Tonal Masking Level Differences in Children

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The masking level difference (MLD) was investigated in 62 normal hearing children who had no history of ear disease, aged 7 to 13 years. The MLD is a psychoacoustic measure of binaural interaction and central auditory processing related to extracting signals from noise backgrounds. The MLD is a more efficient and less culturally biased predictive measure in the assessment of auditory processing disorders. In the first MLD test, the masking noise was an interaurally in phase (No), 300 Hz noise band centred on 500 Hz. The 500 Hz pure tone signal was generated digitally (rise and fall time being 100 msec and duration being 2 sec), and presented either interaurally in phase (So) or 180° out of phase (Sn). In the second MLD test, a 500 Hz pure tone signal was interaurally in phase (So) and the noise was either interaurally in phase (No) or 180° out of phase (Nn). The data were collected using a simple up-down adaptive procedure. Signals were presented with using a GSI 16 audiometer with input from a computerised audio system. The mean MLD was 11.0 dB (SD = 1.67) when the signal phase was changed, and it was 7.8 dB (SD = 1.75) when noise phase was changed. Detailed results are discussed in the paper.

A Hearing Aid Evaluation Procedure Using Paired Comparisons

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Approximately 10% of clients with a severe/profound hearing impairment prefer a frequency response that differs to the frequency response prescribed by the NAL-RP fitting rule. This poster presents a clinical procedure for evaluating frequency responses that vary around the NAL-RP. The procedure requires the hearing impaired client to switch between two different responses and then vote on which one is preferred. After listening and judging between several responses in a systematic way, the client's overall preference can be assessed and the frequency response implemented in the hearing aid if this differs to the NAL-RP. The procedure is very reliable and is an efficient way of assisting clients to make comparative judgements of different frequency responses. It can be used also with children down to 6 years of age.

Studies in Tactile Speech Perception Using the University of Melbourne Tickle Talker™

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During the past four years, a series of studies have been undertaken investigating the perception of speech presented through the tactile modality. These studies formed part of a project to develop an effective and safe electrotactile speech perception device for those children and adults requiring additional communication assistance to that provided by hearing aids, but unable to benefit from cochlear implants.
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