



the connection between hearing loss and dementia

It feels like a double whammy. As we age, we are likely to experience some degree of hearing loss. And now, we are learning that hearing loss may be a factor in the risk of developing cognitive issues, even dementia. This is significant when we think about the fact that there are approximately 76 million baby boomers living in the U.S. today ranging in age from 52 – 72. As this large swath of the adult population ages and, we can assume, develops increasing degrees of hearing loss, does this also mean there could be a monumental rise in the incidence of dementia? According to findings by researchers from the Rush Institute of Health and Aging, we already know that as of 2010, 4.7 million people in the U.S. 65 and older had Alzheimer's disease, the most common form of dementia. By 2016, that number grew to 5.4 million; and it is estimated that as many as 13.8 million Americans will have Alzheimer's disease by 2050.

The silver lining of this dark cloud is that understanding the risk hearing loss may pose for cognitive decline, allows us to take proactive steps to help mediate the problem. The first step is a hearing evaluation when hearing loss is suspected. The second, if there is a diagnosis of hearing impairment, is a referral to a hearing specialist so an appropriate hearing aid can be prescribed based on the severity and type of hearing loss, and one that is a good fit for the individual's lifestyle and abilities.

Well-Being spoke with Netrali Patel, M.D., Clinical Director of the MIND Center (Memory →



Impairment and Neurodegenerative Dementia) at University of Mississippi Medical Center and Grace Sturdivant, Au.D., CCC-A, FAAA, Vice Chief of Audiology in the UMMC Department of Otolaryngology.

“Though we can’t say hearing loss causes cognitive decline, there is evidence that brain changes occur with sensory deprivation,” Dr. Grace Sturdivant.

There is still much we don’t know about the connection between hearing loss and cognitive decline, but there are several fascinating theories. One focuses on the importance of sensory stimulation for continued brain health. Brain imaging studies show that older adults with hearing loss have less gray matter in the part of the brain that processes sound. It appears that brain cells may shrink when they don’t receive enough stimulation. Another school of thought involves what is called “cognitive load.” When someone is hearing impaired they expend an inordinate amount of energy straining to hear. This may use a person’s

brain resources that otherwise would be available for remembering what one hears. Another piece of the puzzle of hearing loss and cognitive decline has to do with the isolation one experiences when they are less able to converse with others, enjoy social gatherings and participate fully in their lives.

According to Dr. Patel, when evaluating patients for dementia, physicians often miss the opportunity to check for hearing loss and the role it may play in a patient’s cognitive decline. The same is true of many primary care physicians who see patients for annual checkups or for ongoing care for other health conditions. Asking about problems with hearing loss and referring patients to a hearing specialist if hearing loss is suspected, is key to these patients getting the treatment they need to lessen the affect hearing loss may have on their cognitive decline.

“While we do not currently offer a full hearing test as a part of a medical evaluation at the MIND Center, we do check hearing as part of the physical exam, with what is called a whispered voice test,” says Patel. “For this test, the physician stands approximately 3 feet behind the patient





and whispers a series of sounds. If the patient is not able to repeat the sounds, that is an indication of hearing impairment and the patient is referred to an audiologist.”

Dr. Sturdivant, who is an audiologist, stresses the importance of intervention for mild to profound hearing loss.

“Even with early high pitch hearing loss, getting treatment in the form of a hearing aid is crucial so auditory stimulation of the brain can be restored, Sturdivant explains. “Hearing aids are also a tool to help people stay engaged and maintain social contact with others. Some people are averse to the idea of wearing hearing aids, but the new generation of aids are discreet, easy to use, and some have rechargeable options, eliminating the difficulty of replacing batteries.”

According to Sturdivant all sound, even sounds around the house, such as a refrigerator motor kicking on or a clock chiming are worth hearing and provide stimulation to the brain when no one else is around. She encourages patients to wear their hearing aids even when they are not in a social setting.

A patient’s hearing loss can also impair a physician’s ability to accurately evaluate their degree of cognitive decline. If a patient’s hearing loss is treated with a hearing aid, it is less difficult for a physician to distinguish between what is actual memory loss or symptoms of dementia and what is confusion as the result of not hearing well. Ironically, many screening tools for cognition are auditory in nature.

While the U.S. Preventive Services Task Force does not recommend regular auditory screening for people 50 years of age or older who do not have

symptoms of hearing loss, anyone of any age who suspects they are experiencing hearing loss should be evaluated and treated.

For all of us that tend to shake off hearing loss as a normal part of aging and put off doing anything about it, knowing there is a very good chance not treating our hearing problems could increase our risk of cognitive decline or even dementia should be the wake up call we need to get serious about being tested.



Neirall Patel, M.D., Internal and Geriatric Medicine, is the Clinical Director of the MIND Center at UMMC. She earned her Doctor of Medicine degree from Ross University School of Medicine, and completed her residency in family medicine at St Vincent’s Medical Center. After her residency training, Dr. Patel completed a fellowship in geriatrics at St Luke’s University Health Network where she gained extensive skills in dementia evaluations/testing and comprehensive geriatric assessments. Dr. Patel is board certified in Family Medicine and Geriatrics.

Grace Sturdivant, AuD, CCC-A, FAAA, is an Assistant Professor and Vice Chief of Audiology in the Department of Otolaryngology at University of Mississippi Medical Center. She received a Bachelor of Science in Communicative Disorders from the University of Mississippi, and earned her Doctorate of Audiology degree from Vanderbilt University Medical Center. Dr. Sturdivant specializes in the diagnosis and rehabilitation of adults with hearing loss.