Editorial

Use It or Lose It?: The Unaided Ear Effect

The 1984 report by Silman et al, that monaural hearing aid users appear to suffer a decline in word recognition scores in the unaided ear but binaural users do not (the "unaided ear effect"), has stimulated a great deal of fruitful discussion and inquiry. Indeed, it was the focus of the prestigious First Eriksholm Conference, held in Copenhagen in 1996, and has been substantiated both in this country and abroad. Shlomo Silman and his colleagues suggest that speech recognition declines when the unaided ear is deprived of stimulation over a substantial period of time. Stuart Gatehouse of Glasgow, Scotland, has suggested, moreover, that in addition to the deprivation effect, there may be relatively more rapid acclimatization effects on the aided ear as it becomes accustomed to amplification.

If deprivation is, indeed, the mechanism of the unaided ear effect, then the implication for habilitative and rehabilitative intervention is serious. It suggests, at the very least, that, in the case of moderate or severe loss, our goal should be binaural stimulation to prevent subsequent deterioration in speech recognition ability.

In this issue of *JAAA,* Raymond Hurley analyzes results on a relatively large sample of hearing-aid users and presents compelling evidence in further support of the unaided ear effect. Hurley's results may answer some previously unresolved issues raised by the Eriksholm conferees; especially the onset and magnitude of the effect. Hurley reviewed the records of 142 individuals with bilateral symmetric sensorineural hearing loss who had been hearing aid users for at least 5 years. By their own choice, 77 had been fitted monaurally and 65 binaurally. Hurley analyzed the word recognition scores (NU-6) obtained from both ears at 1, 3, and 5 years postfitting. In the group that had been fitted binaurally, there was virtually no effect of postfitting interval on either ear. After 5 years, only 6 percent of word recognition scores on either ear showed a significant change from the initial evaluation. In the monaurally aided group, however, there was a significant decrease in word recognition ability on the unaided ear, which increased from 1 percent at 1 year postfitting to 6 percent after 3 years and to 26 percent after 5 years.

Hurley's results strongly support the original observation of Silman et al that auditory function does indeed deteriorate in the unaided ears of monaurally fitted individuals with sensorineural hearing loss.

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