

Website and additional information available to all students, Faculty, and staff.

HEARING

It is important that proper precautions are made in protecting yourself from hearing loss. Decibel levels exceeding 90 or more should be limited to no more than 2 to 3 hours per day. Therefore it is essential to not have 3 or more large ensemble rehearsals back to back. Students are encouraged to supplement information obtained in their lessons, master classes, and guest lectures regarding musicians' health and safety issues by utilizing some of the resources listed below.

http://nasm.arts-accredit.org/site/docs/PAMA-NASM_Advisories/5a_NASM_PAMA-Student_Information_Sheet-Standard.pdf

<http://www.vicfirth.com/exchange/2012/01/31/music-induced-hearing-loss-and-hearing-protection/>

<http://www.osha.gov/SLTC/noisehearingconservation/>

<http://www.dangerousdecibels.org/education/information-center/hearing-loss/>

<https://www.nidcd.nih.gov/health/hearing/pages/noise.aspx>

Decibel (Loudness) Comparison Chart

Here are some interesting numbers, collected from a variety of sources that help one to understand the volume levels of various sources and how they can affect our hearing.

Environmental Noise	
Weakest sound heard	0dB
Whisper Quiet Library at 6'	30dB
Normal conversation at 3'	60-65dB
Telephone dial tone	80dB
City Traffic (inside car)	85dB
Train whistle at 500', Truck Traffic	90dB
Jackhammer at 50'	95dB
Subway train at 200'	95dB
<i>Level at which sustained exposure may result in hearing loss</i>	<i>90 - 95dB</i>

Hand Drill	98dB
Power mower at 3'	107dB
Snowmobile, Motorcycle	100dB
Power saw at 3'	110dB
Sandblasting, Loud Rock Concert	115dB
<i>Pain begins</i>	<i>125dB</i>
Pneumatic riveter at 4'	125dB
<i>Even short term exposure can cause permanent damage - Loudest recommended exposure <u>WITH</u> hearing protection</i>	<i>140dB</i>
Jet engine at 100'	140dB
12 Gauge Shotgun Blast	165dB
Death of hearing tissue	180dB
Loudest sound possible	194dB

OSHA Daily Permissible Noise Level Exposure	
Hours per day	Sound level
8	90dB
6	92dB
4	95dB
3	97dB
2	100dB
1.5	102dB
1	105dB
.5	110dB
.25 or less	115dB

NIOSH Daily Permissible Noise Level Exposure	
Hours per day	Sound level
8	85dBA
6	86dBA
4	88dBA
3	89dBA
2	90dBA
1.5	92dBA
1	94dBA
.5	97dBA

.25 or less	100dBA
0	112dBA

Perceptions of Increases in Decibel Level	
Imperceptible Change	1dB
Barely Perceptible Change	3dB
Clearly Noticeable Change	5dB
About Twice as Loud	10dB
About Four Times as Loud	20dB

Sound Levels of Music	
Normal piano practice	60 -70dB
Fortissimo Singer, 3'	70dB
Chamber music, small auditorium	75 - 85dB
Piano Fortissimo	84 - 103dB
Violin	82 - 92dB
Cello	85 -111dB
Oboe	95-112dB
Flute	92 -103dB
Piccolo	90 -106dB
Clarinet	85 - 114dB
French horn	90 - 106dB
Trombone	85 - 114dB
Tympani & bass drum	106dB
Walkman on 5/10	94dB
Symphonic music peak	120 - 137dB
Amplifier, rock, 4-6'	120dB
Rock music peak	150dB

HEALTH AND INJURY

Practicing properly is essential to every musician's best interest. Please refer to your applied teacher in utilizing proper techniques and exposure to prolonged strain on muscle groups, tendons, and bones associated with your instrument or voice.

<https://www.sciandmed.com/mppa/journalviewer.aspx?issue=1197&article=1950&action=1>

<http://navmusic.rice.edu/>

<http://www.working-well.org/articles/pdf/Musicians.pdf>

http://www.med.nyu.edu/pmr/residency/resources/PMR%20clinics%20NA/PMR%20clinics%20NA_performing%20arts%20medicine/Repetitive%20Stress%20and%20Strain%20Injuries%20Preventive%20Exercises%20for%20the%20Musician.pdf

PERFORMANCE ANXIETY

<http://alexandertechnique.com/resources/PerformanceAnxietyGuide.pdf>

<http://www.wcsu.edu/music/conquering-performance-anxiety.pdf>

<http://www.psychologytoday.com/blog/finding-your-voice/201011/performance-anxiety>

TECHNOLOGY SAFETY

http://www.ehow.com/list_6123150_safety-rules-technology.html

<http://suite101.com/article/implementing-effective-classroom-internet-safety-a113817>

http://www.ehow.com/about_5434646_classroom-technology-rules.html

EQUIPMENT MOVING

Students working as stage managers in Brock, Foster, or Campbell must complete a training session on how to safely move the grand pianos on stage. Contact [Greg Sexton](#) for information.

Students working as audio/recording technicians must complete a training session on how to safely use the sound system and recording equipment, and how to safely lift and carry stage monitors. Contact [Dennis Davis](#) for information.

http://www.avatar-moving.com/gh_showarticle.asp?hid=59

Health and Safety Standards

1. Information

- a. Health and Safety standards are very important to the department of music at Eastern Kentucky University. Various methods and expectations are clearly outlined in several documents including links and downloadable materials from our website. All faculty, students, staff, and guests have access to these documents plus several guest artists and courses have been offered to help faculty, staff, and students become more aware of these standards. University safety regulations were established for all units on campus and a dedicated Safety Manual was produced for the department. This 25-page document contains aspects related to day-to-day operations to terrorist threats. This document contains information and map diagrams of entire music building and all performance venues. Also each department was provided a weather radio and emergency bag for major threats such as fire, tornados, and gas leaks from area Army Depot.

<http://www.publicsafety.eku.edu/>

http://www.police.eku.edu/eap/EKU_Emergency_Action_Plan.pdf

Students within our unit are given at least five lectures on safety and health concerns including 1. Moving of heavy materials, 2. Practicing properly to avoid injuries, 3. Hearing loss and long exposure to decibels over 100, 4. Performance Anxiety and 5. Health and Safety of the voice.

1. Demonstrations and training are provided for all parties on how to properly move a grand piano, set up risers, chairs, and moving of percussion instruments. Without this training, individuals are not allowed to move these objects and must seek assistance from our piano technician, music lab supervisor, or other trained individuals.

2. Additional demonstrations are provided and open to all students regarding proper practice techniques to avoid injury. Guest lectures are scheduled throughout each academic year pertaining to health practice habits, vocal safety and care, performance anxiety, and methods used throughout the music world like Alexander Technique.

3. In addition, decibel readings were completed for all classrooms, performance venues, and practice rooms. These results were made available and appropriate steps were made to help areas that did not meet certain standards. New 3.5" ceiling tiles that are more acoustically sound were placed throughout the music facilities to help bleed through and limit excessive decibel levels. Hearing loss handouts are provided to all students that include

exposure times and instruments that cause the most damage at long exposed intervals.

4. All music majors take ASO 100, Freshman Orientation dedicated to music majors. This 16-week course has dedicated time covering all of these aspects plus much more. We offer a special topics MUS 310/510 course at both the undergraduate and graduate levels pertaining to performance anxiety and its comparison to sports medicine and high level competitive training found in both sports and music.

5. Care of Your Irreplaceable Instrument!

A Guide to Vocal Health for All Students

I. Basic Health and Environment

1. Maintain good general health. Common colds and viruses are transmitted much more effectively by hands than by inhaling “germs in the air.” Wash often and minimize contact with the mouth and nasal areas.
2. Consult medical personnel as appropriate for colds, flu, allergies, fever, sore throat, etc. However, proper amounts of vitamin C and zinc have been shown to be helpful for general health.
3. If your physician approves, get a flu shot each year.
4. Maintain body hydration. Drink an appropriate amount of water each day. Take into consideration your body weight, exercise, and age. Check with your physician for an accurate quantity. Soda, alcoholic beverages, and coffee do not replace water! When practicing/rehearsing, make sure you have water to drink. Small chunks of apple also help the mouth to stay hydrated during rehearsals. Dehydration will cause lack of laryngeal lubrication and will harm your instrument.
5. Exercise regularly (jogging, aerobics, swimming, light weight-lifting, etc.).
6. Eat a balanced diet. Excessively spicy food and/or eating a heavy meal before a nap or before retiring at night can cause problems due to flow of gastric hydrochloric acid into the esophagus and laryngeal areas.
7. Be careful of what you breathe. Exposure to smoke (even second-hand smoke), smog, and car exhaust is dangerous for the folds and for the respiratory system. Other “social” drug use is obviously detrimental to vocal and general health.
8. Speak in normal volume levels no matter what your environment. Don’t compete with a loud environment. This means not trying to talk over the sounds around you from such sources as buses, airplanes, loud restaurants, construction machinery,

sirens, etc. Also, cover your ears when the noise is very loud. Singers must be able to hear as well as sing!

9. Emotional unrest and physical or mental fatigue have a direct effect on the voice. You can damage your vocal folds in trying to sound “normal” under such conditions.
10. Both air-conditioning and heat dry our environment. Humidify your house, apartment, or dorm room (especially in the winter) to about 40-50% humidity. An environment that promotes healthy plants will probably be good for you. Too much humidity can promote the growth of molds and mildews. These can be bad especially for the allergy-prone singer. In the summer, homes may need a dehumidifier to get rid of excess humidity.
11. Keep a careful check on back and neck postures. Vocal health and high skill level rely on correct alignment of the spine.

II. Use of the Voice

11. Proper warm-ups are essential. A minimum of 15 minutes before choral or solo singing is necessary. Your voice teacher will guide you in the proper warm-up/technique.
12. Try to avoid scheduling too many rehearsals back to back. When you must sing for extended periods of time, be easy on your voice in rest periods. For example, in between rehearsals, backstage, etc., be quiet. Do not talk excessively with those around you. Be kind and respectful to your instrument!
13. On the day of a concert, avoid extraneous vocal use. For example, on the way to an event do not talk or sing.
14. The middle singing voice and speaking voice should have basically the same general pitch level. A marked difference between the singing and speaking voice should alert the individual that one of the two voices is not being used properly.
15. Avoid singing in a high tessitura for an extended period of time without rest.
16. Avoid screaming or shouting. This includes cheerleading. At sporting events, do cheer on your team but clap or use noisemakers instead of your voice.

III. Minor Illnesses and Therapy

17. For a cold or viral respiratory illness, the following are recommended: application of steam, intake of clear liquids, voice rest, general body rest, and zinc lozenges for healing of the throat. Again, consider a flu shot each fall!
18. Antihistamines should generally be avoided because of the drying effect on the larynx. For a continuous “runny nose,” the use of antihistamines for a brief time may

be advisable. Be sure to drink extra water when using these. Always consult your physician.

19. Symptoms of a misused speaking voice are recurrent hoarseness, throat clearing, voice breaks, tired voice or quick vocal fatigue, pain in the throat or back of the neck, chronic laryngitis, lump in the throat, dry throat, and tight neck muscles. Consult your voice teacher and a laryngologist if you have these symptoms.
20. Hoarseness or “fuzziness” offers evidence that vocal folds are swollen, creating temporary difficulty (or loss) in reaching higher pitches. The singer must avoid using excessive breath pressure to overcome this condition. Simply, don’t force your voice at any time.
21. Hard coughing or prolonged shouting/strain can result in vocal fold hemorrhage, which requires at least 14 days to remedy. Strenuous singing or speaking should be avoided for three to four weeks.
22. Nodes or nodules are firm, compacted swellings on the vocal folds at the mid-portion. They begin as soft protrusions with a little redness. When strenuous voice use continues over a period of time, blood vessels dilate and the swellings become red. Fibrous tissue develops and, if uncorrected, become “surgically mature” and may require extended rest. Surgical removal is necessary only in extreme cases.
23. Severe and persistent coughing often follows a viral respiratory infection. Coughing causes the glottis to squeeze tightly shut, increasing subglottal pressure. There is a forceful, explosive separation of the vocal folds and arytenoids, which may produce hemorrhaging. If hard coughing continues, “blood blisters” may form. These blood blisters are often fluid-filled cysts called polyps. Polyps develop first as a red bump and may be found anywhere in the larynx. Avoid coughing and clearing the throat by drinking water and swallowing hard.
24. Symptoms that indicate the need for a trip to the otolaryngologist:
 - a. hoarse, breathy vocal quality
 - b. cannot sing a soft, unpressured pianissimo
 - c. upper range available only with particular force
 - d. chronic “froginess” and the need to clear the throat
 - e. upper respiratory symptoms lasting more than 7 days
 - f. persistent allergy symptoms not responding to OTC or prescription meds
 - g. acute throat pain with singing
 - h. chronic tonsil or sino-nasal problems
 - i. heartburn or acid indigestion failing OTC therapy

III. Medications

Always consult a physician.

Antihistamines: Antihistamines are sometimes prescribed to treat allergies and are present in some over-the-counter cold medications. Antihistamines should rarely be used because they tend to cause dryness. Prescription nasal steroid sprays such as Nasacort[®] (Phone-Poulenc Rorer), Nasonex[®] (Schering), Flonase[®] (Allen & Hansburys), etc. will often relieve the symptoms of nasal allergy without the drying side effects of antihistamines.

Analgesics: Aspirin products and non-steroidal anti-inflammatory drugs (ibuprofen) should be used with caution as they cause platelet dysfunction and this may predispose to bleeding. Tylenol[®] (McNeil Consumer Products) is the best substitute for pain relief.

Mucolytic Agents: The most common expectorant is a preparation of long-acting guaifenesin to help liquefy viscous mucus and increase the output of thin respiratory tract secretions. Drugs, such as Mucinex[®], may be helpful for singers who complain of thick secretions, frequent throat clearing, or postnasal drip. Awareness of postnasal drip is often caused by secretions that are too thick rather than too plentiful. Mucolytic agents need to be used with a lot of water through the day, to be effective.

Local Anesthetics: Avoid the use of over-the-counter local anesthetic preparations for the throat. Singing under their influence is like trying to play the piano with gloves on.

Progesterone: Question the use of progesterone-dominant birth control pills. They may cause virilization of the female larynx and a loss in the upper vocal range. There may be no other alternative for your individual situation, however, so consult your gynecologist.

Access to materials are provided on our website and students are encourage to download and/or read more about specific areas of concern. These areas include but are not limited to: Protecting your Hearing Health, Musculoskeletal Health and Injury, Psychological Health, Equipment and Technology Safety, Care of your Voice, and Acoustic Conditions in Practice, rehearsal, and Performance Facilities.

2. Policies, Protocols, and Operations

- The department does a great job and making sure equipment moves are completed by a professional staff. Having a fulltime staff member involved in all large equipment moves and large stage set-up

procedures is a wonder asset. Our Music Lab Technician serves as a liaison with the campus moving crew to establish timely and appropriate moves to venues outside of our immediate area. Policies for moving equipment are outlined within our Departmental Governance Document plus all duties of the Music Lab Technician.

Training is provided to move large instruments, set up complex staging, and to utilize curtains, projectors, and sound shells found in our largest performance venues. The Director of Percussion studies also provides a list of do's and don'ts in the handling and moving of percussion equipment.

- We have a dedicated Music Lab faculty member who helps insure that computer equipment, recording materials, and midi implements are running properly. Students can access the space during dedicated hours. Students within the department are all required to take MUS 384, Computers for Musicians in order to have access to the space. Training within this course meets the general education requirements for computer software and technology. We also offer additional special topics in recording, film scoring, and other commercial music and industry genres.
- We provide suitable, well-lighted practice, rehearsal, and performance rooms that meet safety standards. Procedures of how to operate overhead projectors, sound reinforcement equipment, and room set-up are established within each room. Also a complete daily schedule of when the space is occupied is clearly posted as well. Within our Student Handbook and Departmental Governance Documents, room usage and procedures are clearly outlined requiring a faculty, staff, or graduate assistant in the room anytime in use by students or guests. Evacuation diagrams and exit signs are clearly visible inside and outside of each classroom and venue.

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VOICE HEALTH FOR ALL STUDENTS

<https://www.nidcd.nih.gov/health/voice/pages/takingcare.aspx>

<http://www.uthscsa.edu/oto/voice.asp>

http://voicecenter.med.nyu.edu/patients/vocal_health

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<http://suite101.com/article/implementing-effective-classroom-internet-safety-a113817>

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EQUIPMENT MOVING

http://www.avatar-moving.com/gh_showarticle.asp?hid=59