.
7. Carry the load close to the body. Don't twist your body while carrying the load. To change direction, shift your foot position and turn your whole body.
8. Watch where you are going!
9. To lower the object, bend the knees. Don't stoop. Make sure your hands and feet are clear when placing the load.

**Make it a habit to follow the above steps when lifting anything – even a relatively light object.**

## **2. Hearing Health**

Adapted from: *The National Association of Schools of Music (NASM) and Performing Arts Medicine Association (PAMA) Protecting Your Hearing Health - Student Information on Noise-Induced Hearing Loss*

Hearing health is essential to your lifelong success as a musician. Your hearing can be permanently damaged by loud sounds, including music. Technically, this is called Noise-Induced Hearing Loss (NIHL). Such danger is constant. Noise-induced hearing loss is generally preventable. You must avoid overexposure to loud sounds, especially for long periods of time.

The closer you are to the source of a sound, the greater the risk of damage to your hearing mechanisms. Sounds over 85dB (your typical vacuum cleaner) in intensity pose the greatest risk to your hearing. Risk of hearing loss is based on a combination of sound or loudness and duration.

Recommended maximum daily exposure times (National Institute for Occupational Safety and Health - NIOSH) to sounds at or above 85 dB are as follows:

- 85 dB (vacuum cleaner, mp3 player at 1/3 volume) - 8 hours
- 90 dB (blender, hair dryer) - 2 hours
- 94 dB (mp3 player at 1/2 volume) - 1 hour
- 100 dB (mp3 player at full volume, lawnmower) - 15 minutes
- 110 dB (rock concert, power tools) - 2 minutes
- 120 dB (jet planes at take-off) - without ear protection, sound damage is almost immediate

**Certain behaviors (controlling volume levels in practice and rehearsal, avoiding noisy environments, turning down the volume) reduce your risk of hearing loss. Be mindful of those mp3 earbuds.**

**When working in the MIDI Lab, keep your monitoring levels low. This will protect your hearing and maintain your essential ability to notice detail. If your neighbor**

**can hear the music from *your* headphones, or the music can be heard from outside of the studio door, then you are monitoring with too much volume.**

- When performing in either electric or acoustic ensembles, practice at safe volumes. Additionally, the use of earplugs and earmuffs can help to protect your hearing health.
- Day-to-day decisions can impact your hearing health, both now and in the future. Since sound exposure occurs in and out of school, you also need to learn more and take care of your hearing health on a daily, even hourly basis.
- It is important to follow basic hearing health guidelines.
- It is also important to study this issue and learn more.
- If you are concerned about your personal hearing health, talk with a medical professional.
- If you are concerned about your hearing health in relationship to your program of study, consult the appropriate contact person at your institution.

For more information, check out the other NASM-PAMA hearing health documents, located on the [NASM website](#).

### **3. Neuromusculoskeletal and Vocal Health**

The neuromusculoskeletal system refers to the complete system of muscles, bones, tendons, ligaments and associated nerves and tissues that allow us to move and to speak and to sing. This system also supports our body's structure. The "neuro" part of the term "neuromusculoskeletal" refers to our nervous system that coordinates the ways in which our bodies move and operate.

The nervous system consists of the brain, the spinal cord, and the hundreds of billions of nerves responsible for transmitting information from the brain to the rest of the body and back again in an endless cycle. Our nervous systems allow us to move, to sense, and to act in both conscious and unconscious ways. We could not listen to, enjoy, sing, or play music without these structures. In fact, making any change in our approach to movement, particularly to the array of complex movements needed for the performance of music, means working closely with our nervous system so that any automatic, unconscious or poor habits may be replaced with healthy, constructive, and coordinate movement choices.

#### **Basic Protection For All Musicians:**

1. Gain the information about the body that will help you move according to the body's design and structure. The parts of the human body most relevant to movement include the nervous system, the muscular system, and the skeletal system. Muscles move our bones at joints. Our bony structure is responsible for weight delivery and contributes to the support we need to move with ease and efficiency. There is nothing inherent in the design of our bodies or are instruments that should cause discomfort, pain or injury.

2. Learn what behaviors or situations put your neuromusculoskeletal health at risk and refrain from these behaviors and situations.
3. Always warm up before you practice, rehearse, or perform. It takes about 10 minutes before muscles are ready to fire at full capacity.
4. Monitor your practice to avoid strain and fatigue. This means taking breaks when needed, avoiding excessive repetition or practice time if you notice fatigue, strain or discomfort.
5. Use external support mechanisms when necessary such as neck straps, shoulder straps, proper bench or chair height.
6. For vocal health, be sure to drink plenty of water, at least 8 glasses a day and limit your consumption of caffeine and alcohol. Avoid smoking.
7. Be aware that some medications, such as allergy pills, may dry out your tissues. Be aware of side effects and consult your physician if you have questions.
8. Maintain good general health and functioning by getting adequate sleep, good nutrition, and regular exercise.

NOTE: This document has been adapted from the NASM-PAMA documents on Musicians' Health and Safety (see item C. below).

Bodymap.org is the home of Andover Educators, a not for profit organization of music educators committed to saving, securing, and enhancing musical careers by providing accurate information about the body in movement. Andover Educators use an innovative and specific technique called Body Mapping to enhance musicians' abilities and to help those in pain or discomfort.

Andover Educators train musicians and music educators to accurately support and enhance movement in practice and performance with the goal of increasing ease while reducing and eliminating injury. All Andover Educators are musicians dedicated to helping other musicians and understand the struggles, both physical and mental, that musicians face in their careers. The [Andover Educator website](#) contains a list of articles and books related to information about the body for performing musicians.

## **C. NASM Draft Advisory Documents**

### **Basic Information on Neuromusculoskeletal and Vocal Health**

[Read the NASM Advisory Document](#)

This basic toolkit contains information and resources compiled for the use of administrators, music faculty and staff, and music students.

## **D. Course in the Music Department on body awareness and movement:**

**MUSI 240 Body Mapping and Movement for Musicians** – Cynthia McGladrey, instructor

## **E. Additional Hearing Health Resources**

1. For more information on the topic consult Dr. Kris Chesky: University of North Texas (UNT) Texas Center for Music and Medicine
2. Dissertation on the topic (2012); Aaron J. Albin (UNT): “Conductor Awareness of, Knowledge of, and Attitude Toward Sound Intensity Levels Generated During Ensemble-Based Instructional Activities in College-Level Schools of Music”
3. [Dangerous Decibels website](#)
4. [Dr. Marshall Chasin “Hearing Loss Prevention for Musicians”](#) (pdf)
5. [Dr. Marshall Chasin’s website](#)

Spring 2014 - Adapted from NASM/PAMA guides, and from a similar guide at Willamette University.