tion, 11 vowel recognition, CNC words, CUNY sentences, and the Connected Speech Test (CSTv2). Other tests of speech perception were conducted which looked at the effects of different types of background noise, amounts of reverberation, rates of speech and amount of available context. The aim of this was to better simulate "real-life" listening conditions. Consequently, a range of results for both traditional assessments of speech perception and simulated listening conditions will be presented and compared.

Determining a Severity Index for Tinnitus

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In a society which is becoming increasingly litigious and with a high percentage of tinnitus patients presenting with no measurable percentage hearing loss, there exists a need for a measure of tinnitus severity. Percentage hearing loss tables make only marginal allowance for tinnitus when there is also a hearing loss. Without a measurable hearing loss, there is no allowance. Tinnitus requires a separate measurement scale. Case histories for approximately 700 tinnitus patients are examined for factors pertaining to severity. Is hearing loss a suitable measure for compensation in these cases? A new index for measuring tinnitus severity is considered. In practice this tool may be useful for audiologists and doctors specialising in tinnitus especially where legal reports are required.

Family Participation in the Management of Tinnitus

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The amount of contact time an audiologist has with a tinnitus case is very small in terms of making inroads into helping patients with a condition which significantly erodes the lifestyle they have known. Unlike hearing loss, in many cases the onset is sudden. It is productive to enlist the support of a partner or family member in management of these cases. A survey was sent to 412 tinnitus patients and their partners. The results confirm the high toll severe tinnitus can take on the lifestyle of not only the tinnitus sufferer, but also those around him. In general, families of tinnitus patients surveyed underestimated the change tinnitus causes socially and psychologically for the patient. The process an audiologist can follow to involve the family at each stage of assessment, treatment and counselling is discussed.

A Training Program for Use with Multichannel Speech Perception/Production Tactile Devices

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Over the past ten years, there have been remarkable improvements in both conventional hearing aid technology and in the use of multichannel cochlear prostheses. These developments have resulted in improved speech perception for severely and profoundly hearing impaired adults and children. However, a small number of adults and children remain unable to benefit from either of these prosthetic approaches. This may occur as a result of medical/surgical issues, which render implantation unfeasible, or from a decision by the patient or parents that the device...
is inappropriate for the individual person. In these cases, use of a supplemental speech perception device employing the intact tactile modality has been advocated.

A number of single and multichannel devices have been developed, both commercially and in the laboratory. One of these, the Tickle Talker, a multichannel electro-tactile speech processor, has been developed and thoroughly evaluated with both adults and children at the University of Melbourne. Benefits to speech perception have been noted on both closed-set phonemic discrimination tests, and on open-set word and sentence scores, where the device was used to supplement lipreading and/or aided residual hearing. Benefits to articulation have also been noted. Recently, improved speech processing and the design of a new electrode handset have been implemented. While these factors are important to device acceptance, the critical factor in improving speech perception and production appears to be the training program which is employed with the device. The program must be based on the information available through the device, but organised to emphasize the integration of tactually-encoded speech information into open-set understanding of words and sentences if communication is to be improved. The important elements of the program will be discussed. At present, no tactile device is able to provide sufficient information for open-set speech understanding using only the tactile input. While this may be an ultimate goal, significant periods of training may be required to achieve this outcome.

Effects of Earmould Type on Ability to Locate Sounds for People with Conductive or Mixed Hearing Losses

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Previous research has shown that (a) people with conductive/mixed hearing losses have particular difficulty locating sounds in the horizontal plane, and (b) such people, in contrast to those with sensorineural hearing losses, often have improved localization when wearing hearing aids. The exceptional localization difficulty occurs because a greater than normal proportion of sound is transmitted by bone conduction which reduces cochlear isolation and, hence, the interaural difference cues which are vital for horizontal plane localization. The improvement with aiding presumably occurs by increasing the ratio of air conducted to bone conducted sound. It was hypothesised that this ratio and, therefore, localization ability, could vary for different types of earmoulds.

Nineteen experienced users of bilateral BTE hearing aids were tested using three types of earmoulds (hard short, soft short, and soft long) as well as unaided. Almost half showed a significant improvement for aided versus unaided listening and some showed significant differences in performance with different earmoulds. No earmould type was superior for the group as a whole and it could not be predicted which earmould would be best for an individual. Clinicians should be aware that, for conductive/mixed hearing loss clients, aiding may improve localization and that this may be affected by earmould type.
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