

## Hearing Loss is Just the Tip of the Iceberg... Noise and its Far-Reaching Effects on Your Health

Noise can be defined as unwanted sound. Sound is the result of pressure changes in air caused by vibration or turbulence. The amplitude of these pressure changes is the sound level (expressed as decibels or dB) and the rate of speed at which the pressure changes occur is the frequency (expressed as cycles per second or Hertz). Because sound levels are logarithmic, a small increase in decibels can represent a large increase in sound energy. For example, an increase of 3dB represents a doubling of sound energy.

### Recent Studies on Non-Auditory Effects of Noise

- A University of Michigan study observed factory workers wearing blood pressure monitors on the job. With every 10-13 decibel increase in workplace noise, the worker's blood pressure increased by two points.
- A German study discovered that living in a noisy neighborhood--where traffic raised decibel levels above 60dB--tripled women's risk of heart attack and doubled men's risk.

### Low-Frequency Noise

Prolonged exposure to noise, including low-frequency noise, is known to cause many detrimental psychological and physiological effects including:

- Fatigue, anxiety and depression
- loss of concentration and productivity
- headaches, high blood pressure and hearing loss



Model PA4000 - Over-The-Head



Additionally, low-frequency noise is particularly detrimental to communication because it masks consonant sounds--the sounds that make speech intelligible. The Noisebuster ANR Safety Earmuff was specifically designed to reduce low-frequency noise from devices such as engines, blowers, motors, fans, vacuums, pumps and generators.

Some of the loudest environments include:

- |                      |                                |
|----------------------|--------------------------------|
| • Airfields          | • Highways                     |
| • Forestry           | • Ship Engine Rooms            |
| • Payloaders         | • Heavy Tractors               |
| • Diesel Locomotives | • Construction                 |
| • Forges             | • Assembly Lines               |
| • Factories          | • Data Centers/ Computer Rooms |

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