earlens®

Hearing Tech Buyer's Guide

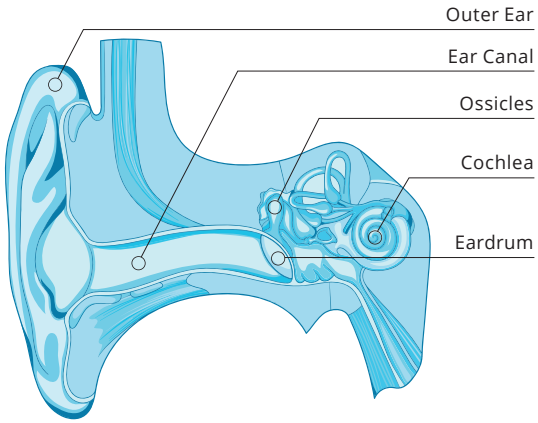
Hearing Loss

HEARING LOSS IS COMMON

Hearing loss affects about **1 in 5 American adults**.[1] Although hearing loss is not unusual, it can be difficult to identify. Hearing loss typically occurs gradually and worsens over time.

NORMAL HEARING VS. HEARING LOSS

In normal hearing, sound vibrations in the air are captured by the outer ear and funneled down the ear canal to the eardrum. In the middle ear are tiny bones called the "ossicles", which help pass sound vibrations to the cochlea, where vibrations are converted into signals that are transmitted to the brain.



Throughout life, it is common for the tiny hair cells in the inner ear to be damaged. When this damage occurs, we have more trouble hearing and understanding over time. This is the most common type of hearing loss and is called sensorineural hearing loss. **The good news is that the effects of sensorineural hearing loss can typically be addressed with amplification.**

YOUR HEARING MAY CHANGE

Even if you have already been diagnosed with hearing loss and currently wear a hearing aid, your hearing may change and require a new solution. Much like when you first noticed your hearing loss, you may find yourself experiencing more difficulty in group settings, or turning up the volume on the TV. You may also feel headaches or fatigue, as you spend more effort listening.

IN THIS GUIDE, YOU WILL LEARN:

- **Factors to consider in your next hearing solution**
- **Different types of hearing technologies**
- **Whether the Earlens® Contact Hearing Solution may be for you**

"Earlens has **changed my life dramatically**. I go to social events more often now, because I know that I can follow conversations."

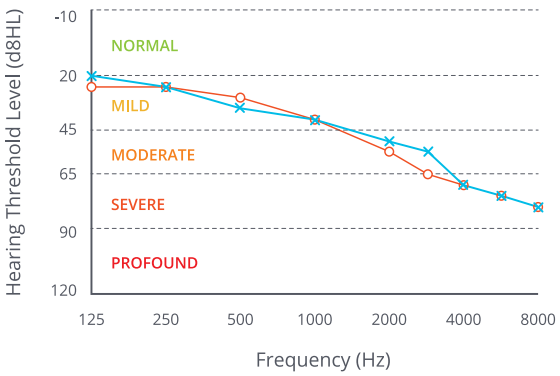
— Marty G.

[1]Lin FR, Niparko JK, Ferrucci L. Hearing Loss Prevalence in the United States. Archives of internal medicine. 2011;171(20):1851-1852. doi:10.1001/archinternmed.2011.506.

3 Considerations for Your Next Hearing Solution

YOUR HEARING NEEDS

The most important aspect of a hearing solution is whether it effectively addresses your hearing needs. Different types of hearing devices are better suited to treat different kinds of hearing loss. Your hearing care professional will recommend a solution based on your current level and type of hearing loss.



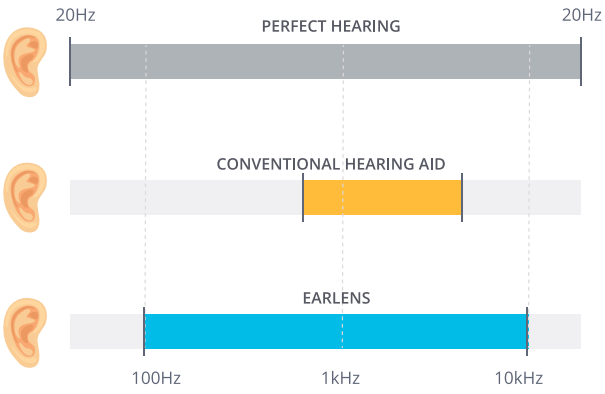
YOUR LIFESTYLE

Would you like to enjoy music more and hear better at the theater? Do you find yourself in situations where it would be inconvenient to change hearing aid batteries? These types of lifestyle factors will impact the best hearing solution for you.

If you lead an active lifestyle, you need to be able to hear people clearly in challenging environments. If you frequently engage in social situations, you may want a rechargeable hearing solution with a full day's charge so that you don't have to change batteries in the middle of a conversation. If you often attend concerts, you may prefer a hearing technology with a broader bandwidth to better hear the highs and lows of music. Discuss your daily activities with your hearing care professional, as well as the situations you would like to hear better in.

YOUR SATISFACTION WITH EXISTING HEARING AIDS

If you wear hearing aids but haven't been satisfied by the clarity or sound quality, you may want to consider a new type of solution. In normal hearing, sound waves travel down the ear canal and vibrate the eardrum. Conventional hearing aids use a speaker to amplify sound. However, restrictions in speaker technology limit the sound quality possible through conventional hearing aids. Earlens overcomes the limitations of speaker technology to provide a more complete sound.



*Data on file at Earlens

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Types of Hearing Technology

Conventional hearing aids capture sound through a microphone and push amplified sound waves through a small speaker down the ear canal to vibrate the eardrum more strongly. But, a new type of hearing solution directly vibrates the eardrum. The only hearing aid in this category is Earlens, which converts sound into pulses of energy to vibrate the eardrum—just like normal hearing works.

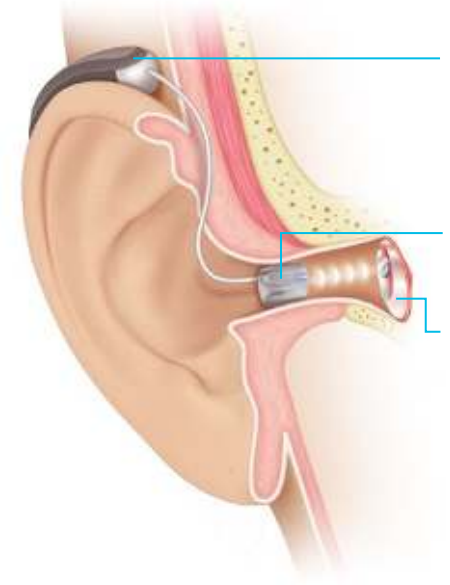
	ACOUSTIC HEARING AIDS			EARLENS
	Receiver-in-the-Canal Hearing Aid (RIC)	**In-the-Ear Hearing Aid (ITE)**	**In-the-Canal Hearing Aid (ITC)**	**Behind-the-Ear Hearing Aid (BTE)**	**Earlens Contact Hearing Solution**
					
	A case behind the ear holds the hearing aid's amplifier and microphone, while a small ear piece that contains the speaker (known as the 'receiver') sits inside the ear canal.	Typically made of a custom acrylic shell that houses all of the hearing aid's electronic parts. There are no external tubes or wires, and the hearing device typically fills the outer part of the ear when worn.	These hearing aids are similar to In-the-Ear hearing aids, but fit slightly deeper in the ear canal to be even less visible. ITC hearing aids are not generally recommended for people with severe-to-profound hearing loss.	Behind-the-ear hearing aids hook over the top of your ear. The main body of the hearing aid rests behind the ear, where the speaker is located, while a custom ear piece is worn inside the ear canal. This type of hearing aid can address the broadest range of hearing losses.	Directly activates the natural hearing system through a custom Lens on the eardrum. Delivers a broader frequency range that is associated with more natural sound quality[1], and better ability to understand speech in noisy environments[2].
Frequency Range	800 - 4,500 kHz				125 - 10,000 kHz
Rechargeable Battery	Typically No				✓
Noise Reduction Technology	✓				✓
Customizable Programs	✓				✓

[1]Moore BCJ, Tan CT. Perceived naturalness of spectrally distorted speech and music. Journal of the Acoustical Society of America 2003 114: 408–419.

[2]Levy SC et al. Extended High-Frequency Bandwidth Improves Speech Reception in the Presence of Spatially Separated Masking Speech. Ear Hear. 2015 Sep-Oct;36(5):e214-24.

The Earlens Contact Hearing Solution

Earlens uses light and a custom Lens placed in your ear to activate your natural hearing system.



1. The behind-the-ear Processor collects and processes sound, then transfers sound to the Ear Tip.
2. The Ear Tip converts the sound into pulses of energy.
3. The energy signals the Lens to gently vibrate your eardrum, activating your natural hearing system for rich, natural sound.

ADDITIONAL FEATURES AND BENEFITS

- Automatically adjusts to challenging listening environments
- Clinically proven to improve speech understanding*
- 95% of users were satisfied with the sound quality of Earlens in a clinical study*
- Easy wireless recharging eliminates the need to change tiny batteries
- Take phone calls and stream music directly from your smartphone through your Earlens

Earlens User Review: Carol

"My hearing loss really did affect me in a lot of different ways."

I would take classes and not be able to understand, and I would have a difficult time following along. I would miss a lot of content and what was going on.

I had difficulty hearing children. My grandkids' voices were higher, so they would kind of tease me. I'd really stare at people's mouths and try and lip read a little bit. Other times I faked it. And sometimes the responses I gave were quite inappropriate to the conversation.

Someone in the family recommended Earlens and thought I might be a good candidate. I was delighted to give them a try. They work – I can hear. I'm just ecstatic with them.

I really love the fact that Earlens has just changed my life. I can go to the movies. I can take my classes. I can go to the book club. I can go to the symphony. The other hearing aids made things really loud. I could hear my shoelaces as they lay on the ground. Now I can hear what I really want to hear. Earlens seems to broaden how much I hear so I don't have to hear it as loud, but I hear more.

Carol,
San Francisco Bay Area

*Data on file at Earlens

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