

# Prevalence of hearing loss among US adolescents has increased significantly

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Data from two nationally representative surveys indicates that the prevalence of hearing loss among U.S. adolescents increased by about 30 percent from 1988-1994 to 2005-2006, with 1 in 5 adolescents having hearing loss in 2005-2006, according to a study in the August 18 issue of *JAMA*.

Hearing loss is a common sensory disorder, affecting tens of millions of individuals of all ages in the United States. Adolescent hearing loss, although common, is not well understood, and can have important educational and social implications, according to background information in the article. Some risk factors, such as loud sound exposure from listening to music, may be of particular importance to adolescents.

Josef Shargorodsky, M.D., M.P.H., of Brigham and Women's Hospital, Boston, and colleagues examined 2 comparable databases to evaluate whether there has been a change in the prevalence of hearing loss and to assess characteristics of hearing impairment in the 12-to 19-year-old age group. The databases were the Third [National Health and Nutrition Examination Survey](#) (NHANES III), 1988-1994, and NHANES 2005-2006. NHANES III examined 2,928 participants and NHANES 2005-2006 examined 1,771 participants, ages 12 to 19 years. Audiometrically determined hearing loss was categorized as either unilateral or bilateral for low frequency (0.5, 1, and 2 kilohertz [kHz]) or high frequency (3, 4, 6, and 8 kHz), and as slight loss (greater than 15 to less than 25 decibels [dB]) or mild or greater loss (25 dB or greater)

according to hearing sensitivity in the worse ear.

An analysis of the data indicated that the prevalence of any hearing loss among 12- to 19-year olds was 14.9 percent in 1988-1994 and 19.5 percent (approximately 6.5 million individuals) in 2005-2006, representing a 31 percent increase in the prevalence of hearing loss over this time. The majority of hearing loss was slight. The prevalence of any unilateral hearing loss was 11.1 percent in 1988-1994 and 14.0 percent in 2005-2006, and any bilateral hearing loss was 3.8 percent and 5.5 percent, respectively. Any high-frequency hearing loss (prevalence, 12.8 percent in 1988-1994; prevalence, 16.4 percent in 2005-2006) was more common than any low-frequency hearing loss (prevalence, 6.1 percent in 1988-1994; prevalence, 9.0 percent in 2005-2006) in both survey cycles.

The prevalence of mild or worse hearing loss was significantly higher in NHANES 2005-2006 than in the 1988-1994 cycle, representing a 77 percent increase. Females were significantly less likely than males to demonstrate any hearing loss in 2005-2006. Histories of 3 or more ear infections, firearm use, and loud noise exposure for 5 or more hours in a week were not significantly associated with any hearing loss in 2005-2006. Individuals from families below the federal poverty threshold had significantly higher odds of hearing loss than those above the threshold.

"The prevalence of hearing loss among a sample of U.S. adolescents aged 12 to 19 years was greater in 2005-2006 compared with 1988-1994. Further studies are needed to determine reasons for this increase and to identify potential modifiable risk factors to prevent the development of hearing loss," the authors conclude.

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