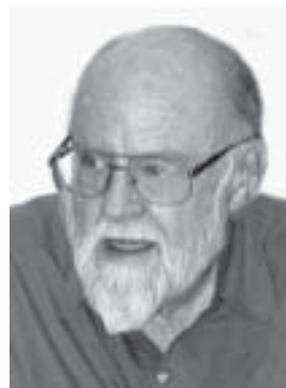


Editorial

Something Worth Boning Up On



The auditory steady-state response (ASSR) appears to be an extremely attractive approach to the measurement of auditory thresholds, especially in difficult-to-test individuals. A number of recent studies have attested to its accuracy in quantifying degree of sensorineural loss with precise frequency specificity. But if one of the principal target populations is babies and young children, we must be concerned as well with conductive loss. Is it possible to use ASSR to measure both air-conduction and bone-conduction thresholds in persons with conductive impairment?

Investigators Fuh-Cherng Jeng, Carolyn Brown, Tiffany Johnson, and Kathy Vander Werff, of the University of Iowa, addressed the problem directly. In this issue of *JAAA*, they present data comparing conventional behavioral air-conduction and bone-conduction thresholds with analogous ASSR threshold estimates. Participants were young adults with normal hearing on whom conductive loss was simulated in two ways, by inserting either epoxy or lamb's wool into an insert earphone tip. Air-bone gap varied from 15–30 dB with lamb's wool and from 30–60 dB for epoxy. Additionally, the investigators measured bone-conduction ASSRs in five profoundly impaired individuals in order to determine the stimulus level at which artifactual response appeared in the tracings.

Results were encouraging. In general, air-bone gaps estimated from ASSRs correlated well with air-bone gaps measured behaviorally, and estimates of gap size agreed closely, except in the range of relatively large gaps where ASSR tended to overestimate the magnitude of the

actual air-bone gap. Finally, the data on persons with profound losses indicate that 50 dB HL is about the upper limit of intensity for bone-conducted stimuli before the ASSR result is contaminated by artifact. The overall positive outcome suggests that further study of the ASSR estimate of air-bone gap in persons with genuine conductive loss is certainly warranted.

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