

Project Title: The Effect of Military Noise Exposure on Tinnitus and its Outcomes in Recently-Discharged Veterans Seeking VA Health Care

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Abstract

Objectives

The primary objective of this research is to conduct an epidemiologic study and obtain initial data to address the etiology, prevalence, and effects of tinnitus and hearing loss among newly-discharged military Veterans who are seeking VA services. A secondary objective is to validate self-report of military noise exposure against the Defense Occupational and Environmental Health Readiness System—Hearing Conservation component (DOEHRS-HC) database. The data resulting from the investigation will provide the foundation for a longitudinal study to better address measures needed to assess noise exposure resulting in tinnitus and hearing loss in Veterans, which will ultimately inform future practice guidelines.

Plan

This is a prospective study evaluating newly-discharged Veterans (i.e., within 2 years of military discharge) seeking healthcare services from the Portland VA Medical Center or from surrounding VA community-based outpatient clinics (CBOCs).

Methods

Participants will complete audiometric testing, testing of speech recognition in noise, immittance testing, otoacoustic emissions, and tinnitus evaluations (if applicable). They also will complete several subjective questionnaires regarding the impact of tinnitus and/or hearing on their health and functioning, as well as a global quality-of-life measure. In addition, they will complete questionnaires that will further describe life-experience factors that could influence the presence and impact of tinnitus and hearing loss on their lives, including a medical history, hearing history, tinnitus history, and noise-exposure history, and a screening for anxiety, depression, sleep disorders, and post-traumatic stress disorder.

Findings to Date

None

Relevance to VA's Mission

This study will investigate the impact of military noise exposure that results in tinnitus and hearing loss, the two most prevalent service-connected disabilities for Veterans. By conducting this epidemiologic study, we will collect cross-sectional data allowing us to investigate the relationships between military noise exposure and these debilitating health problems. This study will provide the foundation for a longitudinal database, which will provide a better understanding of the causes of tinnitus and other hearing-related problems among military Veterans. Additionally, this study responds to the congressionally mandated Institute of Medicine report called, "Noise and Military Service: Implications for Hearing Loss and Tinnitus" that recommends research be conducted to document Veterans' military noise exposures immediately following discharge from service and perform follow-up evaluations in order to determine the effects of military versus post-military noise exposures on early- and delayed-onset tinnitus and hearing loss.