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**Potential of noise-induced hearing loss by aviation fuel  
exposure in rats**

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Clear standards have been established for workplace noise. These are designed to protect workers against noise-induced hearing loss. That occupational hearing loss still occurs despite such standards may reflect a variety of issues ranging from enforcement of standards, to adequacy of standards, and problems of noise assessment. An additional factor that influences susceptibility to noise-induced hearing loss is the presence of chemical contaminants in the workplace that render the auditory system especially vulnerable to noise. We report on the ability of aviation fuels to potentiate noise-induced hearing loss in laboratory rats. Subjects were exposed to JP-8 jet fuel, a synthetic fuel produced from coal using the Fischer-Tropsch method, or to clean air. Half of the subjects received a moderate noise exposure following fuel or air exposure. The noise exposure was designed to produce a temporary threshold shift. JP-8 + noise produced greater disruption of distortion product otoacoustic emissions as well as the auditory threshold than did noise alone. Supported by VA Rehabilitation Service grants and the American Petroleum Institute.