



# HEARING HEALTH

BETTER HEARING. BETTER UNDERSTANDING. BETTER LIVING.

Summer 2015



## THE ORGAN of CORTI

*The inner ear structure looks like fine art in this colored electron micrograph magnified 830x.*

*The hair cells (seen in yellow) translate mechanical energy into an electrical impulse that goes to your brain via the cochlear nerve.*

**R**ealizing that you have hearing loss doesn't usually happen in a single flash of insight. You don't go to bed with perfect hearing and wake up feeling old and impaired. For most people, the realization of hearing loss is something that sneaks up on them gradually over the years. They start to notice themselves missing bits of conversation, leaning forward more often to catch what was just said, or asking people to repeat themselves. There may be years of denial, despite prompting from friends and family, but finally you get to the point where you can't set it aside any longer: you're someone who doesn't hear as well as you used to.

### How did that happen?

There are many kinds of hearing loss, of course, and not all of them are as subtle as age-related hearing loss, also known as presbycusis. Some kinds come on suddenly because they're related to acute illness in your brain or somewhere else in your body. But by far the most common form, the one that afflicts tens of millions of Americans, is related to aging. One in three people older than 60 and half of those older than 85 have it.

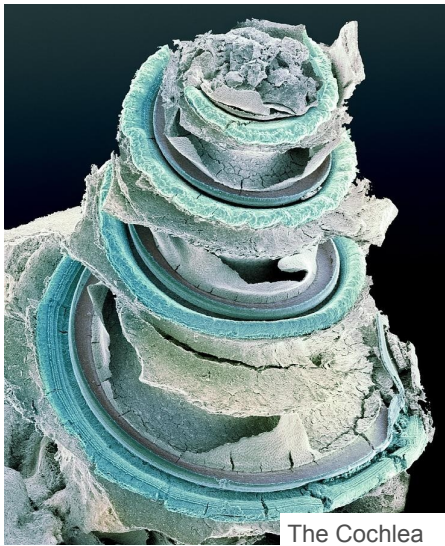
### Static on the line

Age-related hearing loss is most often a sensorineural disorder — that is, it is caused by deterioration in the nerves involved in your sense of hearing. The nerves most commonly affected are those of your inner ear, a tiny space between your ear and your brain shaped like a shell, filled with fluid and lined with hair-shaped nerve cells (see above). They respond like tuning forks to sound vibrations that travel through your outer ear, down your ear canal, through the tiny bones that vibrate your eardrum, and into the inner ear. These hair cells are the end of the telegraph line that encodes vibrations from the outside world for your brain to analyze and interpret as sound, music and speech. If these nerves aren't working, your hearing is impaired. And unless you're statistically lucky, or have good genes, you will most likely experience some of this loss in your lifetime.

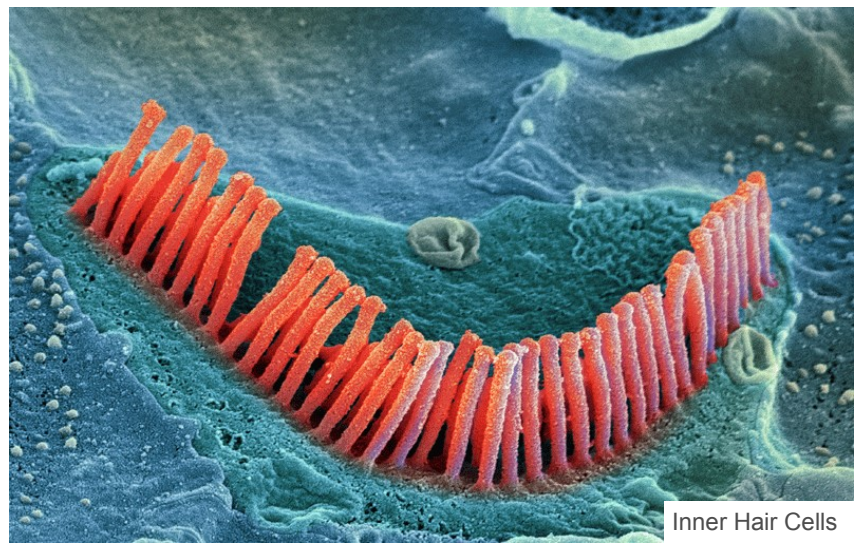
### A lifetime of noise

What causes nerves to die? There are many causes. One common cause is a lifetime of noise. Daily traffic sounds, noisy offices, factory work, construction work and loud music over long periods of time can damage the hair cells of your inner ear.

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The Cochlea



Inner Hair Cells

## This is not OUTER Space. This is your INNER Ear. (Magnified 800-900X)

Continued from page 1.

Other causes, more disease-related, include changes in blood supply due to heart disease, high blood pressure, diabetes and other circulatory problems. Hearing loss can also be caused by a virus or bacteria, heart conditions or stroke, head injuries, tumors, and certain medicines. But even without outside factors, for many of us, sensorineural hearing loss just happens with age.

Whatever the cause, when hair cells are taken off line, bits and pieces of the message go missing. Your brain gets incomplete, inaccurate information to interpret. Not only does this process diminish your comprehension, it also takes more energy for your brain to crunch the data to turn it into meaningful sound. The more you try to listen, the more you literally strain to hear, and the more fatigued you become.

### It's not just about volume

Consciously, you perceive what's happening not as a lowering in the volume of the sound world around you, but in a lowering of comprehension. People seem to mumble. Conversations are more difficult to follow, especially when there's interrupting background noise. The higher-pitched voices of women and children are harder to follow than the lower-pitched voices of men ... because the hair cells that are tuned to high frequencies are usually the first to go. As your nerve cells drop off one by one, your hearing degrades not with a bang, but a whimper. It takes more effort to stay engaged in conversations going on around you. You're asking people to repeat themselves more frequently, and gradually it dawns on you what has happened: you're experiencing hearing loss.

### The journey back

Once you're through the denial phase, the good news is that you've taken the first step on your journey to re-connecting and recovering the richness of life that hearing loss can rob from you. You're on your way to maintaining a safer, more independent life as well, because hearing problems can make it hard to understand and follow a doctor's advice, to respond to warnings, and to hear doorbells and alarms.

When you know the how and the why of hearing loss, and when you accept it, you'll probably move on to what's next: wondering if you're a candidate for hearing instruments. Chances are good that today's hearing technology can make a difference, and that many of your friends have already taken this step. You'd be surprised at how many people around you are using hearing aids, and are getting more out of life because of it. You just don't realize it because many of today's hearing devices are amazingly discreet.

### The good news

Yes, hearing loss is usually irreversible. You can't get those lost nerve cells back. But it is treatable, through modern hearing instruments. And although it happened gradually, that doesn't mean treatment has to take a long time. With the help of modern hearing technology and an experienced hearing care professional, you can go from wondering whether you need hearing aids to wondering why you waited so long to get them.



## How do I know it's time to update my hearing aids?

Hearing aids, like everything else, have a finite lifespan. But there's more to it than that.

Hearing aids can last anywhere from three years to seven — for some people, even longer. Variables affecting this lifespan include how well the instrument is built, how well it's maintained, and how much wear and tear it experiences being worn in your ear for many hours a day.

Naturally, when a hearing instrument stops working reliably, you could be a candidate for new hearing aids, or at least a significant repair. But there are other reasons you may want to make an appointment with your hearing care professional and consider an upgrade, even if things are working fine. Here are a few:

### Changes in your hearing

Remember, age-related hearing loss is a degenerative condition — it gets worse as you get older. If you're not getting like-new performance from your hearing aids, it may be time to see your hearing care professional for an adjustment. Sometimes your hearing may change to the point where it's beyond the range of your current hearing aids. You may need to upgrade to a more powerful instrument or one with new capabilities that meet your changing needs.

### Changes in your life

Changes in your occupation, living situation, outside interests or family life can put new demands on your hearing aids. A new job with a lot of conference calls and meetings, a teaching job, or a job in a noisy environment like a restaurant or construction site ... any of these situations can mean a change in your hearing requirements. So could getting married, moving in with family, taking up a new hobby, or moving to a group home where there is a lot of conversation and social activity. If you were originally fitted for hearing aids based on a quieter lifestyle, any of these situations could create a need for hearing aids with more power or new capabilities.

### Changes in hearing instruments

Advances in hearing technology have introduced a lot of features that weren't available just a few years ago ... features you may have been waiting for but couldn't get when you were first fitted. For example, across the board, hearing instruments are smarter than ever, working with your brain to do a better job of separating conversation from background noise and preserving the spatial 'soundscape' of a room — new features that [enhance comprehension](#) and reduce fatigue. The micro-brains inside these devices work hard to adjust automatically and optimize performance, to take the strain off your brain.

Today's advanced hearing aids are more fun, too. They can connect easily to all the new electronic devices around you — [TVs](#), [computers](#), [smartphones](#), audio equipment and more. And there are more options than ever for size and fit: more colors, completely invisible devices, and newer, more comfortable external hearing aids.

In short, it pays to keep up to date with advances in hearing technology, regardless of how well your current hearing aids are performing. Next time you visit your hearing care professional for new batteries or other services, try asking, "[What's new?](#)"



# Our Hearing Health Care Team



## Contact Us

Give us a call for more info about our services / products

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## IF YOU HAVE MORE MONEY THAN YOU NEED, IGNORE THIS BELOW...

Referrals to our practice from satisfied patients are a great compliment to us. They show that they have confidence in our service and products, and that we have done our part in helping them with their hearing needs. For many years we have shown our appreciation for these referrals with a small token of gratitude for every new patient referred to our practice. Now we'd like to show our appreciation in an even bigger way. If you refer a friend or family member and if they purchase hearing aids from us you will receive a \$\$\$ credit, they will receive a \$\$\$ discount.

Ask us for more details!

Our Website is a **GREAT** Resource.



Access to:

- Our audiology newsletters
- Our PATIENT PORTAL
- Information on audiologic and balance testing
- Frequently asked questions and more...

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