

# **OTOTOXICITY IN THE SOUTH AFRICAN MINING INDUSTRY: A POSITION PAPER**

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Despite the attention that Noise-induced hearing loss (NIHL) prevention has received in the mining industry since 2003 when the milestone to eliminate NIHL was set, the statistics show that NIHL persists as one of the most common occupational diseases in the South African mining industry (Franz, Edwards, Stewart, & Cowen, 2009; Hermanus, 2006; Edwards & Kritzing, 2012). Our knowledge of the causes and the development of NIHL has increased dramatically since the condition of NIHL was first identified in the last century. We now know that the effects of noise and the interaction of noise with many other factors results in a complex pattern of individual susceptibility and a wide variety in the rate of development of NIHL. Ototoxicity or what has been described as “ear poisoning” (oto- = ear + toxic=poison), is one of the factors that we now know much more about. There is well documented evidence that exposure to chemicals on their own in a workplace, can cause ototoxicity in the form of permanent sensori-neural hearing loss together with symptoms of central hearing loss such as speech discrimination difficulties, as well as vestibular symptoms like dizziness, nausea and balance disturbances (Fuente & McPherson, 2006) . There is also extensive evidence that exposure to noise in combination with chemicals can accelerate the development of NIHL (Sliwinska-Kowalska et al., 2006; Sliwinska-Kowalska et al.,2007) .

Therefore this position paper asserts that exposure to chemicals in certain occupations and work activities in the mining industry can lead to ototoxicity which accentuates the problem of NIHL. Increased awareness of all factors that lead to NIHL, in particular ototoxicity in the mining industry, and the implementation of risk assessment and prevention measures can assist the industry in the quest to eliminate NIHL.