

WELCOME TO YOUR BEST HEARING

Congratulations! By downloading this booklet, you are taking the first step towards helping yourself (or a loved one) attain your best hearing. If you are experiencing some degree of hearing difficulty — as do 40 million Americans — you likely have many questions about the variety of options and solutions for treatment.

Advanced Audiology understands it can be very confusing for someone first addressing signs of hearing loss to know where to start in determining if you need treatment and, if hearing aid technology is recommended, how much to spend.

The purpose of this booklet is to help answer many of the commonly asked questions from individuals with symptoms of hearing loss, such as:

- How can I tell if I truly have a hearing loss?
- When is the right time to purchase hearing aid technology?
- How much should I spend on hearing aid technology, if recommended?
- What is the right type of hearing aid for me?

After reading this booklet, our hope is that you or your loved one will feel comfortable and confident to <u>seek out our practice and come in for an appointment</u> to receive a hearing evaluation.



CAUSES OF HEARING LOSS

There are actually many different reasons for hearing difficulties. The causes can go beyond aging and excessive noise to include birth defects, hereditary factors, injuries to the ear or head, infections and ototoxic reactions to medicines or treatments. With so many different causes, it is no surprise that millions of Americans suffer from some degree of hearing loss due to one or several factors.



SYMPTOMS OF HEARING LOSS

While hearing loss is known as the "invisible impairment", there are many noticeable symptoms that warrant attention from a Hearing Healthcare Professional. These symptoms are most commonly:

- Complaints of muffled hearing
- Reduced ability to distinguish certain words in speech, i.e. "sat", "fat" and "hat"
- Need for greater volume when listening to radio or TV
- Difficulty hearing or understanding in places with noise, such as restaurants, ball games, family gatherings or parties

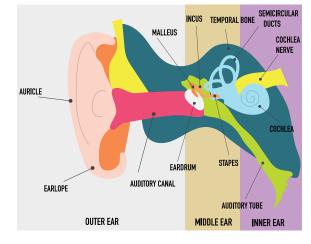
It is important to realize that once you can recognize the symptoms of hearing loss, it is time to seek help.





HOW CAN I TELL IF I TRULY HAVE **HEARING LOSS**?

Before we look at the causes and treatment of hearing loss, it is important to understand the anatomy of the ear and how we hear. As you see in the image at right, there are three parts to the ear: the **outer** ear, middle ear and inner ear. Each of these parts has a critical role in capturing and processing sounds.



The outer ear gathers sound and sends it to the ear drum. The ear drum vibrates and

sends the sound into the middle ear. In the middle ear, the three smallest bones of the body prepare the sound and present it to the cochlea in the inner ear. The inner ear converts the sound to an impulse that is sent through the cochlea nerve to the brain.

TYPES OF HEARING LOSS

There are three basic types of hearing loss: conductive, sensorineural and mixed hearing loss. The first type, conductive hearing loss, is caused by a blockage in the outer or middle ear. This blockage usually results in sounds being softer and can often be treated medically.

The most common type of hearing loss is sensorineural hearing loss. This type of hearing loss is a result of damage to the inner ear. This damage may be caused by excessive noise damage or medications. The damage to the inner ear reduces



the amount of sound that is received and sent to the brain.

The last type of hearing loss is **mixed hearing loss**, which, as the name describes, is any combination of conductive and sensorineural hearing loss.



COPING MECHANISMS USED FOR HEARING LOSS

It is very common for individuals who are beginning to experience hearing loss to not reach out for help. The "coping mechanisms" used to overcome hearing loss typically include behaviors such as lip-reading or piecing together parts of conversations to gather rough context. Additionally, individuals may cup a hand behind their ear(s), sit or stand on a certain side of someone in conversation to hear out of the ear with better hearing, or choose to be seated in quiet parts of restaurants. In the



latter stages of hearing loss, individuals will often find the use of these mechanisms to be too strenuous to attempt as they no longer provide help.

EFFECTS OF UNTREATED HEARING LOSS

Individuals with a prolonged hearing loss who choose not to take action and delay care, can bring about greater impact to their physical, mental and social well-being. New research continuously shows links between the effects of untreated hearing loss and accelerating conditions such as Alzheimer's disease, depression and deprived brain function. Yet these effects can be highly avoidable if a hearing loss is treated early on. In the following sections, we will look at the impact prolonged, untreated hearing loss can have to nurture or stimulate the development of the following conditions:

- Hearing loss and reduced brain function
- Hearing loss and Alzheimer's disease
- Hearing loss and depression



HEARING LOSS AND BRAIN FUNCTION

The term "auditory deprivation" refers to depriving the brain of sound stimulation. The term describes the effects of untreated hearing loss on the ability of the brain to understand speech and other sounds. While the ear picks up and transmits the sounds around us, it is the brain that processes the signals and gives them meaning.

With hearing loss, the presentation of sound to the brain is decreased. As the brain receives less sound, it "forgets" what to do with the sound. Studies published by the Veterans Affairs (VA) in the early 1990s showed that individuals fit with only one hearing aid had a decreased ability to understand speech in the ear without the hearing instrument.

HEARING LOSS AND **ALZHEIMER'S DEVELOPMENT**

As mentioned above, prolonged hearing loss can ultimately lead to reduced abilities and brain function, which may stimulate conditions such as Alzheimer's and dementia. A study conducted at the University of Washington's Department of Medicine of 100 cases of Alzheimer's patients found that 83% had a hearing loss. Once fit with hearing aids, 33% were classified with less severe dementia.

According to the Fischer Center for Alzheimer's Research, many of the symptoms of Alzheimer's can be indirectly caused by hearing loss. In fact, the Michigan chapter of Self-Help for Hard of Hearing advocates for a required hearing evaluation prior to an Alzheimer's diagnosis to determine the impact and overlap of hearing loss.

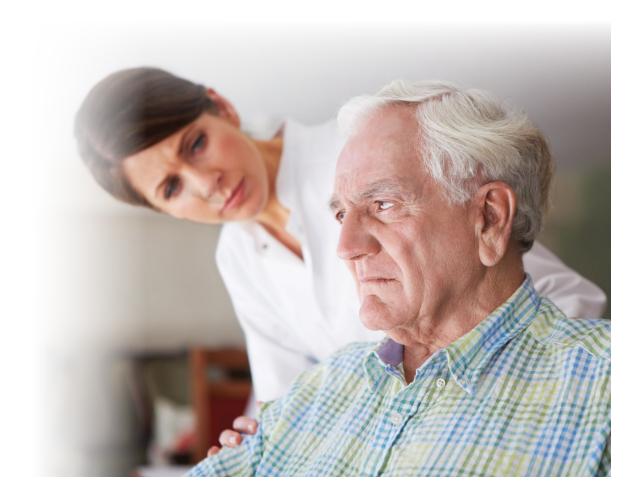


HEARING LOSS AND **DEPRESSION**

In 1999, the National Council on Aging (NCOA) published a unique, large-scale study on the impact of untreated hearing loss. The study found that individuals with hearing loss who did not use hearing aids were almost **twice as likely to experience depression** as those who were treating their hearing loss. Usually, this is the result of social withdrawal and isolation because of the difficulties hearing loss creates for an individual over time.

In fact, a Newspoll telephone survey published in the *Sydney Morning Herald* supported anecdotal evidence that almost 20% of individuals with untreated hearing loss exhibited at least three key symptoms of depression.

The NCOA study supports that using hearing instruments reduces the likelihood of depression, sadness, anxiety or paranoia. When mild depression is exhibited — characterized by withdrawal, mood changes and short temper — a hearing screening is recommended as part of an evaluation.





WHEN SHOULD I CONSIDER **HEARING AID TECHNOLOGY**?

Early diagnosis of hearing loss will enable both the patient and Hearing Healthcare Professional to discuss a wider variety of treatment options. They may vary from assistive listening devices for use in the home to hearing aid technology. Understandably, very few people hope for a hearing aid recommendation. But, the use of hearing aid technology is a proactive



step towards reconnecting oneself with the conversations and sounds that he/she may be struggling to enjoy.

When is the right time for an individual to purchase hearing aids? There is no "one-size-fits-all" answer. Each person must evaluate for him/herself the importance of better hearing in their lives. When overcoming the struggles created by untreated hearing loss becomes a priority, it is the right time to consider hearing aid technology.

WHICH HEARING AID TECHNOLOGY IS RIGHT FOR ME?

When hearing aid technology is recommended, the goal is not to get each patient into the best hearing aid technology available, but rather to get them in the best hearing aid technology for his/her specific needs. Advanced Audiology will suggest a particular size and style of hearing aid

- with the right technology and features
- as the best solution for each patient, based on the hearing evaluation results.









WHAT FEATURES SHOULD I LOOK FOR IN HEARING AIDS?

It is important to look for the right additional components and features to meet your lifestyle needs. These may include background noise management, telephone compatibility and water-resistance.

Background noise management is a sophisticated feature that may use something called "directional microphones" — allowing for more comfortable listening experiences in social settings such as loud restaurants, meeting rooms or gatherings.





Telephone compatibility includes actual components and/or settings to allow the hearing aids and phone to work together. In fact, with wireless streaming technologies, smartphones can now be synced to your hearing aids directly. Telephone use when wearing hearing aid technology is now hassle-free.

Water-resistant casing on nearly all new hearing aids is ideal for the active wearer or those who live in humid climates. This special coating on the exterior of hearing aids makes it resistant to moisture, sweat and oils, such as sunscreen.

These advanced features are additional reasons why today's technology makes using hearing aids an everyday action.





HOW MUCH SHOULD I SPEND

ON HEARING AID TECHNOLOGY?

The evaluation of hearing aid technology is best viewed as an investment in better hearing and reconnecting to loved ones and everyday listening situations — not a consumer electronic purchase. Understandably, individuals sometimes have financial concerns that prevent them from exploring this option. The decision on how much to spend depends on the level of your personal desire for better hearing through selected technology and features.



Not everyone needs expensive hearing aids. Hearing Healthcare Professionals can show you the range in cost — from basic to premium technology. Only with a hearing evaluation can the Professional know the optimal technology for your individual hearing loss. The basis for their recommendation goes beyond the results of the examination and considers your daily listening needs and lifestyle.

While hearing aids are small and relatively simple to use, they actually feature highly sophisticated and intuitive technology that allows them to be personalized to each

patient's unique communication needs. As manufacturers spend more and more on research and development, patients continually reap the benefits of technology advancements for even more comfortable and effortless hearing. Despite all this progress, the price range for hearing instruments has remained relatively constant over the years — allowing you to find the right hearing aid technology and get the best value for your budget.





TAKE THE **NEXT STEP!**

Nothing will get better until you take action. As you can see from the contents of this booklet, today's Hearing Healthcare Professionals and hearing aid technology are well suited to meet the individual needs of every patient. And a hearing evaluation is a simple — but important — first step.



To get started, give us a call at 402.758.5327 or contact through our website http://www.hearingomaha.com/contact.html.

If you have any questions you would like to email, please send them to: info@hearingomaha.com

We wish you the best in your next step toward gaining your best hearing.



