

# Hockey Games: Hard On Your Hearing?

Thousands of fans who attend raucous hockey games on a frequent basis are at risk of damaging their hearing, warns a study that was released Monday.

The study says the threat extends to season-ticket holders, arena workers, and even hockey players. It urges fans to use ear plugs to make Canada's national pastime a little easier on the ears. The authors of the study, which will be published Tuesday in the *Canadian Medical Association Journal*, are University of Alberta's assistant professor in the department of speech pathology and audiology Bill Hodgetts and otolaryngologist Dr. Richard Liu.



Say Hodgetts and Liu, "We live in an increasingly clamorous world, and many of our occupations and leisure activities are potentially hazardous to hearing...More than ever before, there is a need to broaden awareness and better educate everyone about the need to protect hearing, both at work and at play."

To better assess what hockey fans are exposing themselves to, Liu and his wife attended three games of the 2006 National Hockey League Stanley Cup playoff games. During game three of the series, the authors reported obvious spikes in the noise levels. Eight hours of noise at 85 decibels is considered the maximum allowable daily noise, but scientists watched levels shoot far past that, hitting 93 decibels during intermissions and well over 120 decibels when a goal was scored. According to the study's authors, 120 decibels is roughly equivalent to the sound level of a jet taking flight. The total noise exposure per game -- roughly three hours -- averaged 104 decibels.

"To give you some sort of sense of what 104 decibels is like, it wouldn't be much different than having a chainsaw a metre to a metre and a half away from you, running for three hours," Hodgetts told CTV News.

By law, an employee working at a factory enduring the same level of noise would have to wear hearing protection after just six minutes. Anyone at the arena who was not wearing hearing protection received about 8,100 per cent of their daily allowable noise dose, the study found.

One of the subjects of the study experienced a temporary threshold shift of 20 decibels in one year. The authors say that this shift, which represents a real change in hearing status, usually disappears in a day or two. If the ears are subjected to further noise exposure before full recovery, the temporary threshold shift may become permanent. Both subjects described the world as sounding muffled after the games, and both experienced mild ringing tinnitus.

The study warns that excessive exposure to loud sounds is the leading cause of preventable hearing loss and that most cases of noise-induced hearing loss are due to occupational exposure.

"The importance of hearing protection in the workplace is now well recognized, and most industries in North America have programs and regulations in place to ensure the hearing health of their workers," the study says.

"Far less attention has been paid to auditory damage caused by noise outside of work. ... Therefore, there is a growing need to increase awareness of potential sources of damaging sounds and education about the use of hearing protection during leisure pursuits."

*Source: Favaro, Avis and St. Philip, Elizabeth. CTV.ca News Team, "Study warns hockey fans of hearing loss." December 4, 2006.*