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The human health risk assessment from contaminated air in the oil-producing areas (on the example of Novoshehminsky Region of the Republic of Tatarstan)

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Abstract

© 2014 AENSI Publisher All rights reserved. Based on the analysis of the monitoring results the air quality evaluation is provided and the incidence level of oil-producing Novosheshminsky region of the Republic of Tatarstan during the period of 2005-2009. Despite the satisfactory air quality, there is the growth of a number of systemic and autoimmune diseases (blood, blood-forming organs diseases, cancer, the endocrine system diseases) among the district population. The calculated level of non-cancer inhalation risk to public health made 11.0 (extremely high) for children and 2.4 (average) for an adult. The exponential nature of the relationship between the blood diseases, blood-forming organs, autoimmune diseases spread among children and the value of non-cancer risk reflects the presence of the cumulative effect of exposure to low concentrations of pollutants in ambient air on the most vulnerable children of the population.

Keywords

Air pollution, Human health risk assessment, Oil production