



HEARING LOSS AND LEISURE NOISE

The Issue

Some studies suggest that many teenagers and young adults have already experienced permanent hearing loss caused by exposure to excessive noise from a variety of leisure activities.

Background

How Sound Levels and Duration are linked to Hearing Loss

Scientists measure the levels of different sounds with a unit called the A-weighted decibel (dBA).

There is no known risk of hearing loss associated with sound levels below 70 dBA, no matter how long you are exposed to the sounds. However, as sound levels increase, the duration of daily exposure becomes an important risk factor for hearing loss.

You can use the following indicators to estimate whether the sound levels around you and the duration of your exposure pose a risk of a gradual, noise-induced hearing loss:

- If someone standing a metre away from you has to shout to be understood, the sound levels around you probably exceed 85 dBA. You face a significant risk of permanent hearing loss if you are exposed to these sound levels for eight hours or more per day.
- If someone standing 30 cm away has to shout to be understood, the levels probably exceed 95 dBA. This means a significant risk of permanent

hearing loss if you are exposed for about 45 minutes or more per day.

- If someone has to shout into your ear to be understood, the sound levels around you probably exceed 105 dBA. This poses a significant risk of permanent hearing loss if you are exposed for just five minutes per day.
- If after a loud sound has stopped, you experience a temporary hearing loss. For example, you may notice that other sounds seem muffled, quieter, or less clear.
- If after a loud sound has stopped, you experience tinnitus. This is a ringing, buzzing, roaring, or rushing sound in the ear, which does not have a source outside the ear.

The Findings

The following are some ranges of sound levels found to be associated with leisure activities:

- Power tools: 85 to 113 dBA
- Home and car audio: 84 to 108 dBA
- Music in dance bars: 90 to 110 dBA
- Personal stereo systems: 60 to 110 dBA
- Music in fitness classes: 89 to 96 dBA

All of these activities pose a potential risk of a gradual, noise-induced hearing loss, depending on the actual sound

level you are exposed to, and the duration of exposure. For instance, you could spend up to two and a half hours every day in a dance bar with music at 90 dBA without putting your hearing at significant risk, as long as you had no other exposure to hazardous sounds. However, if the sound level of the dance bar music is at 110 dBA, you would be at significant risk for permanent hearing loss after only a minute and 30 seconds per day.

Another important finding is that accidental exposure to an intense sound close to the ear, whether from a rifle, cap gun or firecracker, can cause immediate and severe hearing loss that may be permanent. If you are exposed to an intense sound like this, stay in a relatively quiet place for 24 hours to rest the affected ear(s). If your hearing hasn't recovered fully after a day, contact your doctor in case you need a test or examination. It is important to note that if you use firearms for hunting or target practice regularly, you are at increased risk for permanent hearing loss, whether immediate or gradual.

Minimizing Your Risks

Take the following steps to protect your hearing:

- Limit the amount of time you spend on leisure activities that are excessively noisy.
- Keep your car and home audio at enjoyable but safe levels.
- When you're at risk for noise-induced hearing loss, wear a hearing protection device

such as earplugs or earmuffs. The device should be as well fitted as possible. Consult an audiologist if you need assistance.

- If you experience temporary hearing loss or tinnitus after leisure or work activities, be sure to schedule quiet time following such activities to allow your ears to recover fully.
- Avoid buying children's toys that produce excessively high sound levels. Remember, children may hold toys closer to their ears than adults.

Talk to your doctor if you have concerns about your hearing, or if you experience any of the early signs of hearing loss, including:

- Difficulty when trying to follow a conversation when there are background sounds (at a social gathering, in a cafeteria, etc.)
- The perception that people mumble when they speak
- Tinnitus (as described above)

Finally, it's important to realize there is no way to know how sensitive your ears are to damage from sound, until the damage is done. Prevention is the only way to protect yourself against noise-induced hearing loss.

Health Canada's Role

Health Canada provides information and regulations to help prevent hearing loss from exposure to excessive noise at work, at home, or at play. An example of Health Canada's regulatory

action is the Hazardous Products Act, which states that no children's toy, as ordinarily used, should produce sound levels exceeding 100 dB.

To help prevent hearing loss, Health Canada has reviewed current scientific studies and has conducted measurements to assess the potential risks of leisure noise.

Need More Info?

The Consumer and Clinical Radiation Bureau,
Health Canada,
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Ottawa, Ontario K1A 1C1
Tel.: (613) 954-6699

It's Your Health: Personal Stereo Systems

<http://www.hc-sc.gc.ca/english/iyh/lifestyles/stereo.html>

Wise Ears Website

<http://www.nidcd.nih.gov/health/wise/index.htm>

Practice Safe Listening (The Hearing Foundation of Canada)

<http://www.thfc.ca/practice.html>