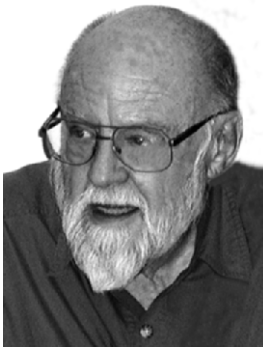
Editorial

Smoking and Otoacoustic Emissions



The first Surgeon General's report on the health hazards of smoking was issued in 1964. In the more than 40 years since that report, the damaging effects of smoking on various organs of the body have been demonstrated so extensively and so convincingly that it is a wonder anyone smokes anymore. In the 2004 report of the Surgeon General, the list of diseases caused by smoking included abdominal aortic aneurysm, acute myeloid leukemia, cataract, cervical cancer, kidney cancer, pancreatic cancer, pneumonia, periodontitis, as well as cancers of the stomach, bladder, esophagus, larynx, lung, mouth and throat; all this in addition to the well-documented effects of smoking on coronary heart and cardiovascular diseases.

But for those individuals who still persist in smoking, there is more bad news. Smoking is not good for your hearing either. In this issue of *JAAA*, authors Candice Negley, Bharti Katbamna, Teresa Crumpton, and Gary Lawson of Western Michigan University report results of a study in which they compared distortion-product otoacoustic emissions (DPOAEs) in two groups; young smokers and young nonsmokers in the 20–30 year age range. Threshold audiograms were obtained across both the conventional and ultra-high frequency (UHF) ranges of test frequencies. Although there were only slight group differences in threshold sensitivity across the conventional range, and no group differences in the UHF range, DPOAE amplitudes were significantly reduced, and DPOAE thresholds for input-output functions were significantly poorer in the smoking group. The authors suggest that the mechanism responsible for this effect on OAEs may be impaired blood supply to the cochlea resulting from smoking-related vasospasm and atherosclerosis.

In an interesting aside, the authors note that, in the UHF range, audiometric thresholds in both groups were significantly poorer in the left ear than in the right ear. This may be an early foreshadowing of the interaural asymmetry pervading the auditory function of older adults.

In any event, the authors make the useful suggestion that DPOAE measures may be helpful in detecting early changes in cochlear function in smokers, leading, perhaps, to the sensible recommendation to cease and desist from this manifest folly.

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