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Individual differences in human reactions to noise

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ABSTRACT

Humans don't just suffer in silence when exposed to environmental noise; most, however, become distressed, irritated, angry, aggressive, or upset. The paper presents individual factors that potentially modulate the effects of noise on annoyance, blood pressure, and sleep disturbances, as explored in various community studies and experimental settings. The paper highlights the impact of age, gender, and personality traits. High noise sensitivity plays a pivotal role in the association between noise exposure and annoyance, cardiovascular diseases, and poor physical and mental health. Furthermore, noise sensitivity may correlate with laterality / handedness, and self-reported anxiety and depression. More recent research investigates its association with misophonia, an abnormally strong emotional and behavioral reaction to specific provoking sounds. Experimental studies nowadays focus on sophisticated cardiovascular and hemodynamic parameters, oxidative stress and inflammatory biomarkers of individual noise exposure. Learning human reactions to noise should help public health authorities identify populations at risk from noise exposure, propose noise abatement measures, and implement public health protection actions.

Keywords (3-6): Noise, Annoyance, Misophonia, Hemodynamics, Biomarkers, Exposure