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## HEARING-RELATED HEALTH AMONG ADULT AMERICAN INDIANS FROM ONE NORTHWEST TRIBE: A RISK FACTOR SURVEY

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**Introduction:** Hearing loss and tinnitus appear common in most populations, although few data have addressed hearing loss and tinnitus among tribal people. Information on hearing loss and tinnitus among tribal members may assist in developing public health interventions.

**Methods:** This cross-sectional study addressed hearing loss and tinnitus among 217 adults in a Pacific Northwest tribe. We conducted logistic regression analyses to assess the relationship among various risk factors with two outcome variables-- hearing loss and tinnitus. Frequency measures were conducted for difficulty hearing certain sounds and hearing aid use.

**Results:** Among all participants, 18% reported hearing loss (males: 24% vs. females: 13%). After age adjustment, significant noise exposure was a risk factor for hearing loss (Odds Ratio (OR): 8.30, 95% Confidence Interval (CI): 1.84, 37.52). The overall prevalence of tinnitus was 33% (comparable between males and females). The strongest risk factors for tinnitus after adjusting for age were significant noise exposure (OR: 2.24, 95% CI: 1.28, 6.73) and otitis media (OR: 2.82, CI: 1.26, 6.30). A larger percentage of women compared to men reported difficulty hearing certain sounds. Only 8% of study participants reported hearing aid use.

**Conclusions:** Increasing age and significant noise exposure were strongly associated with hearing loss in this tribe. For tinnitus, our data indicated that significant noise exposure and a history of otitis media were the strongest risk factors for this condition, even after age adjustment. We recommend that tribal members limit noise exposures and wear hearing protection in risky environments.

### Biography

Becker has spent his entire career as an epidemiologist focused on Indian health issues. He is trained in internal medicine, epidemiology, and anthropology and currently serves as the Interim Associate Dean for Research at Oregon Health & Science University. He works at the Indian Health Board as a Medical Epidemiologist on diverse grants. Although he has a variety of research interests, the common theme in his grant and publication history centers on minority health disparities. As principal investigator on the CDC PRC grant, he has been involved in ocular epidemiologic studies and prevention of hearing loss in tribal communities.

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