

Brain and Hearing

The brain is the processing center for our bodies. To understand the brain, it is helpful to use an analogy. If you consider that the brain is like the post office and is responsible for receiving, sorting, and delivering the mail. Your brain receives, sorts, and delivers information to the body. Should a post office close, the mail will be routed to a different office, to be sorted and delivered. In hearing loss, the area of the brain designated to process sounds in essence “closes” due to absent auditory inputs. The signal is then “rerouted” to

be more visual in nature, so that the individual can make use of visual cues present in speech.

Science has shown that the brain is powerful and learns through experience. The brain is not stationary and evolves over time.¹ Research has found that in individuals with untreated hearing loss the area of the brain designated for hearing has been recoded to be more visually represented.² Once hearing loss is treated the brain will recode with new auditory experiences.

Why is this important?

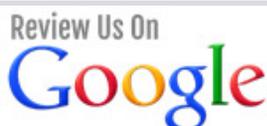
Realistic expectations and goals will need to be set anytime adjustments are made to a current hearing aid or new hearing aids are pursued. It will take the brain time to recode to be able to make use of “new” signals and sounds. It is important to understand that this process is slowed as we age, making it easier for a younger individual to accomplish this process. Patience, practice, and consistent use is key to being successful with this process. Trial periods are established to work through these details. An easy exercise to help achieve this goal is simply reading out loud to yourself daily. There are also auditory training programs available on the computer that will guide you through listening exercises designed to help improve listening skills.

¹ Colucci, D. A. (2012). Neuroplasticity: The New Frontier in Audiology. *The Hearing Journal*, 65(10), 48

² Kappel, V., Moreno, A. C., & Buss, C. H. (2011). Plasticity of the auditory system: Theoretical considerations. *Brazilian Journal of Otorhinolaryngology*, 77(5), 670-674. doi:10.1590/s1808-86942011000500022



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SOUND ADVICE: HEARING IN CHURCH

Are you having difficulty hearing during the service?

Here are some tips to improve hearing during the church service:

- 1) **Distance Matters:** sit close to the front of the church. Every 3 feet the sound becomes 6dB softer, which can make a difference.
- 2) **Sit by a speaker.** The sound in the church can bounce off the walls causing reverberation. Reverberation degrades the speech signal, making it more difficult to understand. Sitting close to the speaker can reduce the reverberation.
- 3) **Ask for assistance:** Some churches offer devices that can help. Ask at the office if there are any assistive listening devices available. An assistive listening device is a device typically worn as a headphone or earbud and will deliver the sound of the person speaking directly to the device. This can reduce the detrimental effects of distance and reverberation.
- 4) **Speak up:** If you feel the speaker does not speak clearly, talks too fast or does not have the microphone close enough to the mouth, let them know. The speaker may not be aware and most likely will be glad for the feedback to make improvements for all to be able to hear and understand his/her message.

If you find that you are still struggling in church it is a good time to follow up with your audiologist.



Spring has finally arrived and most of us who stayed in WI over the winter have been counting down the days and anxiously awaiting the piles of snow to melt. With flowers blooming and trees budding many of us find ourselves preparing for our annual spring cleaning rituals. This is also a great time to give your hearing devices a thorough clean! If you no longer have your cleaning tools - brush, waxtraps, and/or domes - now is a great time to stop in and buy supplies.

Many of these cleaning tips we recommend doing daily, but it is never too late to start good habits!

- Give your devices a good wipe down with a tissue or dry, clean cloth. Ensure there is no debris or wax buildup on the outside of the devices or earmolds
- Brush over your microphone covers with your tool brush. When debris, dust, or wax builds up in the microphone covers sound from your hearing devices

may become weak or stop functioning altogether.

- If applicable, change your domes and waxtraps if you haven't done so in over one month. When they start to fill with wax your device will sound weak or dead. In some cases, wax build up can cause the hearing aid to fail and require repair.
- Whether you have disposable or rechargeable batteries brush out either your battery door of hearing devices or the charging ports in the charger. A buildup of debris in either place can cause poor connection to your battery area and decrease battery life.
- When in doubt call our office to schedule a drop off cleaning appointment with our audiology assistant or if you need maintenance review schedule an appointment with your Audiologist.