The skills needed to long barriers they put in a phonological data indicates that difference in a that their mean, higher, that the sample is simpler, it co-dependency to actually close.

Validation of a Technique for Establishing Maximum Comfortable Levels for Children Using Cochlear Implants

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The aim of fitting a cochlear implant is to establish electrical stimulation parameters that will provide the wearer with comfortable and useful auditory sensations. One parameter that is fundamental to achieving this aim is the Maximum Comfortable Level (C-level). A C-level is the amount of electrical current that produces a loud, but comfortable sound. C-levels need to be established for all channels that a person will use in their speech processor Map. Determining C-levels can be complicated as the person is required to make a judgment about the loudness of a sound. While most adults and older children have the ability to make such a judgment and provide feedback to the clinician, this is rarely the case for young children. Generally, the only way a clinician will be aware a sound could be too loud for a young child is when they observe the child giving an aversive reaction or an involuntary blink. A current level that produces such a reaction is called the Loudness Discomfort Level (LDL). This study examines the relationship between LDLs and C-levels. Testing was performed with a group of adults, using stimulation rates and stimulation modes that are commonly used by children. The LDL/C-level relationship established in this study provides a procedure for setting C-levels for young children when only loudness discomfort responses can be obtained.

Speech Perception by the Hearing Impaired

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We performed a series of studies on speech reception in noise with sensorineural hearing impaired listeners. The results show that this group cannot be considered as homogeneous. For some, speech reception is essentially normal even when taking their raised hearing threshold into account (audibility effect). For others, speech reception is worse than expected on the bases of their raised hearing threshold alone, suggesting additional effects of supra-threshold deficits. Over sixty subjects with sensorineural hearing loss were subjected to SRT-tests in the presence of various types of noise (SRT is the Speech Reception Threshold, the speech-to-noise ratio for 50% sentence intelligibility). We applied the SII-model (ANSI S3.5 — 1997) to predict the SRTs for each subject, accounting for the individual hearing thresholds. A deviation of the actually measured SRT from the SII-predicted SRT was taken as a measure for the effect of supra-threshold deficits on the SRT. For about half of the subjects, measured and predicted SRTs were equal (no supra-threshold deficits). For the other half, the measured SRTs were substantially poorer than predicted, suggesting the effect of supra-threshold deficits. In identifying the nature of these deficits, additional psychoacoustic measurements were performed with these subjects. The results indicate that for the listeners with a supra-threshold deficit, this deficit is related to either poor frequency resolution or to poor temporal resolution. Both aspects in one subject were observed only occasionally. At present, a simple clinical test is developed to identify the degree and nature of a subject’s supra-threshold deficit.
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