

# CLASSICAL MUSICIANS CAN LOSE THEIR HEARING TOO

By Kerri De Rosier

**Y**ou're in a rock n' roll band: the bass is pounding; the crowd is screaming; the drummer's cymbals are crashing. It's loud—and it's dangerous for your ears and could result in eventual hearing loss. Rock stars Neil Young, Sting, Chris Martin with Coldplay, Huey Lewis, Pete Townshend, Ozzy Osbourne and Eric Clapton have all reported being affected by hearing loss, Tinnitus (ringing in the ears) and/or Meniere's Disease, which causes vertigo, Tinnitus, hearing loss, and pressure in the ears. But would you be surprised that classical musicians suffer just as much—if not more—from these conditions as rock n' roll musicians?

According to a study of members of one of Norway's largest orchestras, two out of five musicians suffered from hearing loss. And the numbers are higher for Tinnitus. That same Norwegian study found that 76.9% of the musicians studied experienced Tinnitus.<sup>1</sup> Think about it: practice rooms; loud concerts; five – six-hour rehearsals; sitting directly in front of the brass or percussion section: it's no wonder the numbers are that high.

According to OSHA standards, 90 decibels over an eight-hour period is considered a "permissible" dosage for sound: any sound above 90 dBA can cause hearing loss, which is related to the power of sound as well as the length of exposure. OSHA uses what they call a 5 dBA "exchange rate," which means that when the noise level increases by 5 dBA, the amount of time a person is exposed should be cut in half. In contrast, the

National Institute for Occupational Safety and Health (NIOSH) recommends a lower dBA level of 85 to minimize hearing loss, and that "every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time."<sup>2</sup> Normal conversation is 60 dBA, while an ambulance siren is 120 dBA.

## ? Definition of decibels from

**osha.gov:** "Noise is measured in units of sound pressure levels called decibels, named after Alexander Graham Bell, using A-weighted sound levels (dBA). The A-weighted sound levels closely match the perception of loudness by the human ear. Decibels are measured on a logarithmic scale which means that a small change in the number of decibels results in a huge change in the amount of noise and the potential damage to a person's hearing."

Now consider this: Etymotic, which produces a variety of ear plugs targeted for musicians, gun enthusiasts, and those in the construction fields, has an interactive

chart on their web site that correlates decibel levels with the time it takes to reach the daily exposure limit ([etymotic.com/media/sliderule/index.html](http://etymotic.com/media/sliderule/index.html)). Those cymbals? 118-121 dB, with a daily exposure limit of 15 seconds; flute? 11-112 dB, with a daily exposure limit of one to 15 minutes; violin? 85-105 dB, with a daily exposure limit of two hours to four minutes (the ranges are quite large). Remember that increasing the decibels by just three doubles the noise. The chart also shows how using earplugs can increase the amount of exposure time to high decibel levels.

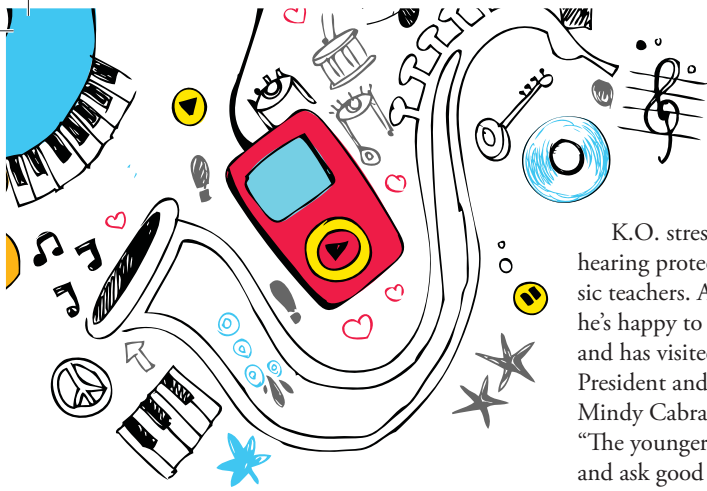
In spite of the obvious dangers, many musicians don't use hearing protection.

Here's a simple message from K.O. Skinsnes, who presented the Student Track Session, "The Science of Hearing and Ear Protection," at last year's MTAC Convention: "If you're playing in a band, it's dangerous for your hearing. Wear ear plugs."

K.O., a trumpet authority and mouthpiece designer and president of Stomvi USA, also spent years working in pits and amplified bands—and played in a loud 70s funk band. He noticed that his band mates were starting to suffer from hearing loss, and decided that he "wanted to make it to old age and be able to hear."

A few years ago, he attended NAMM, where he discovered a Colorado Springs-based company selling hearing protection. He discovered more information at a Midwest band and orchestra clinic in Chicago, where he met representatives of Etymotic and purchased a dosimeter, a device that >





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measures sound exposure over time. He also has a trumpet player friend who happens to be an audiologist help him connect the dots. K.O. gave his first presentation in 2015 at the International Trumpet Guild Conference in Columbus, Ohio, and has since given his pitch four to five times.

He sees resistance from older musicians who say, “it doesn’t sound right when I wear them,” and then don’t protect their hearing. His message to young musicians is that it “gets loud pretty fast.” He suggests that students start wearing cheaper ear plugs to start so they can get used to wearing them, and that musicians young and older wear them for an hour before they need them.

“It’s like sunscreen and sun exposure,” said K.O. “We wear sunscreen to limit the effects of sun exposure. We need to wear hearing protection to limit the effects of sound exposure.”

Like sunscreen, ear plugs come in a variety of intensities—and prices. “You can get a pair of Etymotic ear plugs for about \$15,” said K.O. Some ear plugs reduce sound evenly by a certain number of decibels, such as 20 dB, while electronic earplugs (in the \$299 range) automatically change output levels as the sound input changes. For example, Etymotic’s Music PRO electronic earplugs only reduce sound when the sound levels reach unsafe levels, then restore natural hearing after safe levels are reached. The company also provides custom-fit ear plugs that you can purchase from a hearing professional that “replicates the response of a normal ear canal,” according to the Etymotic brochure. Other companies K.O. mentioned are Hearos ([www.hearos.com](http://www.hearos.com)), which offers foam earplugs, and Earasers ([www.earasers.net](http://www.earasers.net)), which sells silicone ear plugs and has a creative slogan, “Be Ear-Responsible.”

K.O. stressed that the message about hearing protection needs to come from music teachers. A resident of Acton, California, he’s happy to give presentations to schools—and has visited MTAC State Board 2nd Vice President and Convention Program Chair Mindy Cabral’s music school a few times. “The younger students are more interested and ask good questions,” said K.O.

Symphony orchestras are starting to get the picture. “Symphonies are catching up. We’re starting to see acoustic shields up in front of the loud sections,” said K.O.

Yet—it is still up to individual musicians to protect their hearing inside and outside the orchestra or band setting. ■

*Do you have a question about hearing loss? You can contact K.O. through his web site, [www.stomvi-usa.com](http://www.stomvi-usa.com). Etymotic also has helpful information about hearing loss and education programs for music educators at [etymotic.com/hearforalifetime](http://etymotic.com/hearforalifetime).*

<sup>i</sup> Hearing Health Associates (2018, April 23). *Rock Stars and Hearing Loss: Why Hearing Protection is Important*. Retrieved from [www.hearinghealthassoc.com/hearing-health-associates-va-blog/2018/4/18/rock-stars-and-hearing-loss](http://www.hearinghealthassoc.com/hearing-health-associates-va-blog/2018/4/18/rock-stars-and-hearing-loss)

<sup>ii</sup> OSHA.gov. (1996, October) *How loud is too loud?* Retrieved from [www.osha.gov/SLTC/noisehearingconservation](http://www.osha.gov/SLTC/noisehearingconservation).



*With extensive experience in mouthpiece and trumpet design, K.O. Skinsnes has worked with brass players since 1994. Additionally, live sound production has gained him knowledge in the dangers of excessive noise levels and how to combat them in a musical environment. K.O. is a trumpet authority, mouthpiece designer and president of Stomvi USA.*

Lead sheets that include seventh chords follow this exercise. *Alfred’s Group Piano for Adults, Popular Music Book 1* includes lead sheets that use only root position chords, chord inversions, and seventh chords, with specific instructions on how to turn each lead sheet into an effective arrangement.

In conclusion, today’s students juggle so many things in their lives—technology, Advanced Placement classes, sports, social activities. With such a busy lifestyle, teachers have to be creative to make piano a priority. Consider yourself a good teacher if you can keep a student who is not going to major in music studying piano throughout high school. ■



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*The couple’s passion for piano teaching and music education has inspired them to write over 300 educational piano materials for students of all ages.*