

# Hearing Protection for Recreational Firearms Users

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With hunting season well underway, it's a good time for a reminder about protecting your hearing during this popular, but loud, recreational activity. Research shows gunfire to be one of the leading causes of noise-induced hearing loss and tinnitus (ringing in the ears).

At impulses in the range of 155 to 175 dB peak Sound Pressure Level, even a single shot can result in damage to the delicate nerve structures of the inner ear. Shooting ranges in both indoor and outdoor settings provide additional risks where bench-rest shooting, platforms, covers, or other solid surfaces can reflect and amplify the sound energy. Unfortunately, many enthusiasts report they seldom wear hearing protection when exposed to gunfire, especially when hunting. Even when shooters themselves understand the potential danger to their own ears, many don't realize that bystanders are also at risk. Recent efforts have been focused on protecting children who often begin hunting and target shooting at a very young age.

The bottom line: it's just good practice for everyone involved in gun sports to consistently wear well-fitted hearing protection when shooting. The National Institute for Occupational Safety and Health (NIOSH) recommends wearing both earplugs and earmuffs for best protection. A variety of hearing protectors is readily available through shooting ranges, sporting goods stores, and web-based vendors. And of course, annual hearing tests are a good way to confirm hearing protector effectiveness.

For more information about gunfire noise, check out these helpful resources:

- [Take Aim at Protecting Yourself](#), *NIOSH Science Blog*, May 18, 2009
- [Don't Let Gun Sports Backfire on You](#): Use Ear Protection and Hang on to Your Hearing, National Institute on Deafness and Other Communication Disorders/National Institutes of Health, 2006
- Flamme, et al. (2009). [Estimates of auditory risk from outdoor impulse noise II](#): civilian firearms, *Noise & Health*, 11: 231-242
- Murphy et al. (2013). [Bystander Impulse Noise Exposure from Small-Caliber Weapons](#): How Close is Too Close? *Update*, Council for Accreditation in Occupational Hearing Conservation, Vol. 25, Issue 1
- Stewart et al. (2014). [Shooting habits of youth recreational firearm users](#), *International Journal of Audiology*, 53:S26-S34