Secret Ear™ Hearing Health

POCKET GUIDE



At Starkey, we believe that to hear better, is to live better.

Contents

Hearing and Wellness Overview
Types of Hearing Loss 8
Causes of Hearing Loss10
Risk Factors12
How Hearing Loss Affects Your Brain 14

Better health and wellness *start with you*

Achieving better hearing takes more than technology – it's a partnership



To live better. To be healthy and happy. It's what we all strive for.

Your hearing health contributes to your overall well-being and quality of life.



Better hearing health and wellness are possible



Hearing loss

in America[®]

lin 3 people over the age of 60 have hearing loss

1 in 14 Generation XERS already have hearing loss ស្ត្រីភ្នំពុំសុំពីសុំតំសុំតំសុំតំ Baby boomers have hearing loss

> 1in5 Teenagers have some type of hearing loss



Hearing loss is the **third most common physical condition in older Americans,** after hypertension and arthritis?

90-95% of people

with hearing loss can be treated with hearing aids.

Types of hearing loss



Sensory/Neural hearing loss (SNHL)

SNHL occurs when there is damage to the inner ear (cochlea), or to the nerve pathways between the inner ear and the brain.

This is the most common type of permanent hearing loss.

Most of the time, SNHL cannot be medically or surgically corrected.



The earlier you detect a hearing loss, the better the chance you have of effectively treating your difficulty⁴.



Conductive hearing loss

Conductive hearing loss occurs when sound is not conducted efficiently through the outer ear canal, to the eardrum and to the tiny bones (ossicles) of the middle ear. Conductive hearing loss is often medically or surgically treatable.



If you get your eyes tested annually, and your teeth cleaned biannually, why not test your hearing?

Causes of hearing loss

A combination of factors typically contribute to hearing loss

1 in 3 people, 65 years and older, live with disabling hearing loss⁵.



Presbycusis - Age Related

- Result of aging process or extended exposure to environmental noise factors throughout a lifetime.
- > Permanent change in inner ear.

Sociocusis - Noise Induced

- > Damage to hair cells and cochlea.
- > Occurs suddenly or gradually.
- > Approximately 26 million Americans between the ages of 20 and 69 have high-frequency hearing loss due to exposure to loud sounds or noise at work or in leisure activities⁶.

Congenital - Genetic

 Results from a family history of hearing loss or predisposition.

Ototoxicity - Drug Related

> There are 200+ known ototoxic (toxic to the ears) prescription and over-the-counter medications on the market today?

This list includes:

- Aspirin
- Some anticancer drugs
- Quinine
- Some anesthetics
- Certain antibiotics

Risk Factors



Smoking

Current smokers have a **70 percent higher risk** of having hearing loss than nonsmokers⁸.



Heart Health

People with **low-frequency hearing loss** are considered at risk for cardiovascular events¹⁰.



Hypertension

There is a significant association between high blood pressure and untreated hearing loss. Hypertension can be an **accelerating factor of hearing loss** in older adults¹?



Diabetes

Hearing loss is **twice as common** in people with diabetes as their peers without?



Did you know there is a link between osteoporosis and hearing loss?

Osteoporosis can adversely effect the three tiny bones in the middle ear, which can lead to hearing loss!

How hearing loss affects your brain

Untreated hearing loss is a health and quality of life issue.

Several studies link untreated hearing loss to negative effects on the human brain, particularly as people age.



Memory and hearing loss

- Adults 50 years and older with untreated hearing loss are more likely to **develop** problems thinking and remembering than adults with normal hearing¹³.
- Adults 75 years and older with untreated hearing loss experience a 30 to 40 percent faster decline in cognitive abilities compared to peers without hearing loss¹³



Dementia and hearing loss

- Seniors with untreated hearing loss are significantly more likely to develop dementia over time than those who retain their hearing¹⁴.
- Adults with mild hearing loss are **two times** more likely to develop dementia.
- Adults with moderate hearing loss are **three times** more likely to develop dementia.
- Adults with severe hearing loss are five times more likely to develop dementia¹⁵.



Mental health and hearing loss

- Adults 50 years and older with untreated hearing loss were found to be less likely to participate in organized social activities than peers who wore hearing aids¹⁶
- Adults 50 and older with untreated hearing loss are more likely to report depression, anxiety and paranoia than peers who wore hearing aids¹?



Tinnitus and hearing loss

- Tinnitus is the number one military service disability¹⁸.
- The most common causes of tinnitus are: noise exposure, aging, head injury and medication side effects¹?
- Tinnitus affects up to 45 million Americans¹⁹



Income and hearing loss

 Adults with hearing loss who wear hearing aids have a lower unemployment rate than peers with hearing loss who do not wear hearing aids²⁰.



Falling and hearing loss

• People with mild hearing loss (25 decibels) are **three times more likely** to have a history of falling²!

Sources:

- 1 Better Hearing Institute. (2004). Prevalence of Hearing Loss. Retrieved from: http://www.betterhearing.org/ hearingpedia/prevalence-hearing-loss
- 2 National Academy on an Aging Society. [1999]. Challenges for the 21st Century: Chronic and Disabling Conditions. Retrieved from: http://www.agingsociety.org/agingsociety/pdf/chronic.pdf
- 3 Better Hearing Institute. [n.d.]. Hearing Loss Treatment. Retrieved from: http://www.betterhearing.org/ hearingpedia/hearing-loss-treatment
- 4 Johns Hopkins Medicine. [2014]. Hearing Loss Linked to Accelerated Brain Tissue Loss (News Release). Retrieved from: http://www.hopkinsmedicine.org/news/media/releases hearing_loss_linked_to_ accelerated_prain_tissue_loss_
- 5 World Health Organization. (2013). Millions of people in the world have hearing loss that can be treated or prevented. Retrieved from: http://www.who.int/pbd/deafness/news/Millionslivewithhearingloss.pdf
- 6 National Institute on Deafness and Other Communication Disorders. [2014, March]. Noise-Induced Hearing Loss. Retrieved from: http://www.nidcd.nih.gov/health/hearing/pages/noise.aspx
- 7 Cone, B., Dorn, P., Konrad-Martin, D., Lister, J., Ortiz, C., & Schairer, K. (n.d.). Ototxic Medications (Medication Effects). Retrieved from: http://www.asha.org/public/hearing/Ototoxic-Medications/
- 8 Cruickshanks, K., Klein, R., Wiley, T., Nondahl, D. M., & Tweed, T. S. (1998). Cigarette smoking and hearing loss: the epidemiology of hearing loss study. Retrieved from: http://www.ncbi.nlm.nih.gov/pubmed/9624024
- 9 American Diabetes Association. [2013]. Diabetes and Hearing Loss. Retrieved from: http://www.diabetes. org/living-with-diabetes/treatment-and-care/seniors/diabetes-and-hearing-loss.html
- 10 Friedland, D. R., Cederberg, C., & Tarima, S. (2009), Audiometic pattern as a predictor of cardiovascular status: Development of a model to rassessment of risk. The Laryngoscope, 119:4733-486. Retrieved from: http://onlinelibrary.wiley.com/doi/10.1002/lary.20130/Jabstract
- 11 Babich, M., Hoffmeister, D. & Doughty, A. (2009). Osteoporosis and Conductive Hearing Loss_ A Novel Model of Clinical Correlation. PHILICA.COM Article number 148. Retrieved from: http://philica.com/ display_article.php?article_id=148
- 12 Agarwal, S., Mishra, A., Jagade, M., Kasbekar, V. & Nagle, S. K. (2013). Effects of Hypertension on Hearing. Indian J Otolaryngol Head Neck Surg. 65[Suppl 3]: 614–618. Retrieved from: http://www.ncbi.nlm.nih.gov/ pmc/articles/PMC3889397/www.ncbi.nlm.nih.gov/pmc/articles/PMC3889397
- 13 Lin, F. R., Yaffe, K., Xia, J., Xue, Q., Harris, T.B., Purchase-Helzner, E., ... Simonsick, E.M. (2013). Hearing Loss and Cognitive Decline in Older Adults. JAMA Internal Medicine, 173(4), 293-299. doi:10.1001/ jamainternmed.2013.1868
- 14 Lin, F. R., Metter, E. J., O'Brien, R. J., Resnick, S. M., Zonderman, A. B., & Ferrucci, L. (2011). Hearing loss and incident dementia. JAMA Neurology, 68(2), 214-220. doi:10.1001/archneurol.2010.362.
- 15 Johns Hopkins Medicine. (2011). Hearing Loss and Dementia Linked in Study. Retrieved from: http://www. hopkinsmedicine.org/news/media/releases/hearing_loss_and_dementia_linked_in_study
- 16 The National Council on the Aging. (1999). Untreated hearing loss linked to depression, social isolation in seniors. Audiology Today, 11 (4).
- 17 Reinemer, M., & Hood, J. (1999). Untreated Hearing Loss Linked to Depression, Social Isolation in Seniors. Audiology Today, 11(4). Retrieved from: http://www.audiology.org/publications-resources/documentlibrary/untredt-hearing-loss-linked-depression-social-isolation
- 18 U.S. Department of Health & Human Services, National Institutes of Health, National Institute of Deafness and Other Communication Disorders. (2015). Tinnitus. National Institute on Deafness and Other Communication Disorders. Retrieved from: http://www.indica.nih.gov/health/hearing/pages/tinnitus.aspx
- 19 American Tinnitus Association. (n. d.). Understanding the Facts. Retrieved from: https://www.ata.org/ understanding-facts/causes
- 20 Kochkin, S. (2010). The efficacy of hearing aids in achieving compensation equity in the workplace. Retrieved from: http://old.betterhearing.org/pdfs/hearing_aids_and_employment.pdf
- 21 Johns Hopkins Medicine. (2012). Hearing Loss Linked to Three-Fold Risk of Falling. Retrieved from: http:// www.hopkinsmedicine.org/news/media/releases/hearing_loss_linked_to_three_fold_risk_of_falling

It's important to take an empowered, proactive approach to health during every stage of your life – **let it begin with your hearing health.** Take time to learn about hearing loss causes and prevention so you can discuss them with your hearing care provider.







www.Starkey.com



© 2016 Starkey. All Rights Reserved. 81706-000 3/16 MISC3636-02-EE-ST