

Mixed martial arts - *Impact on hearing and tinnitus prevalence*

Background: Mixed martial arts (MMA) is a sport gaining popularity, especially amongst young individuals. This sport contains fist, kick, elbow and knee blows to the head, which are risk factors for hearing deficits associated with head trauma.

Methods: Pure tone audiometry, speech in noise test and tympanometry was performed on a group (N=11) of experienced MMA practitioners. In addition, perceived hearing status, including occurrence of tinnitus amongst the athletes (N=64), were assessed through an internet based questionnaire.

Results: Hearing levels were significantly worse at high (3000, 4000, 6000 Hz) frequencies amongst the competing MMA-athletes compared to the non-competing athletes tested with tone audiometry. A weak correlation between the length of MMA practice and perceived tinnitus was found.

Conclusion: Impact on hearing in MMA-athletes was found mainly in high frequencies amongst professional athletes. The findings are compatible with studies investigating hearing deficits related to sports-related concussion. Further, more in-depth longitudinal studies are needed to assess the individual consequences of practicing MMA amongst both men and women.