I Have a Hearing Loss: what do I do and where do I go for help?

The course outline

- Hearing loss is common in the elderly. Advertisements for help are often misleading and confusing.
- Who should I go for professional advice, what questions should I ask, and what services should I expect?
- "What is a realistic expectation for improved hearing?"
- What hearing aid should I purchase –
- Or better what hearing aid scams should I avoid??

This discussion will offer common sense information about hearing loss, hearing aids and their cost, and reasonable expectations for achieving help with hearing aids.
Let’s start with where should I go for professional advice, what questions should I ask, and what services should I expect?

- Licensed Audiologists who work in
  - Private practice who test and dispense/sell hearing aids
  - Audiologists who work in hospitals or clinics
    - UC Health, University Hospitals
    - The Christ Hospital
    - Cincinnati Hearing Center
    - Good Samaritan Hospital
    - Jewish Hospital
    - Others in North Ky, Hamilton and Dayton, Ohio

- Licensed Hearing Aid Dealers
  - In private practice
  - Who work in “big box stores”

- Practitioners who use “best practices” such as speech-in-noise testing, hearing aid test box verification, and Real Ear Measurement
What happened to cause the hearing loss – and can it be fixed?

The answer is both simple and complex – the short answer is we get older and parts wear out!
We age – we wear out body parts.

- An age-related hearing loss typically arises from changes in the inner ear.

- Age-related hearing loss occurs when the tiny hair cells in the inner ear are damaged or die.

- Contrary to many of our other cells in the body, the hair cells in the inner ear do not re-grow or regenerate.
Hearing loss is common, especially among the elderly.

- Approximately 15% of American adults (37.5 million) aged 18 and over report some trouble hearing.
- Men are almost twice as likely as women to have hearing loss.
- Nearly 25% of those aged 65 to 74 and 50% of those who are 75 and older have disabling hearing loss.
What does the typical hearing loss look like in older persons?
What does the typical hearing loss sound like to the individual

• Loss of loudness and inability to hear certain speech sounds.

• Loss of high frequencies of speech: Vowels are low frequency and consonants are high frequency.
What are some consequences of having a hearing loss?

- Evidence is mounting that untreated hearing loss is a significant national health concern and serious health problems, including:
  - social isolation
  - depression,
  - decline in memory and concentration,
  - dementia.

*Pssst - a secret – the good news is you can avoid these problems*
How Do I Know If I Need a Hearing Aid?

According to the Cleveland Clinic, signs of hearing loss include:

• Difficulty following conversations
• Needing people to repeat themselves, especially in noisy places
• Constantly requiring a high TV volume
• Feeling isolated
• Difficulty understanding movies or performances
If you have a hearing loss you can benefit from amplification, i.e. hearing aids!

- Hearing loss in senior citizens and hearing aids
  - Among adults who could benefit from hearing aids, only 30 percent have ever used them!

- Why is that?
  - Poor fit
  - Uncomfortable
  - Self conscious
  - Even among the enlightened, hearing aids still carry a stigma. “Men think, It’s a sign of weakness, and women think, It’s showing my age.”
How to Find the Hearing Aid That’s Right for You

• Some things your audiologist will consider when recommending hearing aids include:
  • Where you have most trouble hearing -
  • Lifestyle – do you hang out with small or large groups?
  • Cosmetic preferences -
  • Your manual dexterity, which is your skill with using your hands – are you arthritic
  • Technological preferences or skills
  • Financial concerns like insurance, trial periods, warranties, and return policies
By the way, a recommendation from UC audiologist Stephanie Lockhart

“I recommend that someone come along with you to that visit,” Lockhart says. “A lot of information will be shared and decisions made. It’s a great idea to have a significant other, family member, or close friend there to be an extra pair of ears.”
Hearing aids – what’s available?
And what is the difference?

Remember, today's hearing aids are not your grandfather’s hearing aid!
Let's explore what is available.
Hearing aids – what’s available? And what is the difference?

- Types of hearing aids on the market
  - Behind the ear
    - Open Fit Hearing Aids
  - Canal hearing aid
  - Completely in the canal
  - Some specialty hearing aids
    - Bone conduction
    - Cochlear Implants
Current hearing aids have many features:

- Are programmed to match your hearing loss amount and configuration
- Have automatic volume control to protect from loud sounds through noise reduction
- Are compatible with blue tooth and loop systems
- Have directional microphones for sound localization
- Automatic sound optimization for typical listening environments
- Telecoil-enabled models enable audio streaming from hearing loops in public spaces.
- Some devices come with GPS tracking to find them if they are lost.
- Rechargeable batteries
You have two ears – use both of them!

Hearing aids in both ears is the only way to go!
They provide increased speech understanding and directional hearing.
Hearing Aids and Masks, a recent problem
Some devices come with GPS tracking to find them if they are lost.
Hearing aids, what do they cost?

- Hearing aids are pricey—
  - Basic costs range from $1300 to $3000
  - Consumer Reports members typically spent $2,588 out-of-pocket for these devices,
  - Buying hearing aids can be complicated, given the wide range of considerations when you're shopping, including battery life, fit, sound clarity, and other features.
  - You probably won't get much relief from your health insurance company, because hearing aids tend to be poorly covered. But you can ask.
Where should I purchase my hearing aids – and what are the risks, benefits and consequences?

- Online?
- From a licensed audiologist?
- From a licensed hearing aid dealer?
- From a big box store such as Cosco or other?
- From an online ad?
- From a newspaper ad?
- Chose a provider who uses best practices!
No Hearing Test Required - Hmmmm!
Free – Free – Free
Why do people buy hearing aids and not use them?

- Poor benefit
- Background noise
- Fit and comfort
- Negative side effects
- Price and Cost of maintenance
- Don’t need help because they are socially isolated
- Hearing aids are broken or no longer work
- Sound quality if unacceptable
- Reason #10: Volume control adjustments More than 40,000 customers complained about their volume controls. The constant manipulation of the volume control is clearly an annoyance indicates need for “smart hearing aids with automatic volume control.
"What is a realistic expectation for improved hearing?" I.e. In what situation do hearing aids help and where not?

- Hearing aids do well
  - In one-on-one listening
  - When background noise is low
  - When the room is carpeted or has drapes that soak up the noise

- Hearing aids do not do well
  - In large groups
  - When background noise levels are high
  - When the room is hard walled and has a reflective surface
What are reasonable expectations for achieving help with hearing aids.

- What social and acoustic situations are
  - Great for hearing
    - One-on-one in a quiet setting
  - Mediocre
    - A small group setting in a quiet restaurant or other setting
  - Awful for hearing
    - A large group in a large noisy room
Trial periods and returns

• Most states require a 30- to 60-day trial period.

• Most hearing health professionals offer this trial but you should ask.

• Find out what fees are required for a return

• Make sure the refund policy is written into the purchase agreement.
What is the warranty on hearing aids?

- New hearing aids usually come with at least one year of comprehensive loss, damage and repair coverage directly from the manufacturer.
- Many hearing care providers may also include 2-year or 3-year manufacturer warranties in the price of new hearing aids, particularly for high-end devices.
- ASK!!!
  - How many warranty days/months
  - What are return policies – will you get your deposit/payment returned?
Assistive listening devices; a topic in it’s own right! Briefly --------

- Hearing loop (or induction loop) systems use electromagnetic energy to transmit sound.
- FM systems
- Infrared systems
- Personal amplifiers

For example, the PLAYHOUSE IN THE PARK has assistive listening devices available for attendees, as do many churches and other public venues.
Be VERY careful of ads like these!!!
Advertisements are everywhere; e.g. this was in the middle of a New York Times Article

Biden plans to release nearly all available vaccine doses in an attempt to speed delivery.
I Have a Hearing Loss: What do I do and where do I go for help? Part 2

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University of Cincinnati College of Medicine
Emeritus Adjunct Professor
Department of Audiology
College of Allied Health Sciences
The plan for the day

- RWK will discuss Tinnitus (ringing in the ear)
- John G. Clark, Ph.D.
  - Professor emeritus UC – colleague and friend
  - Internationally known author and speaker on counseling regarding concerns and conditions beyond hearing loss that may be threatening to the person with hearing loss that decreases the quality of their lives and that of their families.
- His topic: “Improving Communication”
An afterthought from last week: Hearing Aids and Masks, a current problem!

- Wear masks you can tie behind the head like a surgeon’s mask or use plastic extenders to fasten the mask’s ear loops behind the head. Both approaches improve comfort and reduce mask straps pulling off hearing aids.

- Make it a habit to remove masks in the same place—at home or in the car. This makes it more likely to find a hearing aid knocked off by a mask.
Tinnitus:
What is this ringing and buzzing in my ears?

- Tinnitus is the term for hearing sounds that come from inside your body. It's often described as "ringing, buzzing, or other sounds in the ears."
- Prolonged exposure to loud sounds is a common cause of tinnitus. Up to 90% of people with tinnitus have some level of noise-induced hearing loss.
- While tinnitus can be caused by conditions that require medical attention, it is often not medically serious.
- Tinnitus can be temporary or persistent, mild or severe, gradual or instant.
- However, the distress and anxiety it produces can often disrupt people's lives.
More about tinnitus

- Tinnitus represents one of the most common and distressing otology problems, which affects between 10 - 30% of the population.

- The prevalence of chronic tinnitus increases with age, peaking at 14.3% in people 60–69 years of age.

- One Myth is that certain pills (e.g., Ginco Biloba) will provide a tinnitus cure. They don’t!!!!

FACT: While much research has been done around the effects of medication and vitamin supplements on tinnitus, there is currently no proven tinnitus cure.

- Only [tinnitus management devices and sound therapy](#) have been proven to decrease the effects of tinnitus.
In addition to aging - other causes of tinnitus include:

- Ear canal blockage. (ear infection), earwax or other foreign materials. (Avoid Q-tips to clean your ear canal)
- Eustachian tube blockage from a bad cold
- High blood pressure.
- Other conditions like diabetes, thyroid problems, migraines, anemia, and autoimmune disorders such as rheumatoid arthritis
- Ototoxic (ear poisoning) drugs such as high levels of aspirin and anti-inflammatory drugs, cancer drugs, water pills (diuretics, antidepressants
- Noise, Tumors of the auditory nerve, and Meniere’s Disease – all rare in an older age group
- Smoking is linked to the increased oxidative stress and related hearing loss. The more you smoke the greater the damage to the ear.
Ménière's Disease

- A disease that affects the inner ear and causes
  - Episodic dizziness (Vertigo)
  - Nausea
  - Loss of hearing in one or both ears
  - Tinnitus

- Rare in older populations but is devastating
When should I be concerned about tinnitus?

- Typical in the aging ear that we discussed last week
- When it is accompanied by fluctuating hearing and balance problems
- When it is associated with hearing loss and reduced speech understanding in one ear only
Does smoking affect hearing?

• Compared to nonsmokers, smokers have a 70% greater chance of developing hearing loss.
• Nonsmokers are twice as likely to develop hearing loss if they live with a smoker.
• The greater the daily average of cigarettes, the greater the risk of developing hearing loss.
• If you work around high levels of occupational noise, smoking increases your risk of noise-induced hearing loss.
• Adolescents exposed to secondhand smoke are 2 to 3 times more likely to develop hearing loss — and they usually aren’t even aware of it.
Oxidative stress* and antioxidants

- Oxidative stress has been proposed to play a critical role in causing tinnitus
- Because of:
  - Cellular changes in hair cells, hair cell death, cochlear degeneration,
  - Changes in supporting structures and stria vascularis, and
  - Changes in nerve fibers of the acoustic nerve, irregular neural activity

- **Oxidative stress** - an imbalance between production and accumulation of oxygen reactive species (ROS) in cells and tissues and the ability of a biological system to detoxify these reactive products
Antioxidants and their effects on hearing and tinnitus

- Antioxidants are molecules that fight free radicals* in your body that can cause harm if their levels become too high. They’re linked to multiple illnesses, including diabetes, heart disease, and cancer.
- Your body has its own antioxidant defenses to keep free radicals in check.
- However, antioxidants are also found in food, especially in fruits, vegetables, and other plant-based, whole foods. Several vitamins, such as vitamins E and C, are effective antioxidants.
- So, do what your mom told you and eat lots of colorful fruits and vegetables.

*Free radicals are unstable atoms that can damage cells, causing illness and aging.
How can I reduce tinnitus?

- If tinnitus keeps you from sleeping, try using a white noise machine to mask the noise from tinnitus.
- If you don't have a white noise machine, a fan, soft music or low-volume radio static also may help.
- Limit alcohol, caffeine and nicotine.
- Avoid situations that can make tinnitus worse, such as loud background noises.
  - If you are bothered by high levels of background noise, (and your mate snores too loudly) try ear plugs – available at drug stores.
Your recourse: state hearing aid licensing boards

- Ohio Hearing Aid Dealers and Fitters Licensing Board
  
  Hearing Aid Dealers and Fitters Licensing Board.
  246 N. High St. Columbus, OH 43215.
  Telephone: (614) 466-5215.

- Regulates the practices of audiology, hearing aid fitters and speech-language pathology by establishing, promoting and enforcing practice standards and professional competency among licensees
Improving Communication

John Greer Clark, Ph.D.
Professor Emeritus
Communication Sciences and Disorders Audiology Program
University of Cincinnati
College of Allied Health Science
What is BIG?
<table>
<thead>
<tr>
<th>Hearing Loss Descriptor&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Average Aided Real Ear Gain&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Aided Threshold Goal&lt;sup&gt;b&lt;/sup&gt; (dB HL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>−10 to 15 Normal</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>16 to 25 Slight</td>
<td>4 to 10</td>
<td>12 to 15</td>
</tr>
<tr>
<td>26 to 40 Mild</td>
<td>10 to 20</td>
<td>16 to 20</td>
</tr>
<tr>
<td>41 to 55 Moderate</td>
<td>20 to 30</td>
<td>21 to 25</td>
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<tr>
<td>56 to 70 Mod/Severe</td>
<td>30 to 40</td>
<td>26 to 30</td>
</tr>
<tr>
<td>71 to 90 Severe</td>
<td>40 to 50</td>
<td>31 to 45</td>
</tr>
<tr>
<td>91+ Profound</td>
<td>46+</td>
<td>45 to 55</td>
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</tbody>
</table>

<sup>a</sup> Average Hearing Threshold in dB HL +

<sup>b</sup> Average Aided Real Ear Gain and Aided Threshold Goal in dB HL
WATCH

W – Watch the Speaker
A – Ask for the missing part
T – Talk about your HL
C – Change the Situation
H – Helpful Gestures
CARE

C – Clear Speech
A – Get Their Attention
R – Rephrase
E – Keep Realistic Expectations
In the remaining time what are your questions?