

Occupational Noise Exposure from Personal Stereos

The National Institute for Occupational Safety and Health (NIOSH) has estimated that as many as 30 million American workers are exposed to hazardous levels of noise (≥ 85 dBA). Given this unacceptable exposure, NIOSH has identified hearing loss as one of the 21 priority areas for research and maintains that work-related hearing loss continues to be a critical workplace safety and health issue. Noise-induced hearing loss is one of the most common occupational diseases and the second most self-reported occupational illness/injury. Machinery, equipment, and work practices are typically the sources of excessive noise in the workplace. However, workers may be unknowingly contributing to their excessive noise doses in the workplace by using personal stereos such as the iPod and other MP3 players, especially if used to “drown out” other occupational noise sources. In a 1987 Occupational Health and Safety Administration (OSHA) Standard Interpretation Letter, Dr. John Barry wrote, “... listening to a Walkman unit at more than 50% to 75% rated output will generate sound levels in excess of the OSHA PEL (permissible exposure limit) creating a threat to the wearer's hearing, and this may also produce a safety hazard by masking environmental sounds that need to be heard.” Based on personal stereo use studies in non-work environments, personal stereo use alone has been shown to cause overexposure to noise. The use of personal stereos in the workplace has not been investigated as a contributor to worker noise dose but may be a significant source of noise exposure and contribute to the insidious effects of noise-induced hearing loss given the increased popularity and portability of personal stereo devices.

In accordance with NIOSH's National Occupational Research Agenda, we propose to determine if workers are exposing themselves to hazardous levels of noise in the workplace by using personal stereos. This pilot study will provide the necessary data to determine if a prospective epidemiological study, that includes the measure of hearing loss over time, is warranted to ascertain if personal stereo use in the workplace is a contributing factor to occupational noise-induced hearing loss.