Sounds surround us. We enjoy many of them—like music, birdsong, and conversations with friends. But loud or long-lasting noises—from motors, power tools, and even headphones—can permanently damage your hearing. Take steps to protect your ears from harmful noises.

Loud noise is one of the most common causes of hearing loss. An estimated 26 million Americans between the ages of 20 and 69 already have irreversible hearing loss caused by loud sounds. And up to 16% of teens have hearing loss that may have been caused by loud noise.

“Noise damage can begin at any age, and it tends to accumulate over time. That’s why avoiding excess noise is so critical,” says Dr. Gordon Hughes, a clinical trials director and ear, nose, and throat specialist at the National Institutes of Health (NIH). “Hearing loss caused by noise is completely preventable.”

Common Culprits

For adolescents, music players with headphones are a common source of noise exposure. “With adults it may be power tools, lawn mowers, snow blowers, and other sources of that type,” Hughes says. “Workplace noise—like farm machinery, construction, and noises associated with military service—may also cause problems.”

Noise-related hearing loss can arise from extremely loud bursts of sound, such as gunshots or explosions, which can rupture the eardrum or damage the bones in the middle ear. This kind of hearing loss can be immediate and permanent.
But most noise-related hearing problems develop slowly over time, with ongoing exposure to loud sounds. Loud noises can injure the delicate sensory cells—known as hair cells—in the inner ear. “These cells have little hair-like tufts on one side,” Hughes says.

Hair cells help to convert sound vibrations into electrical signals that travel along nerves from the ear to the brain. These cells allow us to detect sounds. But when hair cells are damaged and then destroyed by too much noise, they don’t grow back. So hearing is permanently harmed.

Sometimes loud noises can cause tinnitus—ringing in the ears that lasts anywhere from a brief period to a lifetime. Loud noises can also cause temporary hearing loss that goes away within hours or a couple of days. “But some research suggests that even though the symptoms disappear, there may be molecular or chemical abnormalities that build up and cause potential for long-term damage to hearing,” Hughes says.

It’s best to avoid loud noises when possible. But how loud is too loud?

Sound is measured in units called decibels (dB). Sounds less than 75 dB are unlikely to harm hearing. Normal conversation, for instance, measures about 60 dB. A typical hair blow dryer has an intensity of about 85 dB, but if they’re used for just brief periods, they’re unlikely to damage hearing.

However, long or repeated exposure to sounds at or above 85 dB can cause problems. The louder the sound, the quicker the damage.

“At maximum volume, an audio player with ear buds might produce 105 dB. There’s potential for noise damage to occur at barely 30 minutes of exposure,” Hughes says. A siren may be 120 dB, a rock concert 110 dB, a motorcycle 95 dB, and a lawn mower 90 dB. All these have the potential to harm hearing over time.

“Wear ear protection such as ear plugs if the sound can’t be avoided. Or just get away from the sound, or reduce it, like turning down the volume on an audio player,” Hughes says. Foam insert earplugs can keep some sound intensity from reaching the eardrum, as can protective earmuffs, available at hardware and sport stores. For better ear protection, talk with a hearing specialist about getting a custom-fitted ear mold.

Finally, don’t forget to protect the ears of children who are too young to protect their own. And get a hearing test if you think you or a loved one might have hearing loss.

It’s a Noisy Planet: Protect Your Hearing

Your ears can be your warning system. Noise is too loud when:

➤ You have to raise your voice to be understood by someone standing nearby.
➤ The noise hurts your ears.
➤ You’ve got a buzzing or ringing in your ears, even temporarily.
➤ You don’t hear as well as you normally do until several hours after you get away from the noise.

If you’re around noises at this level:

➤ Turn down the sound.
➤ Avoid the noise (walk away).
➤ Block the noise (wear earplugs or earmuffs).