



Noise in the Workplace

Noise-induced hearing loss is the term for hearing damaged by excessive noise – above 85 decibels (dB), averaged over an eight-hour period.

Most of us take hearing for granted - when we go home at the end of a workday and when we get up in the morning we expect to hear well. When noise is too loud, however, it can damage the sensitive hair cells in your inner ear. As the number of damaged hair cells increases, your brain receives fewer impulses to interpret as sound. As you damage hair cells, you damage hearing.

People differ in their sensitivity to noise and there's no way to determine who is most at risk for hearing damage. Factors such as sound intensity, frequency, and exposure time, all play a role in determining whether noise is harmful or just annoying.

You should consider your hearing at risk if noise affects you in one of the following ways:

- Normal conversation is difficult; you must shout above the noise to make yourself heard.
- You have ringing in your ears for several hours after exposure to noise.
- You have difficulty hearing normal sounds for several hours after exposure to noise.

Before you can control workplace noise, you need to determine its source, who's affected by it, how the noise is reaching them (the noise path), and the noise levels (at the source and at the listeners). Special instruments - a **sound-level meter** and a **dosimeter** - record sound and exposure levels. You can contact Environmental Health and Radiation Safety (503 494-7795) to conduct a **sound survey** of your workplace. Once you understand a noise problem, you can make an informed decision about how to control it.

Critical noise-control tools include the following:

- **Exposure monitoring:** gives you information to determine if individual employees are exposed to hazardous noise levels. Special instruments are used to assess conditions.
- **Audiometric testing:** determines whether an employee's hearing is stable or getting worse over time. Employee Health performs and keeps records of these.
- **Engineering controls:** controls noise at its source so that it's no longer hazardous. These include reductions in noise produced at the source or altering its travel path.
- **Administrative controls:** controls noise by managing employee activities to reduce their exposures.
- **Hearing protectors:** Earmuffs and ear plugs; they reduce noise by decreasing the intensity of sound that reaches the eardrum. Make sure that you use the right tool for the job.

