



Newsletter Summer 2016

WHAT IS NEW IN 2016?

As in any year, the hearing aid industry continues to improve their circuits to address the concerns of the hearing impaired. The most common concern is the ability for the hearing aid to perform well in noisier environments.

1. ALL CIRCUIT LEVELS AND REMOTE CONTROL IN ALL HEARING AID STYLES:



2. CROS AND BI-CROS HEARING AIDS HAVE IMPROVED

- a. The CROS and BICROS hearing aids used for single-sided profound hearing loss, were only available in a large sized BTE hearing aids with good battery life or in a small BTE with poor battery life. They are now available in a more stream lined style that offers good battery life.

3. IMPROVED UNDERSTANDING OF SPEECH IN NOISE:

- a. The newer circuits have been designed to present the clearest signal to the brain. The circuits are also designed to focus on the speech signal while reducing the interfering background noise.
- b. It is important to know that no hearing aid circuit is on the market that will block ALL of the background noise. But, the degree of the reduction in background noise interference has vastly improved.

Please feel free to call the office at 847-382-5700 for more information.

Join the BATTERY CLUB and SAVE MONEY!

\$30.00 entitles you to 36 batteries that you can either stop by to pick up or have mailed to your home.

THE ELEPHANT IN THE ROOM

There has been a great deal of press on the topic of the use of Personal Sound Amplifying Products (PSAPs) in place of hearing aids. One of the biggest differences is the fact that the FDA does not recognize PSAPs as devices for the hearing impaired. There are a great deal of other reasons and I have put together a chart to outline just some of the differences. The chart can be seen on page 2 of this newsletter.

If you find you have questions after you have read the chart, please feel free to contact me.

SUMMER TIPS FOR HEARING AID CARE

To avoid loss of or damage to your hearing aids follow these simple suggestions:

- Remove the hearing aids when working and exercising outside.
- Keep hearing aids protected in their case and out of direct sunlight when not wearing them.
- Keep them away from hat and humid environments when out of ear.
- Do not apply or spray sunscreen near the hearing aids while they are being worn. It is best to apply sunscreen and then put on hearing aids.

HEARING LOSS AND DEMENTIA

The New York Times ran an article about a study published in 2011 that found strong evidence that “seniors with hearing loss are significantly more likely to develop dementia over time than those who retain their hearing.” This finding is not necessarily surprising to those of us who work in the hearing health field. The study leader **Frank Lin, M.D., Ph.D.**, is an assistant professor in the Division of Otolaryngology at Johns Hopkins University School of Medicine.

The study identified two possible reasons for the connection: a. a common pathology or b. “the strain of decoding sounds over time may overwhelm the brains of people with hearing loss. Another factor that has been a known and common “side effects” of hearing loss may play a role as well: a. social isolation.

The study also found that those with more significant hearing loss were more likely to develop dementia.

Dr. Lin ended the article with the following quote: “A lot of people ignore hearing loss because it’s such a slow and insidious process as we age,” Lin says. “Even if people feel as if they are not affected, we’re showing that it may well be a more serious problem.” The research was supported by the intramural research program of the National Institute on Aging.

LISTENING EFFORT

Hearing is the ability to detect sounds. Listening is the ability to hear sounds and give meaning to what you are hearing. The term “listening effort” refers to the amount of energy used to listen. As would be expected, we use more listening effort in noisy environments than in quiet. This effort can be measured both subjectively and objectively. Questionnaires are used for the subjective and pupil dilation and heart rate increases are used for the objective. The studies have found that an increase in listening effort causes fatigue, tension, decrease in recall and reaction time. The recent goal of many hearing aid manufacturers is to make circuits that reduce the listening effort for the users. This results in the user being less fatigued, frustrated or tense during and after conversations, as well as increase recall of the conversation.

CATEGORY	HEARING AIDS	PERSONAL SOUND AMPLIFYING SYSTEMS
FDA DEFINITION:	“A wearable sound amplifying device <i>intended to compensate for hearing loss.</i> ” It is considered a medical device and therefore providers must follow strict pre-fitting guidelines that include a full hearing test, advising the consumer that it is best to see a physician prior to the purchase of the hearing aid.	“A wearable electronic product <i>not intended to compensate for impaired hearing.</i> ” The FDA specifically stated the they are designed to be used by non-hearing impaired consumers to amplify sounds related to recreational activities.
EDUCATIONAL NEEDS FOR PERSONS SELLING:	The hearing health professionals fitting hearing aids are required to complete some form of education and hold state mandated licensing/certification because these are medical devices. Continuing education is required to maintain the licensing/certification. Audiologists hold post-baccalaureate degrees.	NONE. The PSAPs may be purchased online or in stores and sold by anyone.
QUALITY OF SOUND:	Hearing aids contain a much higher level of technology prescribed to treat a diagnosed hearing loss. With the use of computer chips and acting as a microprocessor, the hearing aid is able to reduce noise and distinguish the speech signal from the overall spectrum of sounds which facilitates speech perception. Most circuits include: background noise suppression, flexibility in adjusting to users needs, feedback reduction, directional microphones to focus on area of interest for user and multiple settings within the hearing aid that the user can access to use in different environments.	PSAPs are broadband devices that often have excessive internal noise with greater amplification in the low frequencies. They take in the surrounding sounds and amplify them equally. The amplifier does not have ambient noise reduction or feedback (whistling) reduction.
HEARING VERSUS LISTENING	Well fitted hearing aids use specific fitting rationales to create amplified sounds which provide the brain with abundant, natural acoustic information and allow the user to "listen". Listening is a highly sophisticated cognitive ability which involves attention, neural processing speed and quality, memory, language and more.* In other words, to listen is to extract meaning in the sounds that are heard. Human's ability to listen separates us from all other primates. *Beck, DL, Behrens, T. The Surprising Success of Digital Noise Reduction. <i>Hearing Review</i> . 2016;23(5):20.	PSAPs make the user hear everything louder. Hearing is the perception of sound and not the
CONSUMER SUPPORT:	The hearing aids are fitted to your hearing loss and follow up visits are set for the fine tuning of the hearing aids. The hearing professional is available to problem-solve with you and offers validation and verification testing to show how the hearing aids are assisting you.	The PSAPs are sold with an instruction booklet and you set it up.
COMFORT OF FIT AND RETENTION IN EAR	Custom ear molds can be made, if the generic tips do not retain hearing aid in the ear.	PSAPs supply generic tips. If these do not fit the user's ear, they will be difficult to retain.