

Abstract EFAS/DGA 2007

Changes in hearing of music students - repeated advanced measurements

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Musicians are extremely dependent on good hearing, and are also more at risk to become hearing-impaired than many others. It is therefore desirable to identify early signs of inner ear damage to prevent further development of a hearing impairment.

In a noise susceptibility project among Swedish conscripts the group of musicians was identified as especially affected. In a follow-up study connections were established with the Royal College of Music in Stockholm, Sweden. Recurrent measurements on a number of students were therefore added to the project.

It is worth mentioning that musicians and frequent music listeners often experience hearing problems such as hyperacusis and/or tinnitus without increased threshold. Such symptoms may originate from small lesions in the inner ear. Among students at the Royal College of Music in Stockholm, as many as 50% consider they have some type of hearing problems.

The hearing of 23 students at the Royal College of Music was measured once a year during a three-year period, starting during their first year at college. The test battery of measurements consisted of otoacoustic emissions such as transient evoked otoacoustic emissions with and without contralateral noise, distortion product otoacoustic emissions and spontaneous otoacoustic emissions. Furthermore, hearing thresholds with high accuracy, thresholds for brief tones in intensity-modulated noise, Hagerman's sentences in noise and forward masking were measured.

In addition the students filled in a questionnaire at each test occasion including questions about for example perceived hearing problems and amount of practice time.

