

Hearing Loss and Dementia

03-30-2011

Researchers are calling for “critically needed” “rehabilitative strategies” for confronting a newly discovered association between hearing loss and the progression of **dementia**. (1)

A Johns Hopkins study of more 639 people from 1990 through 2008 found that participants with moderate to severe **hearing loss** were more likely to develop **dementia** or **Alzheimer’s Disease**. Research showed that the more severe the hearing loss, the stronger the association with cognitive decline.

The study, conducted by Frank R. Lin, MD, PhD and colleagues, was reported in the February issue of JAMA’s Archives of Neurology. The authors stated, “A number of mechanisms may be theoretically implicated in the observed association between **hearing loss and incident dementia**. Dementia may be over-diagnosed in individuals with hearing loss, or those with cognitive impairment may be over-diagnosed with hearing loss. The two conditions may share an underlying neuropathologic process.”

The authors continued, “Finally, hearing loss may be causally related to dementia, possibly through exhaustion of cognitive reserve, social isolation, environmental deafferentation [elimination of sensory nerve fibers], or a combination of these pathways.”

While the Johns Hopkins study could prove no association between the participants’ self-reported use of hearing instruments and a reduction in risk, the use of hearing aids has been shown in a National Council on Aging study and others to alleviate isolation (2), a known effect of untreated **hearing loss** and a risk factor for **dementia**. Isolation was documented as a particularly devastating consequence of overlooking hearing loss problems in the landmark NCOA study. (3) The Johns Hopkins background paper reported, “Candidate risk factors for dementia include low involvement in leisure activities and social interactions, sedentary state, diabetes mellitus, and hypertension, and another potential risk factor is **hearing loss**.”

Other studies have explored the link between mental acuity and hearing. A Brandeis University study reported in Science Daily linked **hearing impairment** to reduced cognitive power. Struggling to hear, it was theorized, may consume so much brain energy that “spoken language skills” are negatively impacted. The Brandeis study indicated that “even when older adults could hear words well enough to repeat them, their ability to memorize and remember the words was poorer when compared with other individuals of the same age who had good hearing.” (4)

The Johns Hopkins researchers advocate for further study and express regret that they know of no interventions in existence today that might stave off the development of dementia in an anticipated 100 million people worldwide by 2050.

References:

(1) Study: *Hearing Loss Associated with Development of Dementia*

(2) *Quantifying the Obvious: The Impact of Hearing Instruments on Quality of Life*, By Sergei Kochkin, PhD, and Carole M. Rogin, MA, *The Hearing Review*, January, 2000

(3) *The Consequences of Untreated Hearing Loss in Older Persons*, *The National Council on Aging*

(4) *Brandeis Study: Poor Hearing May Cause Poor Memory*, *Science Daily*.