

lead to a decrease in consuming traditional foods among the indigenous people of the Russian Arctic. Our data support the notion that the traditional northern diet promotes healthy vitamin D levels, while adherence to the “western” type of diet correlates with a lower 25OHD concentration. Supported by 026-F grant of the Perm State Pedagogical University.

Key words: *nutrition, lifestyle, vitamin D, 25OHD, indigenous people, circumpolar regions, Arctic*

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TO THE BIOARCHAEOLOGY OF CHILDREN’S BURIALS FROM GONUR-DEPE BRONZE AGE SITE, TURKMENISTAN

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The aim of this communication is to discuss the results of bioarchaeological investigations of the remains from Gonur-depe tombs, where sub-adult human beings were buried. Gonur-depe is a well-known Bactria-Margiana archaeological complex site (Southern Turkmenistan, III–II mill. BC). The skeletal remains of 37 individuals received from 36 tombs in 2009–2010 excavation are analyzed. The sample has such an age structure: 8.3% belongs to the fetus and newborns, 30.6% - to children less than 1 year, 30.6% - to 1–3 year-olds, 8.3% - to 4–6 year-olds, 11.1% - to 7–9 year-olds, 8.3% - to 10–12 year-olds and 2.8% - to 12–15 year-olds. Cribra orbitalia was the most common stress marker. Distribution of this indicator shows significant differences between the infantilis I and infantilis II age subgroups. Variability of the long bones was considered separately for each age interval. Deviations from the M. Maresh standards were calculated by dividing the individual values of the parameter to the age standard ones. Individual deviations from the age standards vary in the range of 0.73–1.02 (average value – 0.90). Proximal segments of the extremities reveal a greater delay in growth rather than the distal ones. The infants aged 0.2–2 years demonstrate the smallest “lag” from age standards of longitudinal growth rates. Primary distal growth in the sub-adult sample is connected with the dolicho- and mesomorphic types of body proportions (relatively elongated forearm and calf). Overall, the results of bioarchaeological research of the sub-adult burials from Gonur-depe confirm once more the thesis about good adaptation of this ancient group to the local environmental conditions and show that main body proportions of the adaptive types according to Tatyana Alexeeva (in this case – the Arid one) are formed in the early childhood. The investigations are supported by the Russian Fund for Basic Research (project 13-06-00233a).

Key words: *bioarchaeology, children’s burials, Arid adaptive type, Turkmenistan, Bronze Age*

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CROW’S INDICES OF DIFFERENTIAL FERTILITY IN RUSSIA’S TWO LARGEST CITIES: INTERETHNIC VARIATION AND SECULAR TRENDS

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Using Russia’s 2002 census data, population replacement parameters and Crow’s indices of the opportunity for selection have been analyzed in Moscow and St.-Petersburg in 7 cohorts of females with completed fertility (years of birth from the early 20th century till 1962). During the whole time period, average number of births per female (kav) in 5 ethnic groups under study (Russians, Ukrainians, Byelorussians, Tatars and Jews) was less than 2, that is not enough even for simple population replacement. In female 1953–1957 birth cohort kav varies from 1.33 (Jews) to 1.61 (Tatars). Proportion of infertile females (having no births) in two megalopolises is considerably larger (up to 20% in the senior age cohorts) than in populations with traditional culture. Selection component due to differential fertility (I_f) was high in female cohorts born before the 2nd

World War, and later kept stable at 0.3–0.4, mostly due to relative stabilization of interfamily variation in fertility (family planning and birth control, predominantly by means of medical abortions). Component due to differential prereproductive mortality, I_m , has shown a 50-fold decrease during the 20th century as a result of social progress and improvements in medical care, and nowadays attained negligible values (<0.03). It means that in these urban populations process of selection relaxation, with respect to both components – I_f and I_m , has been almost completed. An important predictable consequence of selection relaxation is an increase of population genetic load, which implies further development of genetic counseling. Intensity of intergroup selection (based on interethnic variation in birth rates within each megalopolis), is many times lower than that of intragroup selection (interfamily variation), and also tends to decrease, presumably, as a result of demographic transition – changes of migrant's reproductive behaviour in urban environment. Judging by 1926 census data, at that time interethnic differentials in vital statistics in Moscow were much more significant than now, and almost all ethnic groups demonstrated a positive natural increase.

Key words: Crow's indices, fertility, mortality, selection relaxation, urban populations, interethnic differentials

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COMPARATIVE ANALYSIS OF PHYSICAL DEVELOPMENT OF SCHOOLCHILDREN FROM DIFFERENT COUNTRIES

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Comparative analysis of the main indices of physical development of children, teen-agers and youth at the age of 7–17 years from Belarus, Russia, Poland, Serbia, Bulgaria and Estonia was performed. All samples were examined in the late 1990's – early 2000's. Through decades and from one generation to another, changes in physical development of children and youth, in different territorial and ethnic groups are important to study. In Belarus, studies of children and youth physical development were conducted by the team of the Department of Anthropology and Ecology, Institute of History, National Academy of Sciences, from the beginning of 1980's till the beginning of the 21st century. Studies in Belarus were held in different parts of the Republic. Total number of the examined was 5744 persons (2900 males, and 2844 females). It was shown that the positive secular trend was going on in the populations of towns and villages in the 1990's, and that urbanization is an important factor influencing the age of puberty. The study also demonstrated local variations in growth patterns under extreme environmental conditions, and exposed different growth rates in Belarusian schoolchildren at the age period from 7-17 years. Annual growth rates in stature have been also analyzed in schoolchildren from different countries. On the whole, the variations of main physical parameters in children and youth showed similarities and differences in the examined ethno-territorial groups. Belarusian children of both sexes showed closest tendencies in growth dynamics with Russians and Poles, and boys also with Bulgarians. The tallest children are Serbians and Estonians. As in the case with height, Belarusian children of both sexes are similar in body weight to the Russians and Poles. Similar to height, the biggest differences are seen between Belarusian and Estonian children. According to the rates of growth, Belarusian children of 7 to 17 years old are similar to the other ethno-territorial groups, as maximal growth and weight gain is seen in similar age periods.

Key words: physical development, schoolchildren, comparative analysis, ethno-territorial groups

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