



Helping Protect
People
at Work, at Home, for Life



Facts about Noise

Measuring Noise

Noise hazard depends on the **level** (sometimes called intensity) of the noise, its **duration**, and **how often** the exposure occurs. The point above which regular exposure to sounds becomes hazardous is a level of about 85 decibels (abbreviated dB, or sometimes dBA which is the value that more closely corresponds to human hearing). Noise is measured using a sound level meter.



You Don't Get "Used to Noise"

Noise does not have to be uncomfortably loud, or even painful, to be damaging. You may think your ears are "used to the noise," but what has probably happened is that your hearing has been temporarily dulled or that hearing loss has already begun.

A Rule of Thumb

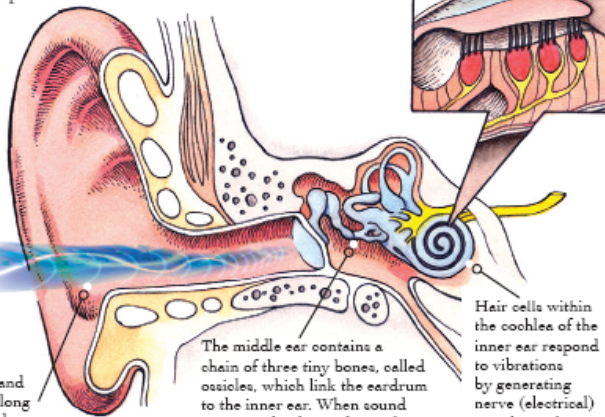
When you feel the need to shout in order to be heard three feet away, the noise levels are probably 85 dBA or more and hearing protectors are recommended.

How We Hear

Healthy inner-ear nerves (hair cells) are the key to good hearing. Although some die off naturally as you age, many more are killed early if your ears aren't protected from harmful noise.



The outer ear collects and funnels sound waves along the ear canal to the eardrum.



Using Your Ears to Assess Noise Risk

If, after the noise stops, you notice a ringing, buzzing, or whistling in your ears that wasn't there before, this is a warning indicator. Called **tinnitus**, this is like a "sunburn" of the nerve

cells of your inner ear, indicating that they have been irritated and overworked. Tinnitus is especially noticeable in a quiet place, such as when you are trying to go to sleep at night. If you don't protect your ears from noise, tinnitus can become a permanent, constant annoyance in your life. Apparent muffling or softening of sounds after noise exposure is a warning sign that your hearing is affected by a **temporary threshold shift**. Repeatedly exposing your ears to loud noise without protection can cause the shift to worsen and become permanent, resulting in untreatable damage to your hearing ability.

