

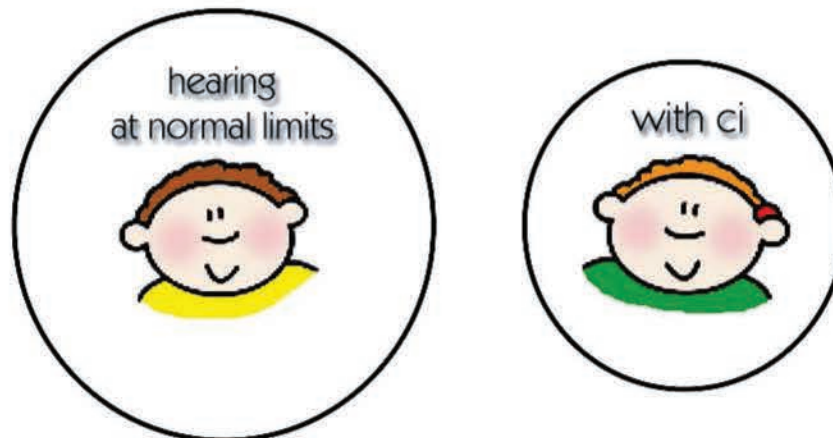
Hearing Age

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In terms of listening and language experience...how have we made use of the past year? The past day? Breakfast?

Before we are born there is sound. Sound in the dark. We are then born into a rich stew of sensory input. Through meaningful experience, the warmth of our mother's touch connects in our mind with her smell and her sound. We hear her voice and memory of the other senses associated come flooding back. The sound of your father is meaningfully paired with the sight of him, the smell of him, the fun of him. This is how we learn. Meaningful experience. What's that sound? I've heard that before! It's the dog drinking from his bowl again. If we think of how far a child has gone in terms of his learning, let's use the idea of an odometer to measure it. For every meaningful connection he learns, count one click on the odometer.

As we consider the chances for meaningful connections, let's talk about the term "earshot". What is within earshot? What can I hear around me? To make the meaningful connections we've been talking about, we need to hear the sounds and words that go with what we see, touch, taste, smell. We know that moving out of earshot can greatly impact a child with hearing loss. All of our technology and techniques in treatment are designed to help important sounds to reach your child's ear. Fm systems put your voice within earshot from all distances. Some therapists feel that the greatest thing cochlear implants provided was increased earshot. Children were free from having to learn up close at the table in quiet. With cochlear implants children with profound hearing losses were learning incidentally from meaningful experiences around them throughout their day. This blew the therapists away in the beginning. Treatment has sensibly shifted focus to making these daily activities as rich with language and sound as we can.



If we think of a child born with hearing at normal levels, the circle of "earshot" (the sound that can reach him) is wider than that of a child born with hearing loss. If we get close enough, most children (even with profound losses) can hear some of what we say. Once we provide today's technology in the form of hearing aids or cochlear implants, we widen that circle of sound considerably. We can most often also make sure that the all the sounds of speech that a child needs to learn language can be provided. The earshot is still reduced when you compare it to normal hearing. The sound is not as clear as normal hearing and can more easily be distorted by the presence of noise. Our job is to get within that circle of sound and make sure that our children have as many meaningful listening, language, and learning experiences as the children with hearing at normal limits.

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What will help us make the most of the experiences a child has within that circle? Talking louder will not help. Often a loud speaking voice will make the vowels of your words louder, but this will in turn cover up some of the softer consonant sounds you want your child to hear. Talk at a normal level, but get closer (or make sure you have an Fm system). Reduce the noise. Noise is sound that is non-meaningful to the learning. Close curtains when you can in the house. Don't run the dishwasher in the daytime. Turn off the TV unless you are watching it (duh!). Keep the meaningful sounds (usually your voice) clean and clear above the other sounds. Most important of all...keep your meaningful language meaningful to your child. What you think is important to learn is not as important as what your child is interested in. Listening to interesting things will "sell" listening. Saying things that are important for your child to share will "sell" speaking. Every word in and every word out count another click on our odometer.

How far? What does our odometer say? "Hearing Age" is a term that we use to give perspective to progress. Think of children with hearing at normal levels and imagine the circle of earshot around them. They carry that circle with them all day every day. All waking hours. After one day they have had one day of listening and language experience. After one year we expect them to have learned a lot about the language they are experiencing. We expect one year's language growth. Hearing age for a child with hearing loss helps us to put his hearing experience up against his language learning so that we can assess progress. If your child got his hearing aids or cochlear implant at age 1 and is now 2 years old, we say that he has a hearing age of 1 year. If he understands common phrases, has a few words, makes sound associations, has a clear voice and good vowels (just a few examples of what we might look for) we could say that he has made good use of the past year. His language age is at 1 year after listening for 1 year. Hopefully we can get even more in terms of language growth, so that we can catch up a little with his true age of 2 years. Since we are making his language experiences so rich within his circle of hearing day in day out, we might expect him to get even more than a year's growth in language after a year of listening.

All waking hours. If your child only wears his hearing for half of the day, then we can only reasonably expect a half day of listening language growth. That means that in one year of Hearing Age we might expect just 6 months of listening language growth. Have your child wear his hearing all waking hours. Make the most of what he hears and has to say within that circle of sound. There is a saying that the miracle of the cochlear implant is 10% hardware and 90% software, with the software being the language and listening experience we provide. Let's all make the most of this wonderful opportunity.

