

DEVIATIONS OF THE SEASONAL PREVALENCE OF BIRTHS IN THE GENERAL POPULATION AND AT CHILDREN WITH AUTISM

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Negative dynamics of births of Ukrainians is well-known in the last decades. In comparison with the 60th the quantity of births in 2000s decreased more than by 3 times. In the scientific and popular press there are statements of experts specifying the population, namely about the tendency to the *extinction* of Ukrainians, impossibility of the return to 52 million population which the country had on the independence threshold. The factors, capable to brake the birth rate, first of all are social and psychological instability in the country, the population impoverishment with a significant amount of the educated people understandably seeking to limit themselves to the birth of 1 or 2 children. And the last thing is not enough for the simple reproduction of the population.

The seasonal prevalence of births in 60–70s the Soviet Union as a whole and in Ukraine was rather monotonous: a sharp increase in January and a gradual essential decrease till December were noted. Always it was explained by spring shifts of the hormonal background of the population and the related success of conceptions in April and the next months i.e. these

phenomena relating to one of the signs of the natural selection are possible to refer to a certain confidence to the indicators of the population biological stability.

In this work the mathematical approaches were used in the laboratory of epigenetics (under the direction of A. M. Vayserman) of Institute of gerontology (Kiev). The distribution on the months of births of 32027318 people who were born in Ukraine for 1960–2009 was studied. The birth rate frequencies in each of ten-year cohorts were counted by means of a standard method of pseudo-cohorts designing. For every month of the birth the ratio of the observed frequencies of the birth rate to the expected ones was calculated. In the last two decades some shift was found in the optimum of births (according to the optimum of conceptions) for 6 months. In particular, the birth rate increase was displaced towards the summer-autumnal months i.e. one more sign of a dangerous tendency in the development of this population was found.

The obtained data were used when studying the birth rate of 658 mentally ill children. In particular, within a year the monthly analysis of the birth rate of children with the deviations in the mentality development (children's autism) also showed an existence of the *optimum* and *passimum* (the lowest level) of the births which are authentically different on the terms of manifestations from the seasonal fluctuations in the general population. However, it was not confirmed in relation to the children with the organic affection of the brain and cognitive disorders.

LABORATORY ESSENCE OF ADAPTIVE CHANGES ERYSIPELAS ON THE FACE



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OBJECTIVE

Establish the nature of the metabolic (biochemical and hemocoagulation) changes in primary ery-