14th ICBEN 2023 18 - 22 JUNE BELGRADE

14th ICBEN Congress on Noise as a Public Health Problem

Auditory fatigue among professionals working in the amplified music sector

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ABSTRACT

Hearing disorders are common among professionals in the music sector, as they are frequently exposed to sound levels exceeding 100 dB(A). By assessing auditory fatigue, situations that are deleterious for hearing could be identified, allowing the deployment of preventive measures before permanent impairment occurs. However, little is known about the factors contributing to auditory fatigue. The objective is to determine the exposure parameters most influencing auditory fatigue during occupational exposure to amplified music.

Auditory fatigue was defined as variations of both pure tone auditory (ΔPTA) and efferent reflex thresholds (ΔER) during the workday. Noise exposure was monitored by noise dosimetry and information on the volunteers was gathered using a questionnaire.

The population consisted of adult volunteers exposed to music (sound, light or stage technicians, security agents, barmen) and unexposed controls (administrative staff).

ΔPTA and ΔER were positively correlated with the energy of noise exposure and its stability over time, *i.e,* a steady noise tends to create more auditory fatigue.

In addition to a global decrease of noise exposure, our results advocate for the provision of quiet periods within noise exposures as they reduce auditory fatigue accumulation and long-term risks for hearing.

Keywords : Noise, amplified music, occupational, efferent reflex, auditory fatigue.