OTC Hearing Aids and the Future of Audiology



Acknowledgments



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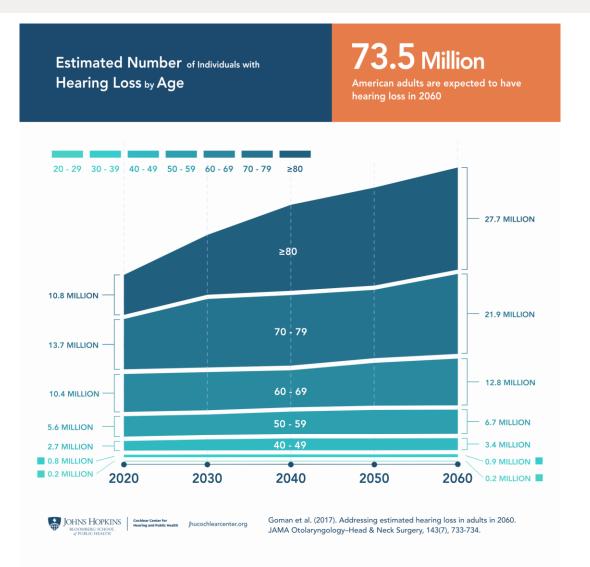


Presentation agenda

- History of OTCs
- OTC hearing aids defined
- FDA regulations
- Why OTC Hearing Aids Aren't Right For Kids
- ASHA OTC toolkit

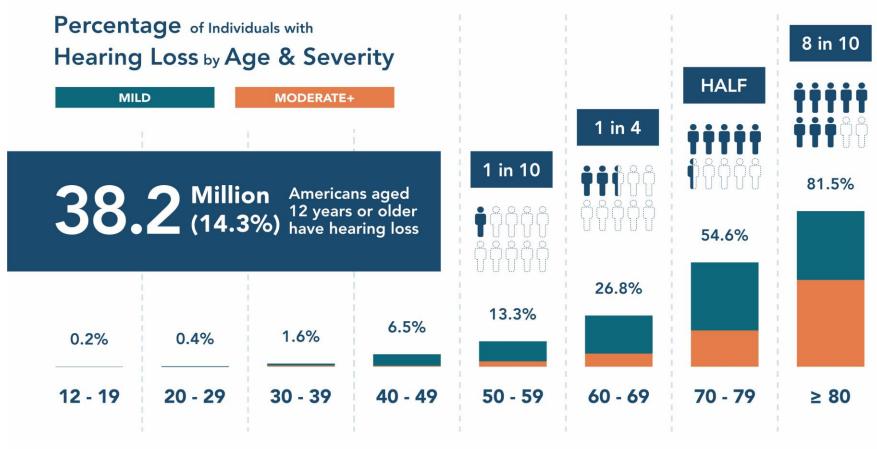


Unaddressed hearing loss is a growing problem in the U.S.





Most older adults have mild to moderate hearing loss



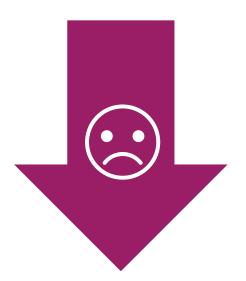








Satisfaction with hearing aids is increasing but the adoption rate is still low



Hearing Aid Adoption

Only ~15-30% of individuals with hearing loss use a hearing aid (Reed et al., 2021;
MarkeTrak 2022 data)

Satisfaction

83% of individuals are satisfied with their hearing aids (MarkeTrak 2022 data)





Trends in hearing aid ownership

Table. Weighted Number and Proportion of Adults 70 Years and Older Using He	earing Aids in the United States From 2011 to 2018 ^{a,b}
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	2011		2015		2018		Dorcontage
Characteristic	No. (95% CI), millions	Percentage (95% CI)	No. (95% CI), millions	Percentage (95% CI)	No. (95% CI), millions	Percentage (95% CI)	change, 2011-2018
All	4.0 (3.7 to 4.2)	15.0 (14.0 to 15.9)	5.0 (4.7 to 5.3)	16.9 (15.9 to 17.9)	6.1 (5.7 to 6.6)	18.5 (17.2 to 19.7)	23.3
Race							
White	3.5 (3.3 to 3.8)	16.6 (15.5 to 17.7)	4.5 (4.2 to 4.8)	19.2 (18.0 to 20.4)	5.5 (5.1 to 5.9)	20.9 (19.4 to 22.4)	25.9
Black	0.1 (0.1 to 0.1)	5.1 (3.8 to 6.5)	0.1 (0.1 to 0.1)	4.7 (3.5 to 5.9)	0.1 (0.1 to 0.2)	5.9 (4.2 to 7.6)	15.2
Sex							
Male	2.0 (1.9 to 2.2)	18.7 (17.1 to 20.3)	2.8 (2.6 to 3.0)	21.9 (20.2 to 23.6)	3.4 (3.1 to 3.8)	24.1 (21.9 to 26.3)	28.6
Female	1.9 (1.7 to 2.1)	12.2 (11.1 to 13.3)	2.2 (2.0 to 2.4)	13.1 (12.0 to 14.2)	2.7 (2.4 to 2.9)	14.1 (12.6 to 15.6)	15.4
Income ^c							
Less than 100% of the poverty line	0.7 (0.6 to 0.8)	12.4 (10.7 to 14.1)	0.5 (0.4 to 0.6)	10.3 (8.6 to 11.9)	0.5 (0.4 to 0.7)	10.8 (8.4 to 13.1)	-13.0
100%-199% Of the poverty line	1.0 (0.8 to 1.1)	13.8 (12.2 to 15.5)	1.0 (0.9 to 1.1)	14.5 (12.7 to 16.3)	1.0 (0.8 to 1.2)	15.4 (12.9 to 17.9)	11.3
200% Or more of the poverty line	2.0 (1.8 to 2.2)	16.2 (14.8 to 17.7)	3.3 (3.0 to 3.5)	19.7 (18.2 to 21.1)	4.5 (4.1 to 4.8)	21.2 (19.5 to 23.0)	30.6

Data derived from the National Health Aging and Trends Study (NHATS) 2011, 2015, and 2018 cycles.



size and age distribution.

^c Poverty line for those 65 years and older in a 2-person household as defined by the US Census.

^b All proportions are age-adjusted according to the NHATS weighted sample

People wait on average 4-7 years to get a hearing aid





Why the wait?

Cost

Lack of insurance coverage

Hearing loss not bad enough

Still gathering information

Not ready to admit having trouble hearing



Why do we care?

- Untreated hearing loss is associated with:
 - Depression (Lawrence et al., 2020)
 - Social isolation (Nachtegaal et al., 2009)
 - Reduced quality of life (Ciorba et al., 2012)
 - Dementia (Huang et al., 2023)
 - Falls (Jiam et al., 2016)
 - High healthcare costs and utilization patterns (Reed et al., 2019)





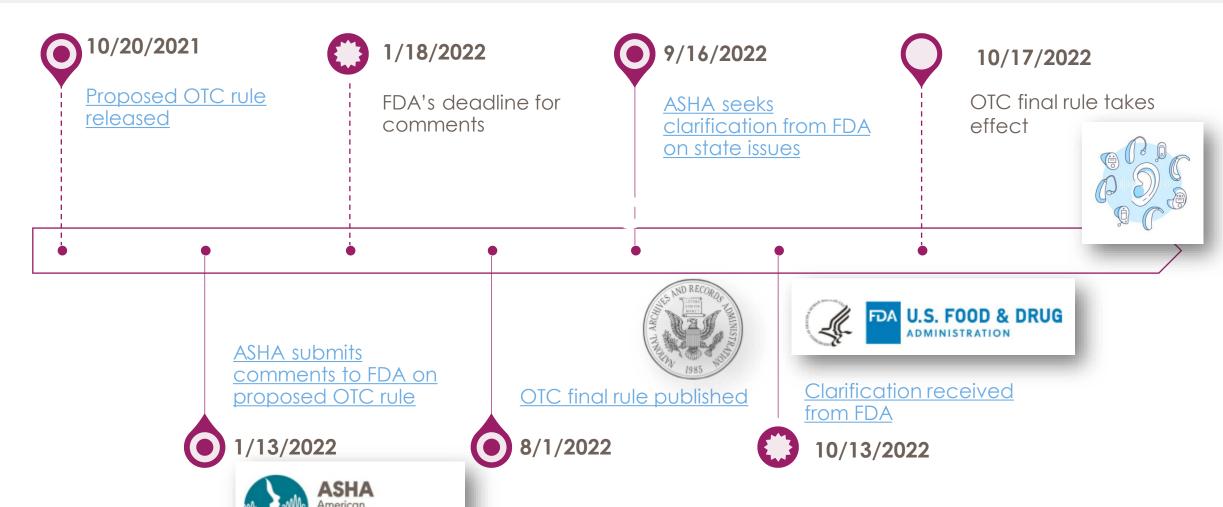
How did we get here?





How did we get here?

Speech-Language-Hearing





Implications of the FDA's final rule

- Establishes a new regulatory category for OTC hearing aids
 - Defining and establishing applicable requirements
- Designates hearing aids that do not meet the requirements for the OTC category as prescription hearing aids
- Repeals the conditions for sale applicable to hearing aids
- Amends existing labeling requirements for hearing aids
- Updates regulations relating to decisions on applications for exemption from **Federal preemption** that will become obsolete as a result of changes to the hearing aid requirements.



ASHA seeks clarification from FDA on state level impact

- ASHA has been active in helping our members and state affiliates understand the implications of two critical components of the FDA rule:
 - The designation of traditional (non-OTC) hearing aids as "prescription devices"
 - The repeal of federal medical evaluation requirements







ASHA seeks clarification from FDA on state level impact



September 16, 2022

Robert M. Califf, M.D Commissioner U.S. Food and Drug Administration 10903 New Hampshire Avenue Silver Spring, MD 20993

Dear Commissioner Califf:

Sincerely,

Judy Rich, EdD, CCC-SLP, BCS-C

2022 ASHA President

Status of Non-OTC Hearing Aids as Prescription Devices

To help remedy this issue, ASHA strongly urges the FDA to confirm through additional guidance that reclassifying non-OTC hearing aids as "prescription devices" is not intended to prevent licensed practitioners—who are authorized to order the use of these devices—from continuing to do so.

Status of Medical Evaluations Under § 801.421

To help address this concern, ASHA strongly urges the FDA to confirm through additional guidance that the OTC hearing device rule does not require states to implement medical evaluation requirements for prescription hearing aids for adults. Furthermore, ASHA urges the agency to consider establishing new conditions for the use of prescription hearing aids that only allows for a medical evaluation requirement with the option for the consumer to opt-out via a waiver.



OTC Rule Impact on States



We clarify below that the final rule:

October 13, 2022

Dear State Official:

- Does not change the necessary qualifications of who may provide hearing healthcare with prescription hearing aids, including the recommendation, selection, fitting, and dispensing of these devices;
- Does not require an additional professional to take actions, for example, does not
 in any way require a physician's involvement prior to fitting these devices; and
- Does not require an examination of any kind to obtain a prescription hearing aid.



FDA: Hearing Aids and Personal Sound Amplification Products: What to Know

	Over-the-Counter (OTC) Hearing Aids	Prescription Hearing Aids (Any hearing aids that do not meet OTC requirements)	Personal Sound Amplification Products
Type of Product	Medical device Electronic product	Medical device Electronic product	Electronic product
Intended Users	 People 18 years and older For those with perceived mild to moderate hearing loss 	 People of any age, including those younger than 18 years For people with any degree of hearing loss, including severe 	People of any age with normal hearing to amplify sounds in certain environments
Conditions for Sale	 Purchaser must be 18 years or older No medical exam No prescription No fitting by audiologist No need for licensed seller 	Prescription needed Must purchase from licensed seller in some states	No applicable FDA requirements regarding conditions for sale





Defining OTC hearing aids

- "An over-the-counter (OTC) hearing aid is an
 - air conduction hearing aid that does not require implantation or other surgical intervention, and
 - is intended for use by a person age 18 or older to compensate for perceived mild to moderate hearing impairment.
 - The device, through tools, tests, or software, allows the user to control
 the hearing aid and customize it to the user's hearing needs.
 - The device may use wireless technology or may include tests for selfassessment of hearing loss.
 - The device is available over-the-counter, without the supervision, prescription, or other order, involvement, or intervention of a licensed person, to consumers through in-person transactions, by mail, or online, provided that the device satisfies the requirements in this section." p.50749



What are those requirements?

- Labeling
- Output limits
- Electroacoustic performance limits
- Design requirements
- Conditions for sale





Labeling

- Outside package labeling
- Labeling, inside the package
- Labeling on the device
- Technical specifications
- Software device labeling



Outside package labeling

- Warnings and other important information
- Statement of build condition
- Statement of OTC availability
- Indication of battery information
- Indication of control platform





Warnings



WARNING: If you are younger than 18, do not use this.

You should go to a doctor, preferably an ear-nose-throat doctor (an ENT), because your condition needs specialized care. Over-the-counter hearing aids are only for users who are age 18 or older.

This hearing aid is for adults with signs of mild to moderate hearing loss. How do you know if you have this?

- You have trouble hearing speech in noisy places
- You find it hard to follow speech in groups
- You have trouble hearing on the phone
- Listening makes you tired
- You need to turn up the volume on the TV or radio, and other people complain it's too loud

This information and other labeling, including the user instructional brochure, are available on the internet at: [weblink to all labeling and any additional resources]

You may also call [telephone number] or write to [email address] or [postal address] to request a paper copy of this information and other labeling.

Manufacturer's return policy: [succinct, accurate statement of return policy or absence of return policy]

Some people with hearing loss may need help from a hearing healthcare professional. How do you know if you need to see one?

- You can't hear speech even if the room is quiet
- You don't hear loud sounds well, for example, you don't hear loud music, power tools, engines, or other very noisy things

If your hearing loss makes it hard to hear loud noises, this hearing aid may not be your best choice without help from a professional. If this hearing aid does not help you enough, ask for help from a hearing healthcare professional.

WARNING: When to See a Doctor

If you have any of the problems listed below, please see a doctor, preferably an ear-nose-throat doctor (an ENT).

- Your ear has a birth defect or an unusual shape. Your ear was injured or deformed in an accident.
- You saw blood, pus, or fluid coming out of your ear in the past 6 months
- Your ear feels painful or uncomfortable
- You have a lot of ear wax, or you think something could be in your ear
- You get really dizzy or have a feeling of spinning or swaying (called vertigo)
- Your hearing changed suddenly in the past 6 months
- Your hearing changes: it gets worse then gets better again
- You have worse hearing in one ear
- You hear ringing or buzzing in only one ear



Outside package labeling

- Warnings and other important information
- Statement of build condition
- Statement of OTC availability
- Indication of battery information
- Indication of control platform





Statement of build condition

- "If the OTC hearing aid is used or rebuilt, the outside package shall declare that fact. A sticker under and visible through the outer wrapper will suffice to declare such fact." p. 50751
- Rebuilt hearing aid: "An OTC hearing aid is "rebuilt" if the manufacturer has inspected and tested the device, made any necessary modifications to ensure it meets applicable regulatory requirements, including the requirements in this section to be available OTC, and adequately reprocessed the device for the next user." p. 50749



Outside package labeling

- Warnings and other important information
- Statement of build condition
- Statement of OTC availability
- Indication of battery information
- Indication of control platform





Statement of OTC availability

 "The principal display panel shall bear the marks "OTC" and "hearing aid" with the same prominence required in § 801.61(c) of this chapter for the device's statement of identity. The device's common name on the principal display panel may satisfy all or part of this requirement to the extent the common name includes the marks." p.50751





Outside package labeling

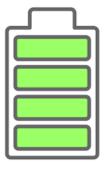
- Warnings and other important information
- Statement of build condition
- Statement of OTC availability
- Indication of battery information
- Indication of control platform





Indication of battery information & control platform

- Indication of battery information: "The outside package shall indicate the type and number of batteries and whether batteries are included in the package."
- Indication of control platform: "The outside package shall indicate whether a mobile device or other non-included control platform is required. The indication must include the type of platform and how the platform connects to the device." p.50751





Labeling

- Outside package labeling
- Labeling, inside the package
- Labeling on the device
- Technical specifications
- Software device labeling



Labeling, inside the package

- Warnings
- Cautions
- Illustration of OTC hearing aid
- Information on function of all controls
- Description of any necessary accessories
- Instructions for sizing & inserting eartip, tools, tests, and software, use of OTC hearing aid with any accessories, maintenance and care, battery replacement or recharging, expected battery life
- Technical specifications
- Commonly occurring, avoidable events
- Warnings re: wireless technology if necessary
- How and where to obtain repair services (at least one specific address)
- Clinical or non-clinical studies performed by manufacturer



Warnings

WARNING: If you are younger than 18, do not use this.

You should go to a doctor, preferably an ear-nose-throat doctor (an ENT), because your condition needs specialized care. Over-the-counter hearing aids are only for users who are age 18 or older.

This OTC hearing aid is for users who are 18 and older. People who are younger than 18 with hearing loss should see a doctor, preferably an ENT, because they may need medical testing and management. Hearing loss can affect speech and learning, so professional fitting and continuing care are also important.

WARNING: This hearing aid should not cause pain when inserting it.

Remove this device from your ear if it causes pain or discomfort when you insert or place it. To try again, make sure to follow the instructions. If you feel pain or discomfort again, contact the manufacturer. If your pain or discomfort doesn't go away, contact your hearing healthcare professional. You can also report this to FDA as an adverse event according to the instructions that appear later.

WARNING: When to See a Doctor

If you have any of the problems listed below, please see a doctor, preferably an ear-nose-throat doctor (an ENT).

- Your ear has a birth defect or an unusual shape. Your ear was injured or deformed in an accident.
- You saw blood, pus, or fluid coming out of your ear in the past 6 months
- Your ear feels painful or uncomfortable
- You have a lot of ear wax, or you think something could be in your ear
- You get really dizzy or have a feeling of spinning or swaying (called vertigo)
- Your hearing changed suddenly in the past 6 months
- Your hearing changes: it gets worse then gets better again
- You have worse hearing in one ear
- You hear ringing or buzzing in only one ear



Cautions

Caution: This is not hearing protection.

You should remove this device if you experience overly loud sounds, whether short or long-lasting. If you're in a loud place, you should use the right kind of hearing protection instead of wearing this device. In general, if you would use ear plugs in a loud place, you should remove this device and use ear plugs.

Caution: The sound output should not be uncomfortable or painful.

You should turn down the volume or remove the device if the sound output is uncomfortably loud or painful. If you consistently need to turn the volume down, you may need to further adjust your device.

Caution: You might need medical help if a piece gets stuck in your ear.

If any part of your hearing aid, like the eartip, gets stuck in your ear, and you can't easily remove it with your fingers, get medical help as soon as you can. You should not try to use tweezers or cotton swabs because they can push the part farther into your ear, injuring your eardrum or ear canal, possibly seriously.

Note: If you remain concerned, consult a professional.

If you try this device and continue to struggle with or remain concerned about your hearing, you should consult with a hearing healthcare professional.

Note: What you might expect when you start using a hearing aid

A hearing aid can benefit many people with hearing loss. However, you should know it will not restore normal hearing, and you may still have some difficulty hearing over noise. Further, a hearing aid will not prevent or improve a medical condition that causes hearing loss.

People who start using hearing aids sometimes need a few weeks to get used to them. Similarly, many people find that training or counseling can help them get more out of their devices.

If you have hearing loss in both ears, you might get more out of using hearing aids in both, especially in situations that make you tired from listening—for example, noisy environments.

Note: Tell FDA about injuries, malfunctions, or other adverse events.

To report a problem involving your hearing aid, you should submit information to FDA as soon as possible after the problem. FDA calls them "adverse events," and they might include: skin irritation in your ear, injury from the device (like cuts or scratches, or burns from an overheated battery), pieces of the device getting stuck in your ear, suddenly worsening hearing loss from using the device, etc.

Instructions for reporting are available at https://www.fda.gov/Safety/MedWatch, or call 1-800-FDA-1088. You can also download a form to mail to FDA.



Labeling

- Outside package labeling
- Labeling, inside the package
- Labeling on the device
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- Software device labeling



Labeling on the device

- The serial number
- If the battery is removable, "+" symbol to indicate positive terminal for battery
- Removeable tag indicating hearing aid is rebuilt, if applicable



What are those requirements?

- Labeling
- Output limits
- Electroacoustic performance limits
- Design requirements
- Conditions for sale





Output limits & electroacoustic performance limits

Max OSPL90 of 111 dB SPL or 117 dB SPL in device with activated input-controlled compression

Total harmonic distortion not to exceed 5%*

Self generated noise shall not exceed 32 dBA

Latency shall not exceed 15 ms.

≤ 250 Hz-≥ 5000 Hz frequency bandwidth

No single peak in one-third-octave frequency response shall exceed 12 dB

Acoustic coupler choice: 2cm³ or a scientifically valid and technically equivalent alternative



What are those requirements?

- Labeling
- Output limits
- Electroacoustic performance limits
- Design requirements
- Conditions for sale





Design requirements

Most medial
component must
remain ≥ 10 mm
away from tympanic
membrane

Use of atraumatic materials

Customized, acoustically favorable, and comfortable physical fit

Through tools, tests, and software, allow "lay user" to control and customize device

User-adjustable volume control

Adequate reprocessing if rebuilt



What are those requirements?

- Labeling
- Output limits
- Electroacoustic performance limits
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- Conditions for sale





Conditions for sale

Age minimum of 18

Sale of an OTC hearing aid without "statement of OTC availability" is prohibited

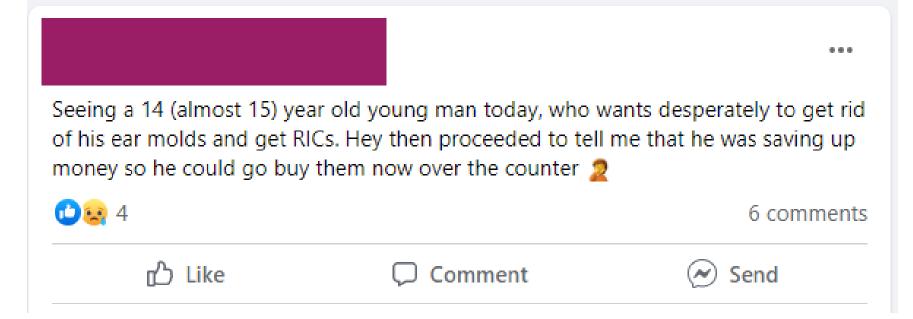




Pediatric & Educational Audiologists: AKA-Freakin' Miracle Workers

♠ Private group · 3.0K members







Why OTC Hearing Aids Aren't Right for Kids—But Other Options Are

For the first time, certain hearing aids are now being sold in drug stores and online without any involvement of a medical professional. These overthe-counter (OTC) hearing aids have created a lot of excitement as a more affordable option to help people with hearing loss.



https://www.healthychildren.org/English/healthissues/conditions/ear-nose-throat/Pages/why-over-thecounter-hearing-aids-arent-right-for-kids.aspx



OTCs and Kids

- Maybe not be obvious to consumers that OTCs aren't right for kids
 - Tamper proof battery doors
 - Child appropriate size
 - Specialized, age-appropriate testing
 - Volume controls
 - Connection to remote microphones



Why You CAN'T Get OTC Hearing Aids For Kids

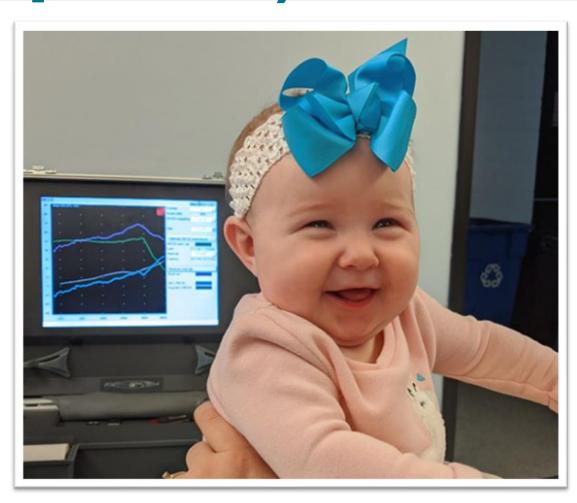
Article 4 min read



https://www.hearingfirst.org/b/blog/posts/why-you-can-t-get-otc-hearing-aids-for-kids



OTCs and Kids (arguments for parents)



- Your child has unique hearing loss and they need devices customized to their needs
- Your child's ears are growing and their hearing needs may change
- OTC hearing aids can't replace professional care



Ongoing advocacy

- Enhance Medicare access to audiology services through passage of the Medicare Audiology Access Improvement Act
 - Expanding coverage to include treatment services
 - Removing physician referral requirement completely
 - https://www.votervoice.net/ASHAaction/Campaigns/106771/Respond



ASHA's OTC toolkit



ASHA has compiled the following resources to help you

- Educate patients about OTC hearing aids
- Promote the continued value of an audiologist
- Collaborate with and market your practice to other trusted professionals influencing OTC hearing aid decisions

Resources

TOOLS FOR AUDIOLOGISTS

RESOURCES FOR PHARMACISTS

RESOURCES FOR PRIMARY CARE PHYSICIANS



Tools for audiologists



Tools for Educating Patients



Collaborating with Pharmacists



Collaborating with Primary Care Physicians (PCPs)



Other Resources



Tools for audiologists

OTC HEARING AIDS



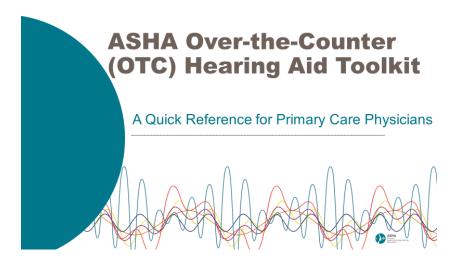
PRESCRIPTION HEARING AIDS

SELECTION PROCESS	Self-selection; however, consumers may choose to consult with a licensed audiologist or hearing instrument specialist or non-licensed support personnel.	Functional communication assessment with a licensed audiologist or hearing instrument specialist.
FIT BY	Self, licensed audiologist or hearing instrument specialist, or non-licensed support personnel.	Licensed audiologist or hearing instrument specialist.
PRICE	Estimated to be less than \$1,500/pair-consult vendor or retailer for exact pricing.	~\$1,000-\$7,000/pair-varies based on what services or warranties are included in the cost.
AGE	18+	0+
HEARING LOSS DIAGNOSIS	Purchase <u>does not require a hearing test;</u> hearing levels may be approximated through self-reflection, self-administered tools, tests, or software, or through a hearing test with a licensed audiologist or hearing instrument specialist.	Pre-purchase audiologic assessment required.
HEARING LOSS SEVERITY	Self-perceived mild to moderate.	All degrees.
DESIGN	One-size-fits-most or semi-custom; hearing aid must sit >10 mm from eardrum.	Not limited by depth or design; includes custom-molded and invisible in the canal options.
RETURN POLICY	Not required by the FDA; determined by manufacturer and state of sale; this information must be on the hearing aid packaging.	Required in most states.
VERIFICATION OF AMPLIFICATION LEVELS	Users seeking care from a licensed audiologist or hearing instrument specialist can inquire about verification measures compatible with their OTC hearing aids.	Best practices include real-ear measurements (REMs) at the time of hearing aid fitting.



Collaboration with PCPs

PATIENT HEARING CHECKLIST







Collaboration with pharmacists

PATIENT HEARING CHECKLIST



Please check all items that apply to you:			
Please check all items that apply to you: I am younger than 18 years old. I hear much better in one ear than in the other ear. In the last 6 months, I suddenly cannot hear out of one or both ears as well as I used to. I have ringing, roaring, or beeping in one or both of my ears. I have a history of taking medication that causes hearing loss. I have a history of chemotherapy and/or radiation in the head and neck region. In the last 6 months, I have noticed active drainage from one or both of my ears.			
I have constant pain or discomfort in one or both of my ears.I experience dizziness.			
If you check any one of the boxes above, an OTC hearing aid may not work for you. Consult with an audiologist. Please see pharmacist for recommendation.			

Reflect on your hearing in quiet and noisy environments, and check the column that best describes you:

This Best Describes Me	Quiet Environments	Noisy Environments
	I have good to excellent hearing.	I have good hearing; I rarely have difficulty following/participating in a conversation.
	I do not have problems hearing what people say.	I may have difficulty following/ participating in a conversation.
	I have difficulty hearing a normal voice.	I have difficulty hearing and participating in a conversation.
	I can hear speech if it is loud speech.	I have great difficulty hearing and participating in a conversation.
	I can hear loud speech if it is directly in my ear.	I have very great difficulty hearing and participating in a conversation.
	I have great difficulty hearing.	I cannot hear any speech.
	I cannot hear any speech or loud sound.	I cannot hear any speech or sound.

If you have selected an option above where writing is highlighted in red, an OTC hearing aid may not work for you. Consult with an audiologist. Please see pharmacist for recommendation.



Collaboration with pharmacists





Greetings! We hope that this letter finds you well.

I'm [insert first name or first + last name], an audiologist.

As you may know, over-the-counter (OTC) hearing aids are expected to hit the pharmacy shelves soon. We understand and highly respect that, as pharmacists, you may be the first or last (prior to purchase) health-care provider that a patient approaches for advice on their hearing difficulties. I am writing to invite you to collaborate with me so that, together, we can provide high-quality patient-centered hearing health care. OTC hearing aids, just like any other OTC product, may be appropriate for some but not all patients who come through the pharmacy door.

Refer to an audiologist when the patient reports:

- being younger than 18 years of age (OTC hearing aids are intended for patients 18+ only);
- asymmetrical hearing;
- a sudden onset of hearing loss in one or both ears (see ENT referral below);
- ringing, roaring, or beeping in one or both ears (tinnitus);
- a history of exposure to ototoxic medications;
- a history of chemotherapy and/or radiation to the head and neck region (hearing loss related to chemotherapy often occurs closer to treatment, whereas hearing loss related to radiation can have a delayed onset); and/or
- experiencing greater than a perceived mild to moderate hearing loss.

AUDIOLOGIST AND ENT REFERRAL GUIDE



What is an audiologist?

An audiologist is a hearing health-care expert who helps prevent, diagnose, and manage hearing and balance disorders for people of all ages. An audiologist holds either a master's (MS) or a doctoral level degree in audiology (AuD/PhD/ScD), completes a fellowship or externship year, and is licensed to practice state by state. An audiologist helps patients understand what part of their hearing system may be causing a breakdown, conducts a functional communication assessment to identify a patient's hearing needs, and helps guide patients through the process of selecting the most appropriate level and type of hearing technology to address their hearing needs. It is recommended anyone with concerns about their hearing get evaluated by a licensed audiologist as the first step, even if they intend to purchase an OTC hearing aid.



Refer to Ear, Nose, and Throat (ENT) physician when the patient reports:

- a sudden onset of hearing loss or fluctuating hearing loss in one or both ears (seek help as soon as possible; treatment for sudden sensorineural hearing loss is most effective within 48 hours of the onset of symptoms);
- a pulsing tinnitus;
- active fluid from one or both ears within the past 90 days;
- pain or discomfort in one or both ears;
- a feeling that one or both ears are clogged;
- visible congenital or traumatic deformity of the ear or surgically altered ears; and/or
- dizziness.



Thank you!





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