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Hearing disorders in musicians

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Exposition to loud sounds can cause hearing damage. In studies of Kähäri 74% of professional musicians demonstrated hearing problems, such as hearing loss, tinnitus, hyperacusis, distortion of sound, and diplacusis. It seems that average sound pressure levels of music have become higher and higher last decades, which can be the cause of greater number of hearing problems in musicians even attended by unfitness for work.

In The Netherlands the department of social affairs, the board of almost all professional symphony orchestras and the union of musicians concluded a treaty to improve a) information about hearing problems due to loud sounds, b) screening and prevention of hearing problems in musicians, c) hearing protection, and d) rehabilitation of hearing impairment in musicians. In the framework of this treaty we performed a study to the hearing capacity of 259 musicians who are members of five professional symphony orchestras in Amsterdam, The Hague and Arnhem. In this study we combined results of questionnaires and tone and speech audiometry in quiet and in noise with auditory filtering, tinnitus analysis, loudness scaling and oto-acoustic emission measurements to gain more insight into individual sensitivity to hearing damage due to exposition to loud music.

The results of this study (ref. Jansen) show that a lot of the musicians participating in our experiments complain about their hearing which is associated with the outcome of the measurements, less with tone audiometry, but more with loudness scaling and tinnitus analysis. Oto-acoustic emission measurements appear to be of great significance. We are now performing continuation measurements looking to the possible predictive value of OAE's with respect to regular audiometry.

Literatur:

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