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What did you say? Protecting our hearing?

What does the typical day sound like for you? Let's listen in on our teaching colleague, Robin. (Notice the decibel level {dBA} in parenthesis for each sound.)

The day starts with the alarm clock (65-80 dBA) encouraging Robin to get out of bed. She catches her breath (10 dBA) before staggering out of bed and heads for the bathroom to shower. After drying off, she quickly blow dries her hair (60-95dBA), and dresses for work. Noticing some suspicious clouds outside, Robin walks into the living room to turn on the television (70 dBA) for the local weather forecast. Just as she suspected, there is a thunderstorm brewing. It should hit right about the time she is ready to leave the house for work.

Speaking of brewing, Robin better get her coffee made. She starts the coffee maker (55 dBA) to get a thermos filled with her favorite hazelnut coffee for the upcoming workday. While walking towards the refrigerator to get a yogurt, she steps on the dog's squeak toy (135 dBA). She now has about 5 minutes to brush her teeth with her electric toothbrush (50-60 dBA) and to get to the car for work. She locks up the house, turns on the alarm (80 dBA), and hops into her car. Robin shoves her backpack to the passenger seat and accidentally presses the car horn (110 dBA). Hoping the neighbors didn't hear that, she starts the car (70-90 dBA) and reaches for the radio dial to turn up the volume (varies depending on the song). As she pulls out of the garage, just as expected, a clap of thunder (120 dBA) echoes across the sky. This should be an interesting and somewhat noisy ride to work as the rain pelts (50-80 dBA) the top of the car. Robin compensates for this sound by putting the radio dial up a notch (Center for Hearing and Communication).

Our days are filled with sound. Everything we use, connect with, and encounter has some sort of auditory wave that adds to the noise around us. The example above is just a start to Robin's day. Imagine if Robin was a music teacher. As music teachers and musicians have an intense exposure to sounds. We typically have acquired a sensitivity to multiple ranges, timbres, textures, and volumes. Our

profession has built our focus on the review, adjustments, and manipulation of sounds, creating a situation where we may have a hyper sensitive awareness to sounds.

In Robin's sound story, the decibel levels may not seem extreme when you realize that hearing loss is attributed to long or repeated exposure to sound that is at or above 85 decibels (National Institute on Deafness and Other Communication Disorders). However many of the normal everyday sounds shared within the story reach beyond 85 decibels. These sounds occur quickly, but can cause serious damage to your hearing, especially in those instances when there is a sudden loud sound, such as loud percussion.

In a study conducted from 2004-2008, seven million health insurance records were reviewed by a German research team. Within the records the team found that musicians were 57 percent more likely to suffer tinnitus as a result of their jobs (Leibniz Institute for Prevention Research and Epidemiology – BIPS).

As a musician and music teacher, you are within a unique environment whether it is a soundscape of normal everyday sounds or those created in your rehearsals. A symphonic orchestra has been monitored with a peak of 120 decibels to 137 decibels. A rock concert has the potential to go to 150 decibels. As music teachers, we are surrounded by varying sounds at elevated (after all, that is what this article is about) decibel levels (CHC).

How do we protect our hearing?

The online article, "Preventing Hearing Loss in Music Teachers and Other Music Professionals through Technology," shares several things you can do to protect your hearing. Consider these preventive measures.

- Measure the overall noise during an active rehearsal to see what decibel levels are reached. There are applications available on smartphones, as well as noise meters which can offer this information.
- Use earplugs during rehearsals to reduce damaging high intensity sounds to safer levels. Be informed about your hearing health. Watch the video "[Hear For A Lifetime](#)" for a more visual representation of how your ear reacts to soundwaves.

What can we do to minimize noise in our classrooms?

Our students also need protection when it comes to their hearing. A few things you can do to minimize the noise levels in your classroom according to the article, "Auditory Awareness: Are Students Hearing the Lesson?" can include:

- Minimize noise distractions such as passing time sounds or school grounds cleanups by closing the classroom door or windows.
- Install sound deadening materials such as carpet or acoustic tiles in the room.

- Place speakers strategically for ear access without causing those nearest to the sound source to be overtaxed with sound waves.
- Demonstrate the use of earplugs to your students and explain why you are using them. Either provide earplugs for students or encourage them to find a pair on their own that is the color that matches their personality.

Resources from Rockers offer more information.

A prime example of a musician who has worked to better inform the field about the damaging effects of high intensity sustained sound is Kathy Peck. She is a female rock performer who lost her hearing after giving a particularly loud concert. That spurred Kathy to found H.E.A.R. (Hearing Education and Awareness for Rockers). The organization is dedicated to raising awareness of the dangers of noise exposure that can lead to permanent hearing loss and tinnitus. Damage to hearing is typically cumulative and irreversible, not immediately detectable, and it can occur from almost any contemporary music source or event.



H.E.A.R. has created a 15-minute video, Listen Smart: Safely Handling the Power of Sound: (15 min.) that shows students the importance of hearing protection. Teacher resources are included. Another resource to check is the H.E.A.R. film Listen Smart “rockumentary.” It is a detailed look at the mechanics of sound and an easy-to-follow description of how the human ear works. Viewers learn why high-

decibel sounds can create such unintended havoc on the body. This video includes practical tips on hearing protection, information on the short-term and long-term effects of noise exposure and solid advice from music professionals. Features Ozzy Osbourne, Wyclef Jean, Lars Ulrich of Metallica and Moby. Awards: Cine Golden Eagle Award.

In our world of sound, music plays an important role. Many of the above musicians have found that their craft has unfortunately impacted their hearing and health over time. Another musician to find this challenge was Waukesha Wisconsin’s own Les Paul. It was ironic that Les Paul, the man whose life revolved around sound, needed to wear two hearing aids. Though the cause was not from loud music, his hearing loss was a constant annoyance. Many of Les’ musician friends struggle with hearing loss caused by exposure to loud noise. Les’, the itinerant inventor, was working on improving hearing aids until his last days. The Les Paul Foundation continues Les Paul’s quest to improve sound through its support of H.E.A.R. and by providing funding to the Hearing Health Foundation for its research to find a cure

for tinnitus. Additional resources related to hearing protection and to Les Paul are available at www.lespaulfoundation.org.

One of the greatest gifts we might give our students and ourselves is to learn and practice hearing protection. Review the information within this article and share practices that support better hearing health in the classroom.

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