

A risk of exposure to noise and air pollution to human health

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The World Health Organization (WHO) pays attention to the evidence highlighting the necessity of sustainable approach of health, environment and transport interaction. Frequently, the influence of physical or chemical pollution that are associated with a certain risk to human health, are evaluated separately. The cumulative effect of both could have significant impact to human health, for instance, to cause cardiovascular diseases. The intention of the study is to determine the risk of the cumulative effect of city traffic noise and air pollution on population health and to propose measures to reduce the risk. The measurements of the transport equivalent noise level, particulate matter (PM₁₀) and nitrogen dioxide (NO₂) emissions were carried out at the most noisy and polluted areas of the city. At the same time the citizens opinion poll regarding their health state was organized. The evaluation of noise levels as well as certain pollutants concentrations in the ambient air and their possible cumulative risk to human health was fulfilled.

The suggestions on how to reduce the negative health risk of transport noise and air pollution were proposed. The results of the measurements performed and the questionnaire survey suggest that the inhabitants of the city are exposed to the interaction of noise and certain air pollutants. The assessments of the state of the health submitted by the respondents were correct and in accordance with vehicles noise and outdoor air pollution levels. As a consequence, people are at risk of cardiovascular and respiratory diseases. The most sensitive population group of transport impact caused by noise and air pollution is elderly people.

Speaker Biography

Olga Anne has completed her PhD from Moscow Chemical Technological University, Russia. She is the Senior Researcher/Professor of Klaipeda University, Lithuania. She has over 60 publications in pre-reviewed journals and 17 of them are in ISI WOS journals that have been cited over 45 times.

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