

Hearing Loss Assessment and Treatment

Dr. Connor Slavich, Au.D.
September 21, 2023



Speaker Disclosure

Indiana Hearing Specialists offer the sale of hearing aids manufactured by Oticon, Phonak, Starkey and Resound. Please note all relevant financial relationships have been mitigated.

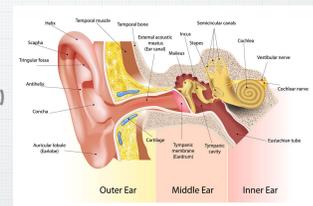
Overview

- * Types of hearing loss
- * Hearing loss in the geriatric population
- * Signs and comorbidities of hearing loss.
- * Cognitive concerns with hearing loss

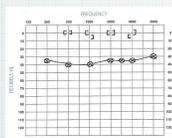


Types of Hearing Loss

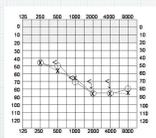
- * Four types of hearing loss
- * Conductive Hearing Loss (CHL)
- * Sensorineural Hearing Loss (SNHL)
- * Mixed Hearing Loss (MHL)
- * Auditory Neuropathy Spectrum Disorder (ANS \bar{D})



Audiogram Examples



Conductive



Sensorineural



Mixed

Hearing Loss in the Geriatric Population

- * Presbycusis - age - related hearing loss
 - * 1 in 3 people 65 to 74 years of age experience hearing loss, with over half experiencing hearing loss 75 years of age and older (U.S. Department of Health and Human Services)
 - * Starts as a high frequency hearing loss and progresses
 - * Permanent damage to the inner ear structures
- * Causes of Presbycusis:
 - * Age
 - * Noise Exposure
 - * Genetics

Hearing Loss and Comorbidities

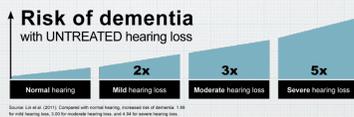
- * From the American Speech - Language - Hearing Association, hearing loss is the third most common chronic condition for older adults.
- * Health conditions that may be risk factors for hearing loss:
 - * Diabetes
 - * High Blood Pressure
 - * Heart Disease
 - * Sleep Apnea
 - * Kidney Disease
 - * Some medications (chemotherapy drugs)

Hearing Loss and Comorbidities cont.

- * Patients with hearing loss have consequences of:
 - * Depression
 - * Anxiety
 - * Cognitive decline
 - * Dementia
 - * Falls
 - * Unintentional injuries

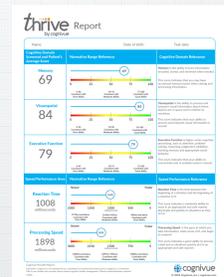
Dementia and Hearing Loss

- * Increased research suggests a correlation between hearing loss and cognitive decline
- * Hearing loss increases atrophy in the brain
- * The more severe of hearing loss, the increased risk of poorer cognitive function



Cognivue Testing

- * Complete an assessment with Cognivue
- * Evaluates three cognitive domains:
 - * Memory, Visuospatial, and Executive Function
- * Two speed performance domains:
 - * Reaction time and processing speed
- * Results give us a baseline of cognitive ability, while showing areas that may be of a concern.
- * Complete these assessment yearly to monitor cognitive status.



Signs and Symptoms of Hearing Loss

- * Tinnitus, or ringing in the ears
- * Difficulty hearing other people clearly and misunderstanding, especially when background noise is present.
- * Asking people to repeat themselves
- * Hearing the television, radio, or talking on the phone.
- * Not engaging in social activities, choosing to stay isolated.



Tinnitus

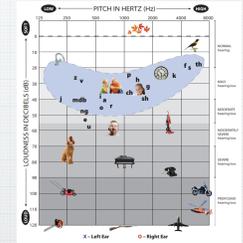
- * Defined as a sound or noise that someone hears in one or both ears.
- * Typically caused by an underlying condition, such as hearing loss, ear injury, or a problem with the circulatory system.
- * Impacts every person differently. For some, it may be periodic. For others, tinnitus may be constant and bothersome.
- * Red Flags for Tinnitus:
 - * Pulsating tinnitus
 - * Unilateral tinnitus
 - * Impacting every day life / being able to sleep

Ways to Treat Tinnitus

- * Monitoring diet:
 - * Reduction of sodium intake
 - * Limiting caffeine, alcohol, and nicotine use
- * Adjusting lifestyle:
 - * Quality of sleep and sleep schedule
 - * Stress
- * Properly fit hearing aids and / or masking devices
- * Different counselling tools and potential Cognitive Behavioral Therapy (CBT) if needed

Hearing Loss Severity Example

- * CDC Hearing Loss Simulator:
 - * <http://www.cdc.gov/niosh-mining/hlsimweb>



Citations:

- * U.S. Department of Health and Human Services. (n.d.). Age-related hearing loss (presbycusis) - causes and treatment. National Institute of Deafness and Other Communication Disorders. Retrieved April 19, 2023, from <https://www.nidcd.nih.gov/health/age-related-hearing-loss#:~:text=It%20is%20one%20of%20the,than%2075%20have%20difficulty%20hearing.>
- * The Hidden Risks of Hearing Loss. (2022, November 1). The Hidden Risks of Hearing Loss | Johns Hopkins Medicine. <https://www.hopkinsmedicine.org/health/wellness-and-prevention/the-hidden-risks-of-hearing-loss>

Contact Information:
Dr. Connor Slavich, Au.D.
Phone: (317) 671-8000
Email: drslavich@indianahs.com