

# Hearing Loss Prevention Program PPOP

## What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Hearing Loss Prevention Program focuses on reducing occupational hearing loss through

- research on evaluating and controlling hazardous exposures,
- developing noise controls, ensuring effective hearing protector use,
- performing occupational hearing loss surveillance,
- and investigating damage risk criteria for impulse noise.

The Program works with partners in industry, labor, trade associations, professional organizations, and academia.

## What do we do?

- Develop and evaluate engineering and administrative controls to reduce worker exposure to hazardous noise levels.
- Conduct surveillance of occupational hearing loss to identify workers at increased risk and monitor progress in prevention activities.
- Promote evidence-based best practices for work-related hearing loss prevention by publishing NIOSH communication products, including guidelines and criteria documents.
- Advance hearing protector and fit-testing technology. This ensures workers are protected when engineering or administrative controls have not yet been implemented or do not reduce noise to safe levels.
- Identify, assess, characterize, and reduce risk factors associated with occupational hearing loss. This includes ototoxic chemicals that cause hearing loss due to poisoning the sensory cells of the inner ear.

## What have we accomplished?

- Conducted in-person and virtual workshops about impulse noise, hearing loss prevention, and communication for occupational and safety organizations (National Hearing Conservation Association meeting (NHCA), American Industrial Hygiene Association, American Conference of Governmental Industrial Hygienists).
- Co-authored two U.S. Army Technical Report [Pervasiveness of early middle ear muscle contractions](#) and [Middle ear muscle contractions in response to non-acoustic stimuli](#). The general recommendation is that middle ear muscle contractions should not be relied upon as an integral part of damage risk criteria for high-level impulse noise.
- Published estimates of the prevalence of hearing loss in the [Mining and Oil & Gas Extraction Sectors](#) and in the [Services Sector](#).
- Spearheaded the [International Year of Sound Wikipedia Campaign](#) to expand information on sound and hearing, reaching more than **131 million readers**.
- Helped to revise the [acoustic standard for measurement of speech intelligibility over communication systems \(ANSI/ASA S3.2\)](#).
- Participated in the National Safety Council's [Safety+Health magazine podcast](#) on hearing loss prevention and the safety implications of diversity, equity, and inclusion.

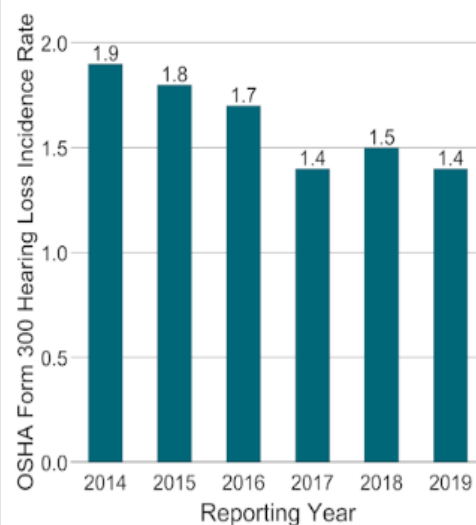
## What's next?

- Provide best practice recommendations for integrating fit testing into hearing loss prevention programs on a new NIOSH topic web page for [Hearing Protector Fit Testing](#).
- Provide a series of webinars for the Council for Accreditation in Occupational Hearing Conservation and the NHCA on hearing protector fit testing, age-adjustment of hearing screening, and impulse noise.
- Contribute to the [International Ototoxicity Management Group](#), which aims to address gaps in the management of individuals who experience hearing loss, tinnitus, and/or balance difficulties following medical or occupational exposures to ototoxicants.
- Revise acoustic standards for measuring impulse noise performance of hearing protection devices (ANSI S12.42) and [Estimating Noise Induced Hearing Loss due to Occupational Noise Exposure \(ISO 1999\)](#).

## At-A-Glance

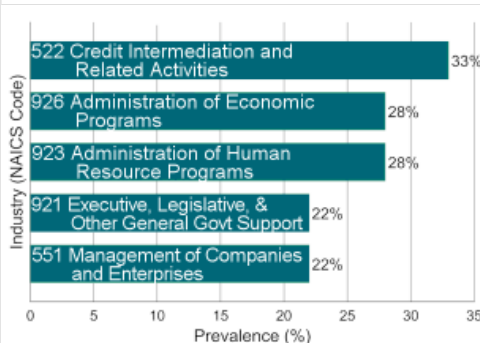
The Hearing Loss Prevention Program provides leadership to reduce the prevalence of occupational hearing loss. This snapshot shows recent accomplishments and upcoming projects.

Incidence rate hearing loss per 10,000 for full-time worker reported to BLS by year



Source: Bureau of Labor Statistics

Five Highest Industry Prevalences of Hearing Loss Among Noise-Exposed Workers in the Services Sector, 3-Digit NAICS Level, 2006-2015



Source: Adapted from Sekhon et al. *Int J Audiol* (2020) 10.1080/14992027.2020.1780485



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