

# Effects of short-term weather changes in Naberezhnye Chelny city on people suffering from ischemic heart disease

Emelina S., Rubinshtein K., Gur'yanov V., Perevedentsev Y., Ivanov A.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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## Abstract

© 2015, Allerton Press, Inc. Studied are the effects that variations of meteorological parameters at different time scales in Naberezhnye Chelny city produce on people suffering from ischemic heart disease. The number of ambulance calls from 2010 to 2012, meteorological parameters, and some biometeorological indices are compared by the cross-correlation analysis. Demonstrated is the absence of statistically significant correlation between the daily series of ambulance calls due to ischemic heart disease during the period under study, on the one hand, and average daily series of major meteorological parameters and the most frequently used biometeorological indices, on the other hand. Revealed is the correlation between the number of ambulance calls and the intradaily variations of air pressure and air temperature at the time scale of 3 hours. Proposed is a parameter (biometeorological index of weather effects, IWE) taking into account the total effects of intradaily variations of air pressure and air temperature and characterized by statistically significant correlation with the number of ambulance calls made by people suffering from ischemic heart disease.

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## Keywords

biometeorological index, Medical weather forecast