

# Early Detection of Noise-Induced Hearing Loss

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**Aims/Goals:** Current clinical diagnostics are not sensitive to identifying early consequences of noise exposure in humans with normal audiograms who complain of tinnitus and difficulty hearing in background noise. This longitudinal study aims to develop hearing tests that can detect hearing damage sooner than current methodology.

**Methods:** The primary metrics include standard and ultra-high frequency audiometry, speech understanding in noise, electrocochleography, middle ear reflex responses, and self-report measures of tinnitus and noise exposure.

**Future Directions:** Currently in the data collection phase, the tests developed as a result of this study could help prevent further damage in patients with noise exposure, raise awareness, and increase motivation for use of hearing protection.

