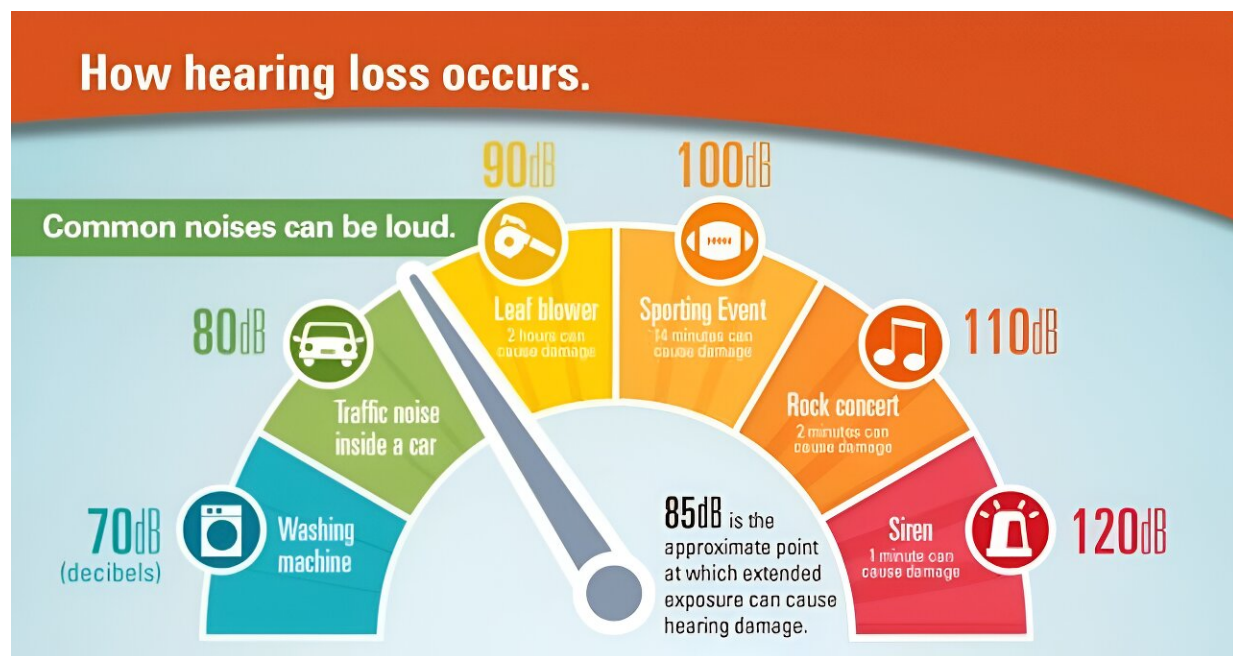


Loud sounds at movies and concerts can cause hearing loss, but there are ways to protect your ears

September 26 2023, by Cory Portnuff



Some rock concerts can cause hearing damage within two minutes. Credit: [Centers for Disease Control and Prevention](#)

Ever go to the movies or a rock concert and been blasted by the sound? You may not realize it while it's happening, but ongoing exposure to loud sounds at these venues can damage your hearing.

Our ears are highly sensitive to loud noise. Even very short exposures to high-level sounds—that's anything above 132 decibels—can cause [permanent hearing loss for some people](#). That's true even if it's just a brief blast; a single gunshot or fireworks explosion can cause immediate damage to the ear.

Even lower-level sounds—around 85 decibels—[can injure the ear](#) if heard for extended periods of time. Listening to a [lawn mower](#) for eight hours a day, for example, can put a person at risk for hearing loss.

Simply put, as the sound gets louder, safe exposure times get shorter. And whether from movies or concerts, fireworks or lawn mowers, about 40 million Americans have [hearing problems from loud noise exposure](#). The unfortunate part is that it's all preventable.

How hearing damage happens

As an [audiologist and scientist](#) who [studies hearing loss](#), I spend a lot of time talking to my patients and the public about preserving their hearing for a lifetime.

What many people do not know is that exposure to [loud sounds](#) over time can [damage the tiny hair cells](#) of the inner ear. These cells pick up sound and turn them into neural impulses that travel to the hearing centers of the brain.

Injuries to the ear from loud sound [can cause difficulty hearing](#), decreased tolerance of loud sounds—[also known as hyperacusis](#)—and tinnitus, a constant ringing in the ears.

I'm particularly concerned about recreational noise exposure. While we commonly think about potential harms from [loud noises](#) in factories, [construction sites](#) or other loud workplaces, the Centers for Disease

Control and Prevention estimates that 53% of people ages 20 to 69 who have hearing loss from [loud noise report no workplace noise exposure](#).

That means these people choose loud hobbies or recreational activities without being aware of the risks. It's not just movies, concerts and [sporting events](#); [power tools](#), motorcycles, off-road vehicles and firearms can all be hazardous to the ear.

Concerts and movies

Concerts regularly exceed 105 decibels, where sound exposure is safe for only about four minutes. Some shows can be even louder. And these levels of sound usually last for long periods of time—two or three hours. This clearly puts listeners at risk for [hearing loss](#). The same also applies to other music-dominated events, [like nightclubs](#).

Movie theaters can exceed 100 decibels, though usually not for extended periods of time. Generally, most people are [safe when going to movies](#), though many moviegoers may find some louder sounds uncomfortable—like music or over-the-top sound effects, along with the explosions and gunshots. Extended watching of [movies](#), such as a double feature, can increase a viewer's risk.

Protecting yourself

Using a sound meter app can estimate how loud the environment is, and then you can decide if you need to protect your hearing.

For iPhones, [the NIOSH SLM app](#) is good; for Android, [the Decibel X app](#) works well. Apple Watches come with an already installed [Noise app](#).

Here are some other [tips to protect your ears](#):

First, if you can control the volume, turn it down. For headphones, use [the 80-90 rule](#), which means you can listen at 80% of the maximum volume for 90 minutes per day. Turning it down gives you more time; turning it up gives you less time.

If you can't control the volume, move farther away from the sound source. Standing next to big speakers at a concert, for instance, is often louder than being in the middle of the crowd. Taking breaks from the sound also helps.

So will earplugs or earmuffs. Although foam or rubber earplugs work, they block high frequencies, which sometimes muffles the sound. But [specialty earplugs](#) are designed to reduce loud music levels without muffling the sound. That said, for children, earmuffs are usually the easiest and safest choice.

Injury from loud sound results in premature aging of the ears. The ears of a 30-year-old with damage from loud [sound](#) may hear [more like the ears of a 50-year-old](#). But remember, it's largely preventable. Taking action today can help you protect and preserve your hearing for a lifetime.

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