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Incidence of occupational noise-induced hearing loss in Poland in 1999–2006

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Introduction: Long-term and repeated exposure to high levels of noise causes every year hearing impairment in millions of workers throughout the world. Over 650 000 employees (of the total 5 million industrial workers) are at the risk of suffering this impairment in Poland.

The aim of this study is to show the epidemiological data on the occurrence of occupational noise-induced hearing loss (ONIHL) in the years 1999–2006 (and partly in 1992–1998).

Methods: Individual files of patients with the established diagnosis of ONIHL were statistically analyzed taking account of the following data: workplace (industrial branch) and its geographic location, noise exposure duration, and the subject's age. The files were derived from the central state register, where the data on all cases of occupational diseases, certified all over the country each year, are collected and processed.

Results: The analysis revealed that ONIHL is the most widespread nosologic unit, amounting (in some years) to 25% of the total prevalence, as compared to other 26 acknowledged work-related diseases. Over 36 new cases of ONIHL per 100 000 employees were identified annually in the years 1992–1998. However, since the beginning of 1999 this rate significantly decreased to 20 cases per year. The highest incidence was found in the key branches of industry, e.g., coal mining, iron and steel, metallurgical and transport equipment production; the majority of cases were registered in the southern and western provinces, mainly in Silesia, a mining basin of Poland. Workers aged 50–59 years and exposed to noise for over 20 years formed the most affected group of the population.

Conclusions: Occupational noise-induced hearing loss still remains a leading occupational disease; the decrease in its rate observed since 1999 may result from the introduction of the national program of hearing preservation established in the same year. The program makes pre-employment and follow-up pure tone audiometry obligatory to assure early detection of noise-induced damage and curb its progress.

