

Hear the News!!!

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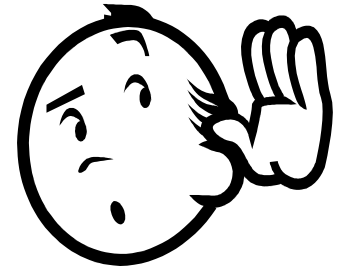
Auditory Deprivation

Hearing loss is one of the most prevalent conditions in the United States. Millions of people have hearing loss and yet only a small percentage of those individuals seek help. Hearing loss can have many negative effects including increased anger, frustration, depression, isolation, anxiety, fear, etc. Fortunately, hearing aids can combat the negative effect of hearing loss.

A study conducted by the National Council on the Aging (NCOA) compared the effects of hearing loss on quality of life for adults who were treated (hearing aids) and those who were untreated (no hearing aids).

The study showed that a significant portion of those who used hearing aids "reported better relationships at home and improved feelings about themselves." Hearing aid users also noted improvements in social life, relationships with spouse, children and grandchildren, mental health, self-confidence, and sense of independence.

The above-mentioned problems are all emotional, social, and psychological side effects of untreated hearing loss. There is also an effect of untreated hearing loss that is physiological: *auditory deprivation*. Auditory deprivation is a decrease in the ability to understand speech without a decrease in hearing. It is the result of the brain "gradually losing its ability to process information... because of a continued lack of sound stimulation". It occurs when "the ear goes unaided [without a hearing aid] over a long period of time".



"Auditory deprivation is a decrease in the ability to understand speech without a decrease in hearing."

Auditory deprivation is a problem that can develop in any ear with hearing loss that goes untreated for a long period of time. Research has shown that when someone with hearing loss in both ears uses only one hearing aid, the unaided ear will experience auditory deprivation within 2-4 years. Though most research studies have focused on monaural hearing aid fittings (using only one hearing aid), results from these studies could be applied when not using any hearing aid at all.

What does all of this mean? Auditory deprivation occurs because of a lack of sound stimulation to the brain. It is uncertain whether the deprivation occurs in the cochlea (inner ear), the nerve pathway to the brain, or in the brain itself, but the lack of sound stimulation interferes with speech understanding, decreasing the quality of life. Most patients with auditory deprivation report that speech and other sounds are distorted and unclear. It has been found that those who experience auditory deprivation when wearing one hearing aid, may recover some speech understanding within two years if they get a hearing aid for the other ear. However, in some cases, no recovery of speech understanding was observed.

So, how can auditory deprivation be prevented or improved? Early and consistent use of hearing aids in both ears will prevent or slow the effects of auditory deprivation. Those who get hearing aids earlier and wear them regularly not only preserve speech understanding, they are also more successful with hearing aid use. Wearing hearing aids regularly will ensure that sound continues to stimulate the ear, the brain and maintain nerve function. As previously mentioned, if auditory deprivation has occurred, partial recovery is possible, depending on how long the deprivation has been present and how severely the speech understanding has been affected.

References:

The National Council on the Aging (NCOA) (1999). *The consequences of untreated hearing loss in older persons: Summary*. Obtained 7 May 2008 from www.ncoa.org.
Silman, S., Silverman, C., Emmer, M., Gelfand, S. (1992). *Adult-onset auditory deprivation*. *Journal of the American Academy Audiology*, 3(6), pp390-396.



Vestibular/Balance Spot:

Although controversial, there is increasing evidence that the musculoskeletal system, including the cervical spine, plays a role in the development of migraine. Cervical spine dysfunction may be one of many factors involved in the onset and course of migraine.

A primary sensory supply to the head is the Trigeminal nerve, one of the main nerves in the body. As a result, cervical dysfunction and pain may send signals to the brain along this cranial nerve leading to headache or migraine. Treating impairment of the neck through postural correction, manual therapy to the joints, soft tissue massage, as well as therapeutic exercise, may reduce the irritation of the trigeminal nerve. This, in turn, may reduce the severity and frequency of migraine.

References:

Makovsky, Howard W. An Introduction to Soft Tissue Mobilization, Spinal Manipulation, Therapeutic and Home Exercises. 2003, pg 91-94.

Hearing aid batteries

Hearing aid batteries are not the same as your watch batteries. They may be small, but that is where the similarities end. Hearing aids require a lot more power and they do not draw power at a steady rate, which would prolong the battery life. The computer chip inside hearing aids is always looking at the environment and adjusting the hearing aid, millions of times per second. Then if the aid has technology for whistling, or feedback problems and background noise, the aid might need a little more juice. Also, depending on the size of the hearing aid, the battery is smaller and has less storage capacity for power. Batteries may last anywhere from 4 days to 2 weeks depending on the size. However, the current zinc-air batteries are a tremendous improvement over the older style mercury or silver oxide batteries. The zinc-air batteries deliver more power, have a great shelf life (3 years if stored in a cool, dry place) and are not activated until the tab is pulled off meaning the battery is not losing power.



New Developments at the Hearing and Balance Center

- *A group of Hearing and Balance employees participated in the Boise Paint the Town volunteer project .
- *Hearing and Balance Centers are offering **free** Aural Rehabilitation classes for adults. Classes will begin July 2008. They will be held at the Boise office. **Please contact Dr. Karrie Weightman at 489-4999 for more information.**
- *David Ness, our 4th year resident this year, is from North Dakota. He is completing his Doctorate at LA Tech University. Welcome!
- *Dr. Paul Lancaster had a baby boy in May, will have his dissertation published in a national journal and is taking an in-depth class on pediatrics.
- *Ontario is having a health fair on August 16th, at the Four Rivers Cultural Center.

And the survey says...

A survey done last spring by Cochlear Americas, a company that is involved with implantable devices to aid hearing, showed some interesting things:

- Men are more likely to say pressure from their spouse or significant other is what prompted them to seek treatment for hearing loss than women
- Men with hearing loss are more likely to say their relationship with their spouse has been adversely affected than women with hearing loss
- Women believe the family relationships (ie sisters) outside that of their spouse or significant other have been affected the most by their hearing loss
- Women are more likely to be annoyed when communicating with someone who has hearing loss

Of those with hearing loss, 53% of women and 37% of men have not sought treatment for the hearing loss. It sounds as if the women have a lot to learn and that the men seem to understand that their wives/significant others are affected by the hearing loss just as much as they themselves are. This might be a lesson in self-awareness. In the battle of the genders, the men win this round.

A PATIENT'S STORY ABOUT HIS JOURNEY WITH COCHLEAR IMPLANTS: PART TWO

This is Part Two of our feature story written by a Hearing and Balance Centers patient, Tom. His story began in the April 2008 newsletter.

"After several years of going to my audiologist and noting my decreasing hearing and how stronger hearing aids did not provide additional, nor adequate benefit, he suggested I consider pursuing a cochlear implant. This recommendation is given to people who have so much hearing loss that hearing aids are no longer able to provide enough amplification for good speech understanding. I had a sinking feeling that it was my last resort to stay in the hearing world. Surgery and the unknown results were a great concern of mine. I was very apprehensive. I knew I had to do something or just fall deeper into the world of the deaf and hard of hearing. Life has too much to offer and when someone cannot hear, the quality of life is diminished for that person and those that love them.

Shortly after my audiologist had suggested the cochlear implant I saw an advertisement from the Hearing and Balance Centers at the Elks. The audiologists that work with cochlear implants were hosting an orientation and informational session for cochlear implants. My wife and I attended this orientation in November, 2006. She had to attend because I would not have gained anything from the meeting with the representative from the cochlear implant company. Yes, my wife had to go to everywhere I went to interpret what was being said. Following this meeting, we made an appointment for a cochlear implant evaluation.

Late one winter day in December the test began with Dr. Jenna Hoffman. I was to wear both of my hearing aids. Unfortunately one of the aids wasn't working too well, so I had to wear two different hearing aids; not even from the same set! I found that throughout the years of wearing hearing aids they seemed to always have their quirks. After two hours of testing I was given the results. This it the first test I was happy about failing! I had a 40 percent recognition of words score in an ideal hearing situation with two aids. This meant, even in an ideal situation (ie quiet, me focused, no distractions), I would miss the majority of what someone said; and very rarely is any listening situation ideal. Both of my ears were candidates for the implant. At this time I was given the names of two people who had implants. I e-mailed them as I was unable to phone. They both responded with long, positive e-mails. One person, Nancy from Weiser, was a constant companion throughout the journey. She was, and still is, wonderful support. It is impossible for anyone other than people with hearing loss to feel sympathy, to really understand what it is like with the loss of one of the most basic senses.

The seemingly long process began. Since this procedure had to be approved by Medicare, several people had to deem the procedure necessary. After the go-ahead, the many tests began. I had appointments with Dr. Beck, the surgeon for the implant, and other doctors and specialists to check the feasibility, or my physical condition, to withstand the surgery.

Finally on May 17th, 2006. the surgery was performed. I was anxious, yes, but also hopeful for the outcome. I was the last on the schedule for surgery that day, about 2 pm. There was the usual preparation for the surgery, but I felt very confident with the staff at St. Luke's. The surgery took about three hours. I felt as well as one can expect after the surgery and stayed the night at the hospital. One of the conditions I had been warned about was dizziness. This never happened and I was able to get out of bed shortly after getting to my room. That night I was given pain pills about every two hours. I also took several walks that night without any help. The next morning I had an appointment with Dr. Beck at her office. She took off the compression bandage and replaced it with a cone-like device that I was to wear for two weeks. After the two weeks the protection piece and the stitches were removed. I now had to wait a month before the activation of the implant. Anticipation!"



A Little Humor: From Do You Hear Me?
Pub: Harris Communications

One evening, a man who is hard-of-hearing and his wife are watching television. She turns to him and says something that surprises him; they've been married 45 years and it's been a long time since she's made such a request. He gets up, walks over to her, and gives her a big kiss. Now it's her turn to be surprised.

"What was that for?" she asks.

He says, "Didn't you say, 'I want to kiss you?'"

"No, no!" she replies. "I said I wanted a tissue."