

Hearing loss is affecting an increasing number of Americans of all ages—including children. Here's what you must do to prevent it.

Lower The Volume!

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By Dr. Ranit Mishori

AS A FASHION ACCESSORY, EAR-plugs cannot compete with a cool pair of shades. But just as sunglasses can shield the eyes from sunshine and glare, ear plugs can provide protection from loud noise—the kind you encounter at rock concerts and NASCAR races but also mowing your lawn on a leisurely Sunday.

Kathy Peck—a former rock musician who is the executive director and co-founder of HEAR (Hearing Education and Awareness for Rockers) and a self-described crusader—always carries a few spare earplugs in her purse.

She has worked tirelessly to distribute ear protection at clubs and rock concerts, at spring-break events and at schools. The reason: People need to be protected from what she calls “the most common hidden disability in America”—hearing loss.

Today, about 32.5 million American adults have difficulty hearing. That is more than one in 10 Americans, as reported by the National Institute on Deafness and Other Communication Disorders (NIDCD). Some of this is unavoidable, but some has to do with the way we live.

Age is one of the unavoidable factors. People tend to lose some of their hearing as they grow older, especially for sounds in the higher pitches. This is nature at work. It is not preventable.

At the other end of the lifespan, babies and young children also can suffer hearing loss, usually as a result of genetic disorders. Hearing loss in childhood also may result from head injuries and certain infec-

tions, such as meningitis. There's also otitis media, the common middle-ear infection so many kids suffer from in early childhood. Several episodes of otitis media can lead to retention of fluid in the inner ear, and consequently hearing problems and delayed speech.

Then there's the cause we can do something about: noise, especially loud noise. Says Dr. Neil Ward, deputy executive vice president of the American Academy of Otolaryngology: “We're seeing an increasing number of younger folks, people in their late 20s and early 30s, showing signs of acoustic damage.”

Music, headphones, iPods. When adolescents and young adults fill their ears with loud music, by whatever listening device, it can cause hearing loss. Volume, not musical taste, is what matters. “All loud music is bad,” whether it's rock, rap or classical, says Dr. Gail



Most rock concerts will erode hearing in those who attend them without protection.

Whitelaw, an audiologist from Columbus, Ohio, and president of the American Academy of Audiology.

Noise-induced hearing loss affects as many as 10 million Americans, according to the academy. Essentially,

What's Too Loud?

Hearing loss may be caused by one-time exposure to extremely loud sound (such as an explosion) or by exposure to loud sounds over months or years.

Loudness, or sound intensity, is measured in decibels (dB). The scale runs from 0 dB (which is the faintest sound a human ear can detect) to more than 180 dB (the noise at a rocket pad during launch). Decibels are measured on a logarithmic scale, meaning that every time the intensity increases by units of 10, each increase is 10 times the lower figure. So 40 decibels is 1000 times as intense as 10 dB.

Experts believe that prolonged exposure to sounds above 85 dB without any protection can damage your hearing.

30 dB	a whisper
50 dB	the sound of heavy rainfall
60 dB	normal conversation
70 dB	rush-hour traffic
85 dB	risk level
90 dB	subway trains; lawnmower
100 dB	power saws, drills
115 dB	sandblasting; loud rock concert
130 dB	race-car noise
140 dB	jet engine
150 dB	fireworks
170 dB	shot-gun blast

➤ You can find an interactive loudness scale at entlink.net/news/bhsm.cfm (click on 'interactive loudness scale' on the right).

All loud music is bad, whatever the listening device. Be a role model and teach children from an early age to avoid loud noises.

Loud noise does to your ears what fire can do to your skin: burn it. Noise “destroys the nerve endings in the middle ear,” says Dr. Ward. These are the tiny “hair cells” that translate vibrations into electrical currents that go to the brain. Damage them, and your hearing suffers.

A single exposure to a very loud noise can do it—an explosion, say, or a gunshot. On the other hand, the constant exposure to the whine and grind of machinery over several years can be enough to wreck your hair cells.

The National Institute for Occupational Safety and Health says approximately 30 million workers are exposed to dangerous noise on the job. Unfortunately, Dr. Ward notes, once the damage is done, it is permanent.

The good news is that this kind of hearing loss is preventable simply by avoiding the level of noise that causes damage. What's too loud? There's a good way to tell, says Dr. Ward: “Anything that causes discomfort.”

Other indicators: A noise is too loud if it prevents normal conversation; if you have to shout to be heard above it; if it causes a ringing in your ears; or if you have difficulty hearing for several hours after exposure to it.

While these warning signs may seem to be common sense, many ignore them, because hearing loss usually kicks in so gradually—sometimes over 10 to 20 years. In fact, according to

Stay Cool, Listen Smart

Hearing loss has increased among adolescents, and some experts blame the growing popularity of the iPod and other MP3 players.

The problem lies with the earbuds, those hip and small earphones that fit directly into the ear. They “inject” a more intense sound signal directly into the ear, with the potential of reaching an intensity of 110 dB, the sound level of a rock concert,” according to audiologist Dean Garstecki, professor and chair in the Department of Communication Sciences and Disorders at Northwestern University in Evanston, Ill.

In addition, the tiny earphones often don't fit snugly, allowing background noise in, which makes many listeners feel the need to crank up the volume. The new MP3 players also have a much longer battery life—which means kids will be listening to their favorite artist for longer periods. And if the favorite artist is a rocker or rapper, the music will probably be played at higher volumes.

The cumulative effect of the type of music, the higher intensity of the sound and the longer duration of exposure is a recipe for hearing loss.

What to do? A simple rule of thumb, says Garstecki, is: “If you can't hear the people around you, it's too loud. And if other people are hearing what you're hearing, it's too loud.”

And if switching from Eminem to Mozart is out of the question, Garstecki recommends following the 60/60 rule: Play the music at no more than 60% of the maximum volume (that's just about over halfway between the ‘off’ and the ‘max’), for no more than 60 minutes.

Getting more snug-fitting ear phones, or using the more old-fashioned ones that cover the entire ear is also an option. They are safer and a cool look—if this were still 1964.



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