

Hearing loss and cognition

Hearing – a complex ability¹



- **Hearing:** passive function – perception of sound
- **Listening:** process of hearing with intention and attention
- **Comprehending:** unidirectional reception of information, meaning, and intent
- **Communicating:** bidirectional transfer of information, meaning, or intent



Good hearing enables...²

- staying active
- staying involved
- participating in social life
- managing daily life
- preserving one's cognitive and functional level

The ears and the brain as equal partners



While the ears pick up auditory signals, the brain gives meaning to the puzzle of sounds.

Hearing loss means...³

- it gets harder for the brain to put the overall picture together.
- it becomes more difficult to focus on the speaker.
- not only reduced sounds but also a disconnection to our surroundings.

Aging and hearing loss²:

- **Age 65+:** hearing loss prevalence of 35%
- **Age 75+:** hearing loss prevalence of 50-80%



► The effect of untreated hearing loss on social withdrawal and social isolation should not be underestimated²

Association of hearing loss and cognitive health

Hearing loss is the largest of the potentially modifiable risk factors for age-related dementia⁴

- Early onset of hearing loss in midlife and high prevalence in old age²
- Social isolation and loneliness due to hearing loss can have important implications for the psychosocial and cognitive health²
- Hearing loss and dementia are both strongly related to age (age 85+: dementia prevalence of 25-35%)⁵

► Timely identification and management of hearing loss is strongly recommended²



1 The ear and the brain are equal partners:¹

Oral communication is a bidirectional process: bottom-up (auditory perception) & top-down (cognitive processes). The ears pick up the auditory signals, the brain gives meaning to the puzzle of sounds.

2 Untreated age-related hearing loss is associated with cognitive decline:⁶

The risk of dementia increases with the degree of hearing loss. Hearing loss results in reduced communication capability, drives social isolation, and affects cognitive abilities.

► **Getting hearing instruments early on is strongly recommended:** Corrected hearing loss fosters participation in conversations & social engagement, reduces the cognitive load of processing degraded sound, and provides increased brain stimulation.