

# Imbalance and Hearing Loss Associated With Cognitive Decline

Dr Scott Sanders, MD, PhD  
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.

## Inner Ear Function & Cognition

## Vestibular Function and Cognition

- Poor vestibular function in older adults was associated with worse performance on Mini Mental Status

- Bigelow et al, J American Geriatrics Society, 2015

- Vestibular impairment was two-fold more common in people with Alzheimer's compared to cognitively normal age matched controls

- Harun et al, Otol Neurotol, 2016

## Hearing and Cognition

- Hearing loss is linked with a decline in cognitive function  
- ACTA Otorhin Italica. A review...association between hearing loss and cognitive decline...2016
- Even mild hearing loss can lead to cognitive decline  
- JAMA Otolaryngology. Association of subclinical hearing loss with cognitive performance. 2020
- Hearing loss is linked to Alzheimer's disease  
- J Neurology. Clinician-judged hearing impairment and associations with neuropathologic burden. 2021
- Hearing aids may slow or delay the progression of cognitive decline  
- Lancet. Dementia prevention, intervention, and care. 2020  
- J Amer Geriatric Soc. Longitudinal relationship between hearing aid use and cognitive function... 2021

## Hearing and Cognition

- Association between hearing aid use and all-cause and cause-specific dementia: an analysis of the UK biobank cohort
- Up to 8% of dementia cases could potentially be prevented if those with hearing loss wore hearing aids
- Those with hearing loss who did NOT wear hearing aids had a **42% higher risk of dementia** compared with those with hearing loss who DID wear hearing aids
- "Hearing aid use is associated with a risk of dementia of a similar level to that of people without hearing loss"

- [www.thelancet.com/public-health](http://www.thelancet.com/public-health) Vol 8, May 2023

# Cognitive Screening Tools

- Cognivue is a cognitive screening tool
- Developed over 15 years at NIH
- Validated by other tests of cognition
  - positive correlation and greater test-retest reliability compared with MoCA
  - scores in agreement and superior test-retest reliability compared with SLUMS
- Assesses memory, visuospatial and executive function, reaction time and processing speed
- Test takes 10 minutes
- Available to our patients 55 and over

