Wayne State University

FP&M Safety Talk - Hearing Conservation

Date:	Trainer:

Exposure to high levels of noise causes hearing loss and may cause other harmful health effects as well. The extent of damage depends primarily on the intensity of the noise and the duration of the exposure. Noise-induced hearing loss can be temporary or permanent. Temporary hearing loss, also called temporary threshold shift (that level of sound that a person can just barely hear), results from short-term exposures to noise, with normal hearing returning after a period of rest.

Generally, prolonged exposure to high noise levels over a period of time causes permanent damage. Therefore a person who regularly sustains a temporary loss or shift in hearing threshold will eventually suffer permanent hearing loss or noise induced permanent threshold shift (NIPTS). NIPTS occurs very gradually over time. In fact, for a long time the worker may not notice any change in hearing acuity until the hearing loss begins to interfere with everyday communication. By then, it is too late to do anything about the hearing loss that has occurred. You are ultimately responsible for protecting your own hearing.

Engineering or administrative measures, such as the following are always the first step in reducing worker exposure to noise:

- Set up noisy machinery in a separate area away from as many workers as possible.
- Place machinery on rubber mountings to reduce vibration.
- Use sound absorbing acoustical tiles and blankets on floors, walls, and ceilings.
- Arrange work schedules to cut down on the time each worker spends in a noisy area.

Many machines currently meet noise specifications because manufacturers have responded to the need to cut noise. Some equipment like saws and punch presses, however, can't be made to run any quieter, so proper hearing protection is a must. Some of the factors you should take into account when selecting the right hearing protection devices (HPDs), include:

- Noise hazard—how much noise will workers be dealing with? All hearing protectors carry a label indicating the Noise Reduction Rating (NRR); a higher number on the label means more effectiveness.
- Fit and comfort—protective devices must fit properly and be comfortable enough to wear as long as they are needed.

HPDs filter out the loud noise. This means they do not block out sound completely, but they reduce the amount of sound reaching the delicate parts of the ear. By doing so, they offer some protection so that hearing will not get overloaded by the surrounding noises (glare) that interfere with speech and machinery sounds. Don't use homemade HPDs or cotton; they don't work. If your facility has noise exposure equaling of exceeding an average of 85 decibels (dB) or more over an eight-hour day, WSU is required to provide you with audiometric (hearing) testing.

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