
Injured Brains get Overwhelmed more Easily

One of the most impactful and longest lasting effects of a traumatic brain injury is the swelling and inflammation that happens with physical trauma.

Inflamed brain tissue has slower synapse transmission times, and cells reach metabolic exhaustion sooner as they struggle to heal and to perform their normal functions at the same time.

This means that intense stimuli like light and sound are more aggravating, and separating speech from background noise becomes overwhelming and exhausting.

Healing Happens, but Takes Time

The average recovery time for a traumatic brain injury is between six months and two years.

Most functions do eventually return, but even after it seems like everything is mostly back to normal, many people feel that they do not have the endurance or the ability to focus that they did before the injury.

With proper treatment and adequate rest, stamina and attention do eventually return for most people, but the amount of time it takes can be very frustrating.

Sound therapies can be effective in calming the brain during recovery, and in helping people deal with the frustration of feeling like they are not quite themselves during the process.

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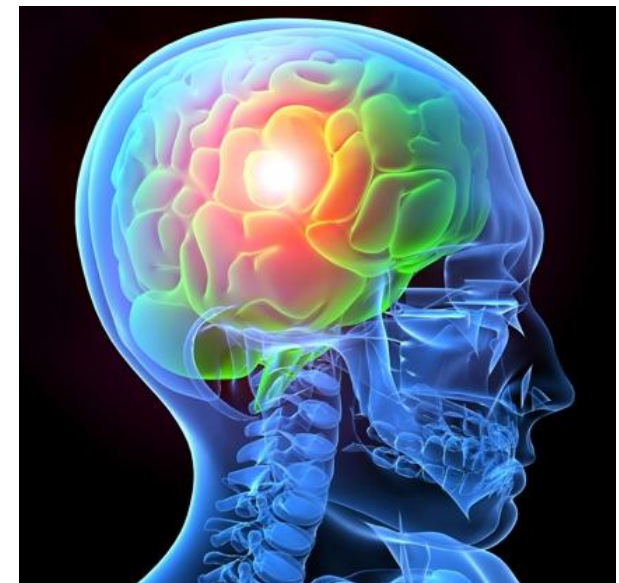
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Traumatic Brain Injury and Your Hearing:

What to Do For Tinnitus, Sound Sensitivity, and Speech in Noise



Tinnitus is One of the Most Common Effects of a Brain Injury



Buzzing or Ringing in the Ears

When the hearing parts of the brain are damaged, the neurons misfire. Your brain hears these errant synapses as a ringing or a buzzing sound. For most people, the tinnitus reduces and eventually disappears as the brain recovers.

The Lymbic System: Tinnitus Triggers Anxiety

Tinnitus can be aggravating all on its own, but the real problem is that the part of the brain that processes sound is right next to the part of the brain that controls stress, anxiety, blood pressure, and nervousness. Constant activity in the auditory system like tinnitus can cause activity in the limbic system, which means that tinnitus directly causes anxiety and stress. Sound therapy is very effective in breaking this causal connection.



Sound Sensitivity

Everybody has a limit to how much volume they will tolerate. Loud sounds are painful and sudden loud sounds are startling. A brain injury lowers the threshold so that sound is painful and startling at a lower volume than it was before the injury.



Habituation & Exposure Therapy

Many people are so bothered by sound after a brain injury that they wear earplugs full time to reduce the amount of sound they hear. If earplugs are what it takes to be able to get through the day, then wear earplugs. Eventually, though, it is important to start re-introducing sound.

Hearing Aids can Give You a Volume Control

If there is a hearing loss, or sometimes even if there is not, hearing aids can help you regulate the amount and type of sound that you are exposed to. This allows people to re-introduce sound gradually, increasing volume over time as the system rehabilitates.

Trouble Hearing with Background Noise

Just as people who have suffered a brain injury tire faster, they often have a much harder time doing several things at once. Hearing in a crowded room involves a complex dance of focusing on speech, understanding words, putting them together into a sentence, and keeping track of the subject matter, all while ignoring the distraction of background conversations going on all around the room.

What used to be a simple and enjoyable conversation in a nice restaurant has now become a nearly insurmountable challenge.



Hearing Aids have Very Effective Noise Reduction

In the past few years, hearing aid circuitry has reached a point where it can selectively turn up the person in front of you while ignoring all the people around you. They can also turn up speech without turning up dishes and road noise.

With or without a hearing loss, noise reduction makes hearing aids a very helpful option for those who have a hard time with background noise.