

U-M researchers: Turn down the volume

December 6 2013, by Laurel Thomas Gnagey

As the nation continues to focus on health care prevention through reform, one cause of serious illness and even death gets ignored—environmental noise pollution.

Researchers at the University of Michigan School of Public Health and the Network for Public Health Law say the problem not only takes its toll on hearing but contributes to heart disease, hypertension, sleep disturbances, stress, learning problems and even injuries.

"I can't think of any other environmental hazard that affects so many people and yet it is so ignored," said Rick Neitzel, U-M assistant professor of environmental science.

In an article published today in *Environmental Health Perspectives*, Neitzel and colleague Monica Hammer lay out a case for federal, state and local officials to address the issue that impacts an estimated 104 million people exposed at levels loud enough to cause serious noise-related [health problems](#).

"Everyone complains about noise, yet we do virtually nothing about it in this country," Neitzel said. "Noise is really up there in terms of [health](#) problems it causes, but it gets no attention—especially compared to other common exposures such as air pollution.

"There are a lot of assumptions that noise exposure is self-inflicted, which is often not the case. We'd like to have people see connections beyond hearing loss and expand the conversation."

In the article, Neitzel and Hammer call for noise to be included in the federal [public health](#) agenda and suggest ways state and local governments can then use the law to enact their own prevention measures to cover any shortfalls. The researchers point out that Congress has not considered the subject of noise in more than 30 years.

Included in their recommendations for the U.S. National Prevention Strategy, an organization representing 17 federal agencies responsible for prevention goals under the Affordable Care Act, are suggestions that the NPS:

- Exert [noise control](#) through direct regulation, setting maximum emissions levels.
- Require emissions disclosure on products, such as children's toys.
- Improve information dissemination about the dangers of noise.
- Conduct more research to fully understand the impact of noise on the population.

The researchers also suggest ways states and local governments could fill the gaps:

- Enact regulations on sources of noise that aren't covered by the Environmental Protection Agency or other federal agency.
- Adopt procurement policies to reduce community noise caused by construction, emergency vehicles and maintenance equipment.
- Take steps to build or renovate housing that protects people from noise.

The EPA has recommended limits over a 24-hour period for [noise exposure](#) in residential areas of 55 A-weighted decibels (dBA) to protect the public from all adverse health effects, and 70 dBA to prevent hearing loss.

People are exposed to [noise levels](#) beyond these recommendations, often due to a cumulative effect from road and rail traffic, air transportation, occupational and industrial activities, amplified music, recreational activities and firearms.

Neitzel's recent research includes a 2012 study showing that 90 percent of New York City urban mass transit riders may be at risk of some permanent, irreversible noise-induced [hearing loss](#) caused by train and occupational noises and Mp3 player use.

"Evidence shows that people exposed to unwanted [noise](#) develop a learned helplessness response. We end up believing that there is nothing that can be done to change our environment, when in fact there are many options available to us," said Hammer, Robert Wood Johnson Foundation Visiting Attorney at the Network for Public Health Law Mid-States Region at U-M.

"Right now with the move to a national comprehensive health system, it pays to focus on prevention. If you only look at it from a monetary standpoint, we can save dollars in the long term and keep people healthy and living longer."

Provided by University of Michigan

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