

## **Abstract EFAS/DGA 2007**

### **Are middle ear implants better than conventional hearing aids?**

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**Introduction.** Several studies suggested that patients' performance with middle ear implants (MEI) is superior to that with conventional devices (CHA). However, these studies comprised mainly dissatisfied CHA users; this might have biased the results. Therefore, we compared results of 32 middle ear implant users with a reference group of 52 CHA users. Inclusion criteria: experienced digital hearing aid users younger than 70 years, no air-bone gap, flat audiogram or mildly sloping ( $\leq 10$  dB/octave from 0.5 to 4 kHz).

**Method.** Speech perception was tested at least 4 weeks after final fine-tuning of the hearing devices (MEI or CHA). From the aided sound-field audiogram, the score at 65 dB SPL was determined.

**Results.** MEI patients systematically scored worse than CHA users, in percentages: 6% worse speech recognition for patients with 50 dB HL hearing loss increasing to 36% for patients with 70 dB HL hearing loss. Subjective data gathered in a sub sample of MEI users were also poorer than CHA data from a large reference group.

A probable cause for the difference is the limited maximum output of MEIs.

**Conclusion.** The commercially available MEIs are effective hearing aids with limited capacity compared to CHA. Nevertheless, for patients with hearing loss up to approx. 60 dB HL, who cannot wear CHAs, MEIs are already an indispensable new solution

