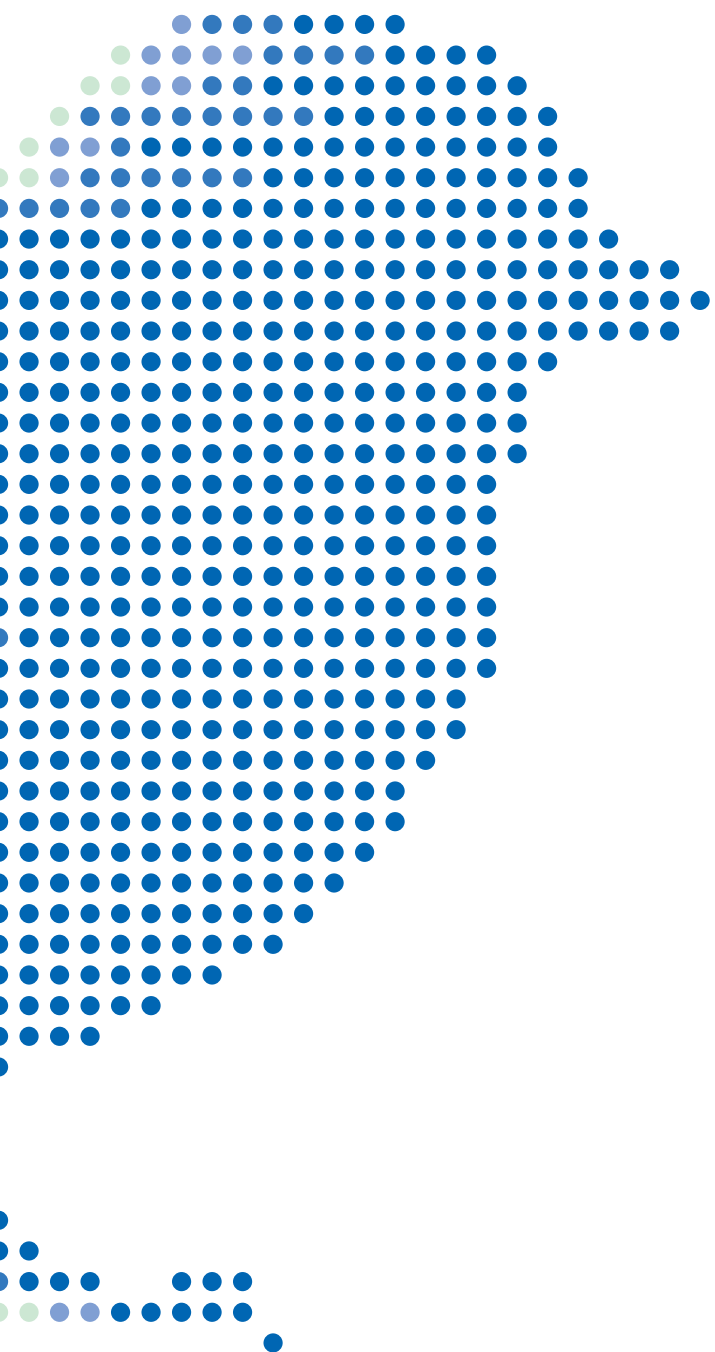




# **Addressing Hearing Loss is Key to Your Brain's Wellness**



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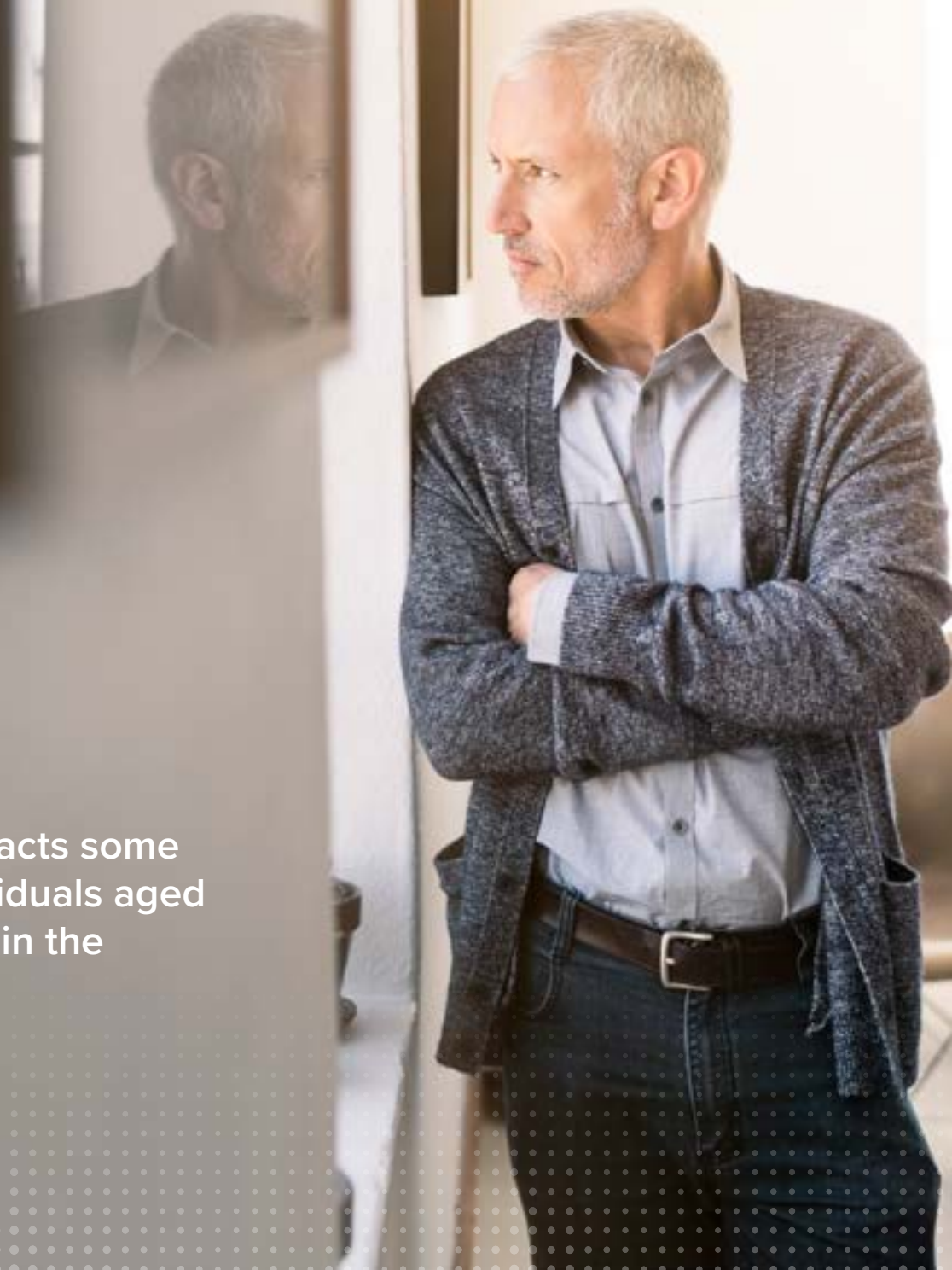
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# High rates of hearing loss among seniors

●●● Hearing loss impacts some 60.7 million individuals aged 12 years or older in the United States. An analysis of data from the U.S. National Health and Nutrition Examination Survey found that hearing loss was more prevalent in the older population; 75% of individuals aged 70 years or older have hearing loss, making it the 3<sup>rd</sup> most common health condition in older adults.<sup>i</sup> Moreover, hearing loss impacts an individual beyond a loss of hearing, with implications for cognitive health and mental health care.

Several neurological and mental-health-related conditions have been linked to untreated hearing loss, including reduced mental acuity and depression.

Research consistently demonstrates the considerable effects that hearing loss has on social, psychological and cognitive performance.<sup>ii</sup> That's why it's vital that individuals even with mild hearing loss seek immediate treatment, as part of their cognitive and overall wellness.



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# Why early treatment of hearing loss?

●●● Simply put, the earlier one detects and addresses hearing loss, the better the outcome for the individual experiencing the loss. According to the NIH,<sup>iii</sup> patients who ignore hearing problems can expect them to worsen over time, exposing them to a myriad of other health problems, some of which can cause permanent damage.

Since hearing loss is an invisible illness, and many of its negative effects are manifested in the long term, it isn't always prioritized as a health issue. Early treatment is vital to help avoid the onset of more serious related health challenges.

# Hearing loss and the brain

●●● Hearing loss has long indicated conditions that impact more than just the ears. Losing the ability to hear can lead to other issues with significant brain-related functions. Looking into recent research, it is apparent that untreated hearing loss can lead to widespread challenges to brain wellness and mental health.



# Alzheimer's disease linked to hearing loss

●●● As recently as 2017, researchers from the University of Wisconsin demonstrated links between Alzheimer's disease and hearing loss. The findings presented at the 2017 Alzheimer's Association International Conference in London, in fact, stated that hearing loss could be an early indicator of Alzheimer's.<sup>iv</sup> Participants in the study showed that if they had mild hearing loss at the beginning of a four-year period, they were more than four times more likely to have mild cognitive impairment after four years than those with normal hearing.

The Wisconsin study found links suggesting that treating hearing loss could be utilized as an intervention for Alzheimer's patients.<sup>v</sup> Future research could be useful to shed light on possible causal relationships between hearing loss and Alzheimer's disease.

“ **The Wisconsin study found... that treating hearing loss could be utilized as an intervention for Alzheimer's patients.**

# Hearing wellness and mental acuity

●● Diminished hearing is also linked to a loss of mental acuity. Reduction in aural stimulation over time leads to a loss of the brain's ability to process sound and recognize speech.

Research from Brandeis University and the University of Pennsylvania explains that the brain is the key component for auditory cognition and recognizing speech. Their 2012 study states, "There is ample evidence linking hearing loss to changes in cognitive ability, particularly when listeners are faced with the task of understanding speech that is acoustically or linguistically challenging."<sup>vi</sup>

Dr. Frank Lin of Johns Hopkins University has numerous publications focusing on hearing loss. He cites brain scans as one tool used to document how hearing loss may contribute to a faster rate of atrophy in the brain. According to his research,

(cont'd) Dr. Lin and his colleagues discovered that, "mild hearing loss doubled the risk. Moderate loss tripled risk, and people with a severe hearing impairment were five times more likely to affect mental health."<sup>vii</sup>

Even in young people, scientists are discovering links between mild hearing loss and changes to how people comprehend language. In younger adults, the brain uses the auditory cortex to understand

sound and language. As part of the natural course of aging, the brain changes after age 50, when it uses the frontal cortex to decipher language. However, in research at The Ohio State

**“ Even in young people, scientists are discovering links between mild hearing loss and changes to how people comprehend language.**

University, MRIs demonstrated that younger adults show premature use of the frontal cortex in deciphering language when they have mild hearing loss.<sup>viii</sup> This could be due to damage from a lifetime of using earbuds to hear music at dangerously high levels, or attending loud concerts.



“ Untreated hearing loss can lead to isolation from friends and family, and ultimately lead to depression.

# Depression & hearing loss

●●● Because conversations become increasingly taxing when an individual struggles to hear, untreated hearing loss can result in a decline in socialization. In turn, this can lead to isolation from friends and family, and ultimately lead to depression.

“Hearing loss was more significantly linked to depression in women and individuals between ages 18 and 69.

A study published in JAMA Otolaryngology-Head & Neck Surgery showed that an increase in hearing loss had a correlation with increased levels of depression. The strongest associations between hearing loss and depression were found in people with

moderate hearing loss. Hearing loss was more significantly linked to depression in women and individuals between ages 18 and 69.<sup>ix</sup>

(cont'd) Using hearing aids can improve symptoms of depression, according to the National Council on Aging (NCOA).<sup>x</sup> Their research found that older people with untreated hearing loss had higher rates of mental challenges than those who wear hearing aids.

According to the NCOA study, people with untreated hearing loss reported increased levels of:

- Sadness and depression
- Worry and anxiety
- Paranoia
- Decreased social activity
- Emotional turmoil
- Insecurity

When seniors in the study used hearing aids, however, they noted important improvements to more than their hearing. They reported improved relationships with families, self-esteem, better mental health and feeling greater independence and security.<sup>xi</sup>

# Barriers to treatment

●● While a solution may seem straightforward (to treat hearing loss), there are barriers to success. An alarming number of people in the U.S. with hearing loss have delayed seeking treatment for

it. According to the American Speech-Language-Hearing Association (ASHA), “Only 20% of those individuals who might

benefit from treatment actually seek help. Most tend to delay treatment until they cannot communicate even in the best of listening situations.”<sup>xii</sup> ASHA’s estimates indicate that, on average, people with hearing loss wait 10 years to wear hearing aids.<sup>ii</sup>

“ Only 20% of those individuals who might benefit from treatment actually seek help.”<sup>xii</sup>



(cont'd) Sometimes hearing loss is compared to vision loss, as both are impairments to vital senses that often may be corrected using either glasses or hearing aids. There are documented concerns regarding the cost of access to treatment with these devices, especially hearing aids. In addition, wearing glasses does not carry a negative stigma<sup>xiv</sup> that some people associate with hearing aids.

A study conducted by Gagné, Southall and Jennings (2011) discussed the fact that even mild stigma can delay treatment for individuals with hearing loss. "In order to live well with hearing loss, one must recognize and accept hearing loss. Specifically, many people must overcome the misplaced shame and poor self-esteem that they may experience."<sup>xv</sup>

Educating and encouraging family members on how to be supportive when dealing with hearing loss helps. When individuals receive support and education regarding hearing loss and communication strategies with loved ones, it can lead to improved quality of life and overall well-being.<sup>xvi</sup>



“ Treating hearing loss can provide improvements to overall well-being.

# Understanding treatment options

●● As previously stated, treating hearing loss can offer improvements to overall well-being. It helps to keep the brain engaged through stimulation and allows for better communication, leading to improved mental health.

Therefore, it's important to understand the options for treating hearing loss.

HearingLife has offices across the United States where professionals can assess hearing and determine if hearing aids could serve as the appropriate treatment option for you or a loved one.

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