Geophysical Research Abstracts,
Vol. 10, EGU2008-A-04347, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-04347
EGU General Assembly 2008
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Abrupt weather changes and atmospheric pollution influence on sickness and death rates (for Moscow and Caucasian Mineral Waters regions).

I. Granberg (1), G Golitsyn (1), A. Razumov (2), N. Istoshin (3), A. Ginzburg (1), N. Efimenko (3), A. Rogoza (4), A. Alekhin (5), E. Chalaya (3), B. Revich (6), E. Semutnikova (7), I. Belikov (1), L. Maximenkov (1), K. Rubinstein (8), N. Povolotskaya (3), D. Shaposhnikov (6)

(1) A.M.Obukhov Institute of Atmospheric Physics, Russian Academy of Sciences, Moscow, Russia, (2) Federal state institution “Russian Research Center of Rehabilitation Medicine and Balneology of Rosszdrav”, Moscow, Russia, (3) State institution "Pyatigorsk State Research Institute of Curortology of the Ministry of Public Health of Russian Federation”, Pyatigorsk, Stavropol region, Russia, (4) Russian Cardiovascular Scientific and Production Complex of Roszdrav, Moscow, Russia, (5) Central Clinical Hospital of the Russian Academy of Sciences, Moscow, Russia, (6) Institute of Forecasting of the Russian Academy of Sciences, Moscow, Russia, (7) State Nature-Conservative Center “Mosecomonitoring”, Moscow, Russia, (8) State institution “Hydrometeorological Center of Russia”, Moscow, Russia (igranberg@gmail.com / Fax: +7 495 951 13 47 / Phone: +7 495 953 21 58)

The clinical reactions caused by the weather factors were called “meteotropic reactions”. The human organism property to respond to the influence of any weather factor by the development of physiological, pre pathological or pathological reaction called “meteorology sensitivity”. Improved methodology for predicting biotropic types of weather needed to improve the meteorology depended people filling under the weather changes, such as extreme temperatures and pressure changes, because the high «meteorology sensitivity seriously affects human feeling and worsens over patients diseases. It was found that even among healthy people going up to 35-45% are meteorology sensitive.

The influence of heat and cold waves on mortality rate is very significant. In July 2001

Moscow has experienced unusually long heat wave, in which the mean temperature exceeded a threshold of 25˚C for 9 consecutive days (with the long term mean "normal" 3 days per year). The daily mortality in a maximum wave reached a record high, exceeding the average mortality multiyear value for July (mathematic expectation) on 93%.

To solve the problem of physical condition of meteorology depended people under the weather change, including extreme temperatures and pressures, the growth recorded atmospheric pollution, the task of improving the methodology updated integrated assessment «biotropic» types of weather, which often cause aggravation of various diseases. Our previous studies have shown the possibility of such an integrated assessment in the form of the «Weather Pathogenic Index» (WPI). This system, which includes the creation of the medical assessment of weather and «Weather Pathogenic Index» (WPI), currently developed for recreational Caucasian Mineral Waters region. Currently in the framework of the Presidium of the Russian Academy of Sciences fundamental research program "Basic Science for Medicine" and RFBR 07-05-12069 project, the system is adapting now to the large cities condition.

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