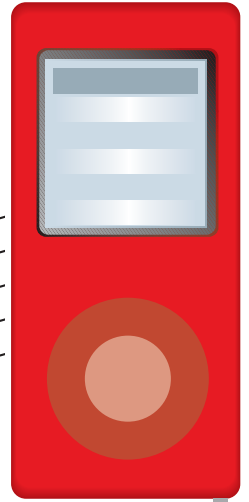
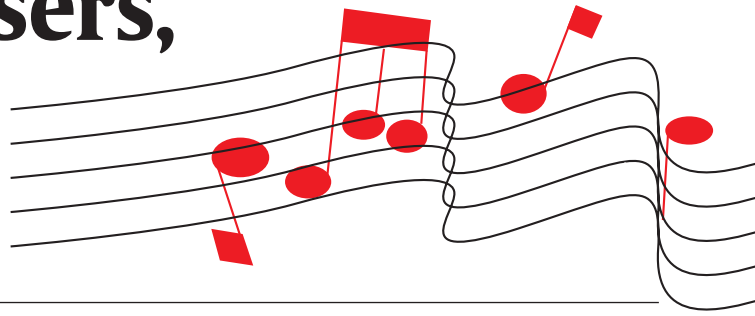


For iPod users, a budding problem



MP3 earphones raise hearing-loss concerns

By Mary Brophy Marcus
USA TODAY

Seattle-based builder and author Pete Nelson blasts his iPod to drown out the sound of his power tools when he works. He cranks it up when he skis and even listens to the portable music player while working at his computer.

"I'm having a love affair with my iPod," says Nelson, whose wife, 15-year-old daughter and 13-year-old twin sons all have iPod addictions.

They're like millions of other Americans who listen to their MP3s for hours each day.

Apple has sold more than 40 million iPods since they hit the market in 2001. Last year, 14 million were snatched up in the fourth quarter alone. Those figures don't include purchases of iRiver, Sony and other brands of MP3 players.

But lately it seems a backlash may be brewing against MP3 players with claims that the gadgets, which typically are used with dime-sized, disc-shaped earphones called ear buds, can cause hearing loss:

► Last month, a Louisiana man filed a federal lawsuit against Apple claim-

ing iPods cause hearing damage.

► Rep. Edward Markey, D-Mass., wrote a letter to the director of the National Institute on Deafness and Other Communication Disorders in January, calling for a review of the scientific information on the effect of portable music players on hearing loss. He also asked for recommendations to help consumers avoid potential damage from MP3 players.

► In France, the government has set a limit of 100 decibels in MP3 players, and Apple has made adjustments. Company executives, when contacted for this report, declined to comment on the maximum volume an American-sold iPod can reach.

But independent testing showed that maximum volumes hovered in the 120-decibel range, about the level of a jet plane taking off, says audiologist Brian Fligor, a hearing expert at Children's Hospital Boston. According to the deafness institute, almost 28 million Americans have hearing loss. One-third have damage because of loud noise.

Very few documented cases of noise-induced hearing loss are tracked to long-term use of hand-held stereos alone, but more research is needed, Fligor says.

Fligor is researching safe-listening levels in MP3s. He and colleagues published a study in 2004 that determined safe-listening levels with portable music players such

as the Sony Walkman; the study found that one hour a day at about 60% volume was safe. Preliminary results of the MP3 study show figures in the same ballpark, he says.

Hearing loss is preventable

If it's not healthy, why give listeners the option to pump it up to 120 decibels? Pure pleasure, Fligor says.

"There are just some songs you want to rock out on," says iPod user and Texas musician Bob Schneider, 40, who has been performing for 17 years and concedes he probably has some hearing damage. "At this stage of the game, I still play the music pretty loud. I can still hear pretty well, but that might be a whole different story when I'm 60."

By then, it might be too late for Schneider or families such as the Nelsons who sometimes listen to their MP3s more than three hours a day.

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Using earphones for hours at high volumes basically causes "shock and awe" to delicate hair-like cells deep within the inner ear that help the brain process sound, says Ron Eavey, director of pediatric otolaryngology at Massachusetts Eye and Ear Infirmary. After years of abuse, those structures won't function anymore, he says.

Nelson, 43, is concerned about hearing loss and already experiences ringing in the ears, called tinnitus, which is a symptom of damage. But he says he has no plans to cut back on his MP3 use.

Noise-induced hearing loss is preventable, says Pam Mason, an audiologist with the American Speech and Hearing Association in Rockville, Md.

Mason suggests dishing out the cash for a good pair of earphones. Sound-isolating earphones made by companies such as Future Sonics, Shure and Etymotic reduce ambient noise outside the ears so that listeners don't have to pump up the volume as high.

"People think if they listen at a lower volume, they won't get the same quality of sound. But good headphones actually allow you to hear more detailed nuances in the music

without the high frequencies that do damage," says Marty Garcia, founder of Philadelphia-based Future Sonics. Boston-based Bose and other companies sell another option: noise-canceling headphones. Battery-driven, they cover the entire outer ear and work by picking up ambient noise outside the headphones and then emitting a counter frequency that cancels out the incoming noise. This technology also allows a user to reduce the volume on his MP3 because there is little outside noise to overcome.

No two people are alike, so it's difficult to predict who will develop hearing loss, experts say.

But if you have tinnitus, find that noises sound muffled, experience temporary hearing loss after a loud concert or have difficulty hearing someone 3 feet away, you need to get your hearing tested.

Apple and other MP3 player manufacturers can help listeners by reducing volume levels, experts say. But in the end, it is up to the user. Says Harvard's Eavey: "It's like using sunblock to prevent skin cancer. Ultimately, iPod users need to make the right choices to avoid hearing loss."

Sound guide to problem noise

Any sound over 85 decibels (dBs) exceeds what hearing experts consider the "safe" range. More than that and over time, there's a good chance you'll damage your ears.

	Decibel level
Firearm	140+
Jet engine	140
Jackhammer	130
Sporting event	127
Live music concert	120+
Jet plane takeoff	120
Band practice	120
iPods and other MP3 players at maximum volume	120
Health club and aerobics studio	120
Movie theater	118
Motorcycle	95-120
Chain saw or pneumatic drill	100
Lawnmower	90
Subway	90
Busy street	80
Alarm clock	80
Vacuum cleaner	70
Conversation	60
Moderate rainfall	50
Quiet room	40
Whisper, quiet library	30

Source: American Speech-Language-Hearing Association

Discussion: What statistics indicate that Americans are addicted to their iPods? What decibel level can iPods sold in America reach? Approximately how many Americans suffer from hearing loss caused by loud noise?



Why do you think people like musician Bob Schneider are blasé about their hearing? What would it be like to lose your hearing? What sounds would you miss?

How can MP3 player manufacturers help protect users' hearing? Ultimately, whose responsibility is it to monitor volume levels?

Judging from the article, are you at risk for hearing loss due to your use of an MP3 player? If so, what steps can you take to protect your ears?

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Look at the "Sound guide to problem noise" chart at right. Are there lifestyle changes you need to make to avoid hearing loss?

