

Is Your Music Too Loud? Experts Say It May Be If it Is Louder Than a Microwave's Beep - WSJ

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To lessen hearing-loss risk, some experts say listen to loud music with earbuds for less than a



How loud is too loud when using a personal audio device? Experts weigh in with specific recommendations. Photo: Corbis Sumathi Reddy

Think twice the next time you pump up the volume on your iPhone to drown out the chatter of those neighboring commuters.

Experts say listening to music at high volumes using earbuds or headphones for more than an hour—and in some cases, as little as a few minutes—can

The World Health Organization in a new campaign advises limiting the use of personal audio devices to less than an hour a day, or for longer periods if equivalent to the beep of a microwave.

The recommendation is based on the WHO's review of previous studies estimating that people use personal audio devices at an average of 94 decibels, a level that is a department for management of noncommunicable diseases, disability, violence and injury prevention.

At 100 decibels, listening should be limited to 15 minutes. But by reducing the volume to 80 decibels or less, a person can safely listen to headphones

Apple and most other makers of personal audio devices don't provide decibel equivalents for the volume controls on their devices. Maximum volume is the most effective way to reduce the risk of hearing damage is to wear noise-canceling headphones, which block out background noise such as a noisy environment such as an airplane.

In [a 2011 study](#) published in the Journal of American Academy of Audiology, researchers evaluated output levels of audio devices and determined that Apple products and setting the volume on an iPod at maximum experiences a sound level of 102 decibels.

At that level, safe listening is limited to about five minutes, said Cory Portnuff, a clinical audiologist at the University of Colorado Hospital and a co-author

Some experts say the WHO recommendations are a bit too restrictive, and its estimate that 50% of young adults are exposed to potentially unsafe levels is an overstatement.

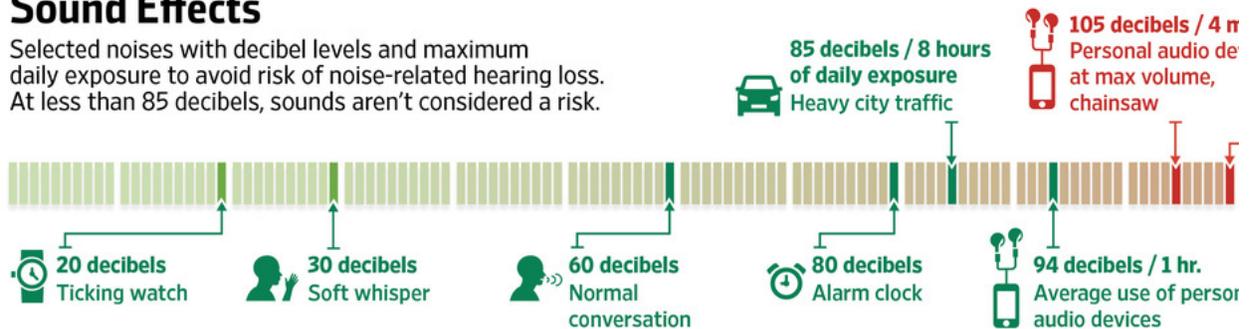
In [a 2013 study](#), this one published in the International Journal of Audiology, Dr. Fligor and Dr. Portnuff found that of 24 adolescents ages 18 to 29, only 10% had noise levels that raised their risk of cumulative hearing loss.

"Volume level and listening time are inextricably combined," said Brian Fligor, a Boston audiologist and another co-author of the 2011 and 2013 studies. Sivantos Technology, Inc., an audiology device company, who has published numerous studies on personal listening devices. "You can listen really loud for short periods of time."

"I take my favorite song at the end of my run and I crank it to the max. But it's only one song," Dr. Fligor said. He recommends keeping the volume on headphones at 60 decibels, for 90 minutes of safe listening.

Sound Effects

Selected noises with decibel levels and maximum daily exposure to avoid risk of noise-related hearing loss. At less than 85 decibels, sounds aren't considered a risk.



Source: World Health Organization

A 2006 laboratory study of about 100 young adults in a simulated airplane found that when listening to music or movies with regular earbuds or headphones more than 85 decibels—more than 80% of the time, said Dr. Fligor. But when wearing headphones that blocked out background noise, people listened to music at lower volumes.

Noise-related hearing loss, while unusual among young adults, can still prematurely age one's ears, Dr. Portnuff said. "It is normal to lose some hearing as you age, but noise-related hearing loss can make that happen much faster."

Audiologists can detect early signs of hearing loss. Dr. Portnuff said warning signs include ringing in the ears and difficulty following conversations in noisy environments. High-frequency sounds are typically lost first, resulting in difficulties in hearing things like whistles or the beep on a watch. Consonant sounds such as s's and t's are also hard to hear.

There is evidence that noise-related hearing loss is on the rise. [A 2010 study](#) published in the Journal of American Medical Association found hearing loss about a third over the previous two decades, with a 28% rise in the prevalence of high-frequency hearing loss, said Sharon Curhan, co-author of the study at Boston Harbor Hospital in Boston.

The study, which used data from a nationally representative survey, couldn't attribute the increase specifically to noise or the use of earbuds, but high-excessive noise exposure, Dr. Curhan said.

Genetics, diet and lifestyle also contribute to hearing loss, Dr. Curhan said. Her research has found that staying physically active, eating a healthy diet and taking pain relievers such as ibuprofen and acetaminophen may help reduce the risk of hearing loss [in men](#) and [women](#).

Seth Schwartz, an otologist and director of the Listen for Life Center, a comprehensive hearing-health clinic at Virginia Mason Medical Center in Seattle, said that even a short exposure to an extremely loud noise, such as a jet engine, can result in hearing loss. In such instances, both the sensory cells of hearing and the auditory nerve can be damaged.

Some noise-related hearing loss can be temporary, which is why experts recommend taking 15 to 20 minute breaks when listening on headphones to give your ears a rest.

Exposure to lower but still dangerous levels of noise for longer durations can damage the sensory cells of hearing and can be permanent.

Dr. Fligor recommends over-the-counter earplugs for people who regularly attend loud concerts and sporting events. He recommends custom-fitted earplugs for people in the music industry.

RJ Jaczko, a 15-year-old high-school sophomore in Wellesley, Mass., is one of Dr. Fligor's patients. A drummer, DJ and concertgoer, RJ hasn't experienced hearing loss because his father, Rob Jaczko, a recording engineer and record producer, and chairman of the music production and engineering department at Berklee College of Music, has protected his ears.

Now, RJ says he wears earplugs to concerts, and whenever he drums or DJs. "They're very helpful," he says. He also keeps an eye on the volume on his headphones. "I started making a conscious effort once my dad explained to me how his ears got to have problems and I realized how easy it was to keep it lower."

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Source: *The Wall Street Journal*, 10 March 2015