

From Me to You

I am writing this in February and it has been an incredibly busy month. Marsha, Doreen and I all went to Phoenix for training on the new Innova hearing aid by Sonic Innovations. I'll tell you a bit more about it later in the newsletter and by the time you are reading this we should be able to order them. It looks really impressive and might be something you want to try – especially if you are in a lot of different types of noisy environments. Michelle and Alison and I also went to Phoenix for the American Hearing Aid Associates meeting where we learned all sorts of new things. And then I just got back from the Dominican Republic and my hearing aid project this weekend. Things look a bit quieter for the next couple of months so we can all catch our breath.

Spring is in the air and the hearing aid manufacturers are rolling out their latest developments and we'll be discussing some of those. We will also be discussing Signal-to-Noise Ratios and SNR loss and why they are important to you and your choice in hearing aids.

DID YOU KNOW?

An article in the September 10 issue of the magazine Science shows that the ear itself is uniquely involved in distinguishing various types of sounds and sending signals to the optimal side of the brain for processing. It has been known for years that the two sides of the brain process signals differently: the left side dominates in the processing of speech signals and other rapidly changing sounds, while the right side processes music and tonal information. And because of the brain's anatomy, the left ear has more connectivity to the right side of the brain and the right ear has more connectivity to the left side of the brain.

This discovery may have profound implications for a person's speech and language development. The research is supported by previous research that suggested a child with hearing loss in the right ear was more at risk for learning problems than a child with hearing problems in the left ear.

NEWS TO USE

You may want to contact your senators and congressmen and ask them to support H.R. 3103/S.2055, otherwise known as the "Hearing Aid Assistance Tax Credit Act." This legislation would allow a non-refundable income tax credit, available every five years, of up to \$500 per hearing aid for the purchase of a hearing aid for those age 55 or older and those claimed as a taxpayer's dependent. This bill was introduced last year but was not enacted. It is gaining strength and is expected to be brought up again this year.

WHAT'S NEW???

There are three new products on the market that I want to tell you about. In late March Sonic Innovations is introducing the Innova. We have been using a lot of Sonic Innovations products since they came onto the market in 1999. They have always had an edge with their Natura products in understanding speech in noise and have represented a good value to our patients. The Innova looks like it will be a significant leap forward. With their combination of signal processing, noise reduction, and directionality plus, it is

possible to get up to more than a +11dB SNR. This is a significant improvement over anything else on the market.

Phonak has come out with their new Savia product line and I had the opportunity to try it out at the recent American Hearing Aid Associates meeting. The most significant improvement I saw with that was in their new “Echo” program. We’ve always known that hearing aids were bothered by background noise, distance, and reverberation. All the manufacturers have been working diligently to try and get improvement in noise, with varying degrees of success. This is the first thing I’ve seen specifically targeted to reverberation and I was quite impressed. I was listening to it in a very noisy exhibit hall and when I switched from the normal setting to noise I wasn’t all that impressed but when I switched from the noise program to the echo program I noticed a big difference. Enough to make me think that maybe many of the complaints we get about understanding in noise are really not about noise so much as reverberation.

Lastly, Oticon has come out with Syncro. They say this is the first hearing aid with true Artificial Intelligence and that it is ten times more powerful than it’s predecessor. Much like our brains scan the environment to pick up sounds, determine how loud they are, where they come from and whether they are worth listening to, Syncro does that too. Based on the information it gathers, a battery of sound processing systems performs thousands of calculations simultaneously. Based on the outcome Syncro adopts an amplification strategy guaranteed to provide the most benefit and the clearest speech for that particular listening situation.

These are all three premium digital products and I want to do some comparison studies on them with several patients so if you would like to be one of the test subjects please call whichever office you go to and let us know.

WHAT IS SNR AND WHY SHOULD I CARE ABOUT IT?

SNR is our term for signal-to-noise ratio. It is a very important component of understanding speech in noise. People with normal hearing are able to understand speech in the presence of noise often even if the noise is louder than the signal by 2.5dB or a SNR of -2.5. People with hearing loss however, don’t do nearly as well and may need a SNR of +15 to do as well. That is a huge difference. And the pure tone audiogram you have always had done is not necessarily a good predictor of what your needs are for SNR. You can have two people with identical hearing tests and one of them will do relatively well in noise and the other one does miserably. Consequently we have begun using a new test in our evaluations called the QuickSIN that helps determine your SNR loss. Your score on that plays a big part on what and why we are recommending whatever hearing aid we are recommending for you. We understand that you may want something cute and tiny but you need to understand that if we are recommending something different it is because we are trying to fit you with something that is going to give you the best overall hearing and understanding.