

# THINK OF IT AS BECOMING BIONIC

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PHOTOGRAPHY BY DAVID REHOR

## A few hours after George Nilson

put on his new hearing aids, he got into his car and shut the door. He then heard a strange beeping. After a few moments of confusion—and a twinge of doubt about the new devices behind his ears—he realized that the noise was the car's alert to fasten his seat belt. He had never heard the sound in that car before.

All doubts about the hearing aids vanished.

"I realized that, unless I was looking right at someone, I was hearing only about 65 percent of what people were saying," said Nilson, the Baltimore City Solicitor. "I thought that the people of Baltimore had a right to expect much more from me... Now I hear about 95 percent of what's being said. I feel good about that. It was the responsible thing to do."

Nilson got the hearing aids at the Hearing and Speech Agency (HASA). They are very small, behind-the-ear hearing aids that deliver sound through a slim tube to the ear canal. "I challenge people to find them," he added. "They're almost impossible to see."

The lawyer is one of the 34.5 million people in the United States who are deaf or hard of hearing, according to statistics from HASA. He's also part of a much more exclusive statistic; only 25 percent of those who need hearing aids actually buy them. And that means the other 75 percent are not hearing what they could and should.

Dr. Sun Young Lee is HASA's director of audiology. The Chicago native and Northwestern University grad said that while most people don't want to wear a hearing aid, it is the best way to communicate if you're hard of hearing. "People who have hearing loss often don't realize how difficult it is for other people to communicate with them and why they stop trying. You don't want that to happen."

Lee discussed these issues and the major technological advances in hearing aids in her office at HASA.

**Q:** Are there any indications that people today may be losing their hearing when they are younger than before?

**A:** There is more early exposure to excessively loud noise now. It's more recreational—music or even hunting. It's just noisier in general today because cities are noisier and most people live in or near cities. We're seeing more Baby Boomers coming in for hearing aids. But that's a good thing. They're usually doing it to stay effective at work.

**Q:** Is any type of hearing loss more common, meaning it affects a certain part of the ear?

**A:** Most people who have age-related hearing loss have trouble hearing higher frequencies. With this, you're losing consonant sounds, so you may hear people talking but you can't understand what they're saying. They have trouble hearing women's and children's voices because their voices tend to be higher pitched.

Most permanent hearing loss is in the cochlea of the inner ear, which is a spiral-shaped organ with sensory cells arranged from high pitches at the base to lower pitches at the apex. The first turn in the cochlea is more susceptible to noise-induced damage, and exposure to loud sounds has the potential to cause long-term loss over time. Loud impulse sounds like an explosion, as well as inner ear infections can cause sudden hearing loss. It often has a genetic component as well.

**Q:** Are there any public health concerns around hearing loss?

**A:** There are certainly for children. Middle ear infections are the most common cause of temporary hearing loss in young children, and some suspect that frequent infections can affect their auditory processing abilities. Studies have shown that even minimal degrees of hearing loss can affect academic performance.

And then there are problems with products we use. There are no regulations for how loud toys can be. Nor are there any for how loud sounds in cars can be or how loud listening devices can be.

### Listen Up! These celebrities use hearing aids too!

Huey Lewis  
Bill Clinton  
Heather Whitestone (Miss America 1995)  
Leslie Nielsen  
Richard Thomas  
Mike Singletary, Chicago Bears linebacker  
Al and Bobby Unser, race car drivers



For older adults, studies show that untreated hearing loss can affect overall health and well-being. There are also the obvious dangers related to driving.

**Q:** What types of hearing aids do people get these days?

**A:** Hearing aids have gotten much smaller, and there are many more styles to choose from. Some new hearing aids sit very deeply in the ear canal, making them practically invisible. Hearing aids that sit behind the ear now offer have the option of using a very slim, clear tube that is very discreet and cosmetically appealing.

All hearing aids are digitally programmed now, so they have chips inside that can process signals much faster and in a more sophisticated manner. All hearing aid manufacturers include some type of noise management capabilities for better speech understanding and comfort.

**Q:** What might surprise people to know about hearing aids?

**A:** There is a whole range of technology to choose from. They can be Bluetooth compatible. You can hear the TV or cell phone right through the hearing aid. And they can now "talk" to each other. If you're wearing two, you can touch the button on one, for example, to make an adjustment to both hearing aids without having to touch the other one.

There is also something called spatial sound that hearing aid manufacturers are using. The shape of our ears tends to emphasize high-pitched sounds, which helps with localization. With hearing aids, sometimes you lose the ability to tell where sounds are coming from. But now sound-processing technology tries to restore that. You can also try out hearing aids and return them after a trial period, which makes buying them much less risky.

**Q:** How long does it take to get an aid?

**A:** It can take between a few days and two weeks. Then there is a period of time for adjustments and getting used to them. But most people find that the aids make a major difference in their lives and—especially—in the lives of the people who interact with them every day.

The Hearing and Speech Agency  
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Established in 1926, the Hearing and Speech Agency (HASA) is a private, nonprofit organization providing hearing and speech services, special education, sign language, and oral interpretation in Maryland for clinical services.



Local developer, Peter Bosworth, decided not to let difficulty hearing get in the way. Instead, he purchased very high-tech aids that not only keep him on top of his work but, he says, "I can literally hear a pin drop."