



## Hearing Loss

VA scientists, engineers and clinicians are studying ways to prevent, diagnose, and treat hearing loss, addressing a wide range of technological, medical, rehabilitative, and social issues. VA researchers are working to develop and implement a new diagnostic test for tinnitus, a potentially debilitating condition that commonly accompanies hearing loss and involves ringing, whistling or other noises in the ears.

### Examples of VA research advances

- **VA partners with Army on study of blast effects**—VA researchers at the National Center for Rehabilitative Auditory Research (NCRAR) in Portland, Oregon, will be collaborating with audiologists at Walter Reed Army Medical Center to study central auditory processing—how the brain interprets incoming sounds—in soldiers who have been exposed to blasts. The researchers will use a battery of behavioral and neurophysiologic tests to better understand how blasts affect this aspect of hearing, and work to identify appropriate interventions.
- **Detection of noise-induced hearing loss**—Researchers at the Loma Linda VA are developing new, more sensitive methods to detect changes in the cochlea that occur before the onset of permanent noise-induced hearing loss. The methods are designed to identify problems that would not show up in standard audiometric tests, and may allow military healthcare providers to more effectively prevent hearing loss among troops exposed to high levels of noise.
- **Sensory Loss**— One of the most common conditions in returning OIF/OEF veterans due to blast exposure is tinnitus (ringing noise in the ear). VA researchers are developing a diagnostic test to determine the presence of this condition, which is currently done by self-report. VA investigators are planning a study in collaboration with DoD to determine whether there are certain central auditory processing disorders that are often associated with exposure to high-explosive blasts, whether there is spontaneous recovery of central auditory function with time after blast exposure, how much recovery may be expected, and how rapidly it occurs.

### Facts About Hearing Loss

Hearing loss affects some 28 million Americans, including more than half of those over age 65. Among the possible causes are: allergies, infections, drugs, exposure to noise, genetics, or simply age. Conductive hearing loss can often be reversed through surgery or medication. Sensorineural hearing loss is permanent, but can often be helped through the use of hearing aids. Noise-induced hearing loss is among the most common disabilities affecting veterans.



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