

Current Trends in Speech Perception Performance in Adult Cochlear Implant Patients

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In 1994, Cochlear Pty Ltd (Now Cochlear Limited) released a new speech processor, the Spectra 22, for use with the Nucleus 22-channel cochlear implant. The Spectra 22 speech processor incorporates a new speech processing strategy called SPEAK, which is based upon research conducted by the University of Melbourne. This paper reports post-operative scores on open-set word and sentence materials for adult patients in the Melbourne Cochlear Implant Clinic who have been started up with the Spectra 22 speech processor. Speech perception data was collected at regular intervals for a period of 6 months from each patient's 'start-up'. The results so far, illustrate that patients are gaining significant open-set speech perception advantage after two weeks' use of the cochlear implant. Speech perception scores are also seen to improve as patients gain more experience with the device. Comparison of the mean results at six months with similar data from patients using earlier speech processing strategies, confirms the findings from comparative studies that the SPEAK strategy is an improvement over the feature extraction type strategies. Although, to date, data has only been collected on a small number of people using the Spectra 22 speech processor, the trend in speech recognition performance obtained with cochlear implants is very encouraging. Cochlear implants should now be more widely considered as a viable option for severely, profoundly and totally hearing impaired people to improve their hearing ability.



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