## Why is it better to treat hearing loss sooner rather than later?

Identifying and addressing hearing loss early brings many benefits. From enhancing your quality of life, to helping protect against several health consequences linked to unaddressed hearing loss, the case for early treatment is strong.

Perhaps the most compelling reason to never put off a hearing test and treatment, however is simply this: We "hear" with our brain, not with our ears. When we have a hearing loss, the connections in the brain that respond to sound become reorganized.

Fortunately, for many people, hearing aids can provide the sound stimulation needed for the brain to restore the normal organization of connections to its "sound center" so it can more readily react to the sounds that it had been missing and cognitively process them.

In fact, the vast majority of people with hearing loss can benefit from hearing aids. And dramatic new technological advances have completely transformed hearing aids in recent years, making them more effective, comfortable, and easy to use. So the sooner you identify hearing loss and start using professionally fitted hearing aids if recommended by a hearing healthcare professional, the sooner you'll begin to reap the rewards of better hearing.

## The benefits of early treatment on quality of life and health

For many years, experts have known the positive impact that addressing hearing loss has on quality of life. Research shows that many people with hearing loss who use hearing aids see an improvement in their ability to hear in many settings; and many see an improvement in their relationships at home and at work, in their social lives, and in their ability to communicate effectively in most situations. Many even say they feel better about themselves and life overall

More recently, however, researchers are discovering a significant link between hearing loss and other health issues, such as cognition, dementia, depression, falling, hospitalization, mortality, and overall physical and mental health.

To get a fuller sense of why it's so important to treat hearing loss sooner rather than later, just consider the latest research on hearing loss and these seven health issues:

1. **Cognition**: According to Brandeis University Professor of Neuroscience, Dr. Arthur Wingfield, who has been studying cognitive aging and the relationship between memory and hearing acuity, unaddressed hearing loss not only affects the listener's ability to "hear" the sound accurately, but it also affects higher-level cognitive functioning. Specifically, it interferes with the listener's ability to accurately process the auditory information and make sense of it. For instance, in one study, Wingfield and his co-investigators found that older adults with mild-to-moderate hearing loss performed poorer on cognitive tests than those of the same age who had good hearing. According to Wingfield, "The sharpness of an individual's hearing has cascading consequences for various aspects of cognitive function. Even if you have just a mild hearing loss that is not being treated, cognitive load increases significantly. You have to put in so much effort just to perceive and understand what is being said that you divert resources away from storing what you have heard into your memory."



- 2. **Risk of dementia**: A study by researchers at Johns Hopkins and the National Institute on Aging found that seniors with hearing loss are significantly more likely to develop dementia over time than those who retain their hearing. Another study, by hearing experts at Johns Hopkins, found that older adults with hearing loss are more likely to develop problems thinking and remembering than older adults whose hearing is normal.
- 3. **Brain shrinkage**: Results of a study by researchers from Johns Hopkins and the National Institute on Aging found that although the brain becomes smaller with age, the shrinkage seems to be fast-tracked in older adults with hearing loss. Another study, conducted by Brandeis University Professor of Neuroscience, Dr. Arthur Wingfield, along with colleagues at the University of Pennsylvania and Washington University in St. Louis, has used MRI to look at the effect that hearing loss has on both brain activity and structure. Their study found that people with poorer hearing had less gray matter in the auditory cortex, a region of the brain that is necessary to support speech comprehension. Wingfield has suggested the possibility that the participants' hearing loss had a causal role. He and his co-investigators hypothesize that when the sensory stimulation is reduced due to hearing loss, corresponding areas of the brain reorganize their activity as a result.
- 4. **Risk of falling**: A Johns Hopkins study showed that people in middle age (40-69) with even just mild hearing loss were nearly three times more likely to have a history of falling. The intensive listening effort demanded by unaddressed hearing loss may take cognitive resources away from what is needed for balance and gait, experts have suggested.
- 5. **Increased hospitalizations**: A Johns Hopkins study found that older adults with hearing loss were 32 percent more likely to have been admitted to a hospital than their peers with normal hearing. The study also found that older adults with hearing loss were 36 percent more likely to have prolonged stretches of illness or injury (lasting more than 10 days).
- 6. **Mortality**: One National Institutes of Health-supported study of older people even found that hearing loss is tied to greater risk of dying for older men from any cause and particularly from cardiovascular causes. The same study found that men and women who used hearing aids, although they were older and had more severe hearing loss, had significantly lower mortality risk compared with hearing impaired men and women who did not use hearing aids.
- 7. **Depression**: Several studies have found a link between depression and hearing loss. A Johns Hopkins study found that older adults with hearing loss were 57 percent more likely to have deep episodes of stress, depression or bad mood than their peers with normal hearing. Another study showed that hearing loss is associated with an increased risk of depression in adults of all ages, but is most pronounced in 18 to 69 year olds. Another study, conducted in Italy, looked at working adults—35 to 55 years of age—with untreated mild to moderate age-related hearing loss and found that they were more prone to depression, anxiety, and interpersonal sensitivity than those with no hearing problems.

