ACOUSTICS2008/2398 The Healthy Benefits of Isolating Earphones

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With the ubiquitous presence of Personal Stereo Players (PSPs), namely iPodsTM and the like, many hearing conservationists have raised concerns about the temporary and permanent hearing damages that could result from long exposure to loud music playback, especially among adolescents and teenagers.

The crux of the problem can be identified as an overexposure of the auditory system. In order to reduce the dose received by the PSP listener, the playback level and/or the duration should be reduced. Assuming that the duration of the music playback experience is really up to the user, the remaining parameter is the music playback level. The purpose of this study is to first understand - from the available public and scientific literature - what factors are influencing the PSP playback level; and second, to investigate if the use of earphones featuring good attenuation of the ambient noise level would lead to a reduced playback level, hence a reduced dose and eventually less auditory damage. Other benefits on sound quality that are associated with isolating earphones will be presented in a third part. Finally the article will review other safety mechanisms that could be used in earphones and PSP to make them safe for the hearing.