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POLICY OF HEALTHY NUTRITION OF SAKHA REPUBLIC (YAKUTIA) POPULATION

ABSTRACT

The generalized materials of the priority directions of a state policy in the field of healthy food of the population in extreme conditions of the North are presented in article; results of epidemiological, hygienic and clinical trials. Questions of quality and safety of food, maintaining food and innovative policy in the region, development of modern food technologies and creation of new types of food of a functional purpose are considered. Regional aspects of optimization of food structure of various groups of the population, including pregnant women and nursing mothers, children and adolescents, youth and adult population with various nutritional and dietary requirements are shown. The leading role of the Centers of health and offices of healthy food in formation among the population of skills and feeding culture and prevention of the diseases connected with food violation is defined. Mechanisms of creation of effective information system in the field of monitoring of food, promotion and promoting of ideas of healthy food are offered.

Keywords: policy of healthy food, extreme conditions, fundamental bases, regional aspects, food optimization, Health centers, nutritiology,

Balanced, rational food based on ethnic peculiarities is the backbone of every person. Correct and optimal nutrition is firstly and foremost nutrition completely supplying all human demands in energy and other major nutrients: proteins, fats, carbohydrates, dietary fibers, minerals, microelements, and other biologically active components.

The Far North and climatically equal areas comprise more than 60% of the Russian territory. And, extremely severe natural and climatic conditions of the Sakha Republic (Yakutia) demand higher requirements to the population's health. Insurance of optimal life activity of people in this area, particularly supply with adequate nutrition is of great social and medical significance in the period of economic transformations.

Alterations in nutrition character lead to development of diseases related to metabolic disadaptation. Among them are cases of ischemic heart and brain diseases, arterial hypertension, metabolic diseases, i.e. obesity, diabetes, pathology of locomotor system, anemia, digestive tract diseases, etc. which are significantly common among indigenous and newly arrived populations of the republic during last 2-3 decades. According to data of the Territorial body of the Federal Service for Statistics in the Sakha Republic, during recent 5 years the dynamics of endocrine system, metabolism, and immune system diseases show a 22% increase, and blood circulation system diseases rose by 45,6%. Anemia cases in the Sakha Republic exceed average Russian rates by 1.7, obesity cases by 1.1, gallbladder and biliary tract diseases by 1.3, liver diseases by 2.6 paza and pancreas diseases by 1.6.

Mother and child health is one of the most significant indices defining the economic, intellectual, and cultural potential of a country. Good nutrition of a pregnant female and breastfeeding mother, support of breastfeeding make major conditions of birth, growth, and development of a healthy child. In spite of obvious

advantages of breastfeeding recommended by WHO and UNICEF for first years, the system of breastfeeding support is underdeveloped in Sakha. Currently, the issues of organization of pregnant female and breastfeeding mother feeding are in the focus in the republic. Results of the research work evidence a significant contribution of malnutrition of pregnant and breastfeeding women in development of complications during pregnancy, childbirth and puerperium.

According to the 2014 data, lower levels of breastfeeding distribution are noted in Sakha people. In recent decades, the number of infants on breastfeeding up to 6 months stays on the level and ranges from 48.1% to 51.3%. By the first year, the number of breastfed infants falls almost 2 times, 26.7% and 29.5% , respectively. Meanwhile, an effective experience of work of the Obstetric Hospital of the Yakut Clinical Hospital should be noted. During 6 years of active support of breastfeeding within the framework of the international program “Hospital friendly to a Child”, level of breastfeeding increased from 60% to 99%.

Support of breastfeeding in the Sakha Republic is one of the priorities of health care, while the work on awareness promotion, support, and stimulation of breastfeeding is extremely important and is worth of a special attention.

Educational institutions make a unified system of public education encompassing during a long period of time all children and adolescent population of the republic. More than 70 % of children and teenagers spend the most part of a day in preschool and school educational institutions. The education and training period in the educational organization coincides with the period of growth and development of a child when an organism is most sensitive to influence of various factors of environment. In the meantime, fast growth and intensive processes of metabolism, demand constant food receipt of enough qualitative fibers, fats, carbohydrates, vitamins, mineral salts and microcells. However, population monitoring researches of the last years (2008-2014) conducted by employees of the Center of Nutrition SRI of health NEFU of M.K.Ammosov in three medical and economic zones of the republic testify to essential deviances of variety of food substances at children and teenagers' nutrition , first of all, vitamins A, With, B₂, iron and calcium, iodine, polynonsaturated fat acids, food fibres. Results of these researches have shown authentic communication of poor-quality food with development of iron-deficient conditions and anemias, osteopenic conditions and osteoporosis, iodine defficient conditions and endocrinopathy. The dynamics rates during the last decades evidences statistically relevant increase of obesity cases among the youth population of the Sakha Republic. Prevalence of obesity in agricultural regions (from 2.6 to 11.3) was statistically lower than that in the Arctic (from 4.6 to 14.6 (3 times)) and industrial (from 5.9 to 17.2 (4 times per 1000 children) regions.

Due to imbalance in school feeding, health and anthropogenic characteristics of children and adolescents deteriorate from junior to senior grades. Currently, less than 5% of junior year pupils are to be considered absolutely healthy. In senior year student groups, these rates are reduced to 2%. In view of this, implementation of the federal program on updating school feeding programs in 2010-2011 contributed into positive trends in feeding of children and adolescents in educational institutions of the Sakha Republic. During this time, 22 pilot schools of the Sakha Republic (the Megino-Kangalasskyi, Khantalsskyi, and Olekminskyu regions) were equipped with modern technologies to provide schools with hot meals twice a day. Following implementation of the project, a network of agricultural schools promoting the idea of healthy food is being established.

By data of the Department of the Federal Service for Consumer Rights in the Sakha Republic, during previous 3 years, the portion of the 3rd group subjects decreased by 1.5, while that of the 1st group favorable in terms of sanitary and epidemiological requirements increased by 3.6%.

In 2014, coverage of schools by hot meals increased from 97% to 99% (in the Russian Federation - 85.1%), by age groups: 100% (in the Russian Federation-95.4%) of 1-4 years; 99.2% (in the Russian Federation – 77.5%) of 5-11 years. In 2014, 58% of school children are fed 2 times a day with hot meals (in Russia - 26.6%), which is 8% higher as compared with rates of 2012. School meals being unvaried do not meet physiological requirements of children in energy and nutrients for normal functioning of their organism. The portion of 3-5 group school children (with chronic diseases) in schools where hot meals are served made 13% (in Russia-21.5%).

In 2011-2013, the number of ready-made dishes that do not meet hygienic standards by sanitary-chemical and microbiological characteristics is shown to decrease (by 0.3% and 1.0% respectively), while the portion of samples not conforming with standards by calorie and vitamin C content has increased by 11.2%.

Major problems in optimization of feeding in educational institutions of the Sakha Republic are the absence of systematized organization of children and adolescent feeding; insufficient quality equipment and material-technical base of kitchens and canteens; the lack of nutrition units for pre-school and school feeding; the lack of unified menus according to physiological requirements of children and adolescents in view of peculiarities of their living conditions, education, and eating habits; problems of provision of rural schools with cold and hot water; the lack of the nutrition monitoring system; insufficiently developed transportation infrastructure in Sakha, food products are delivered to remote northern areas during short navigation period by air, which complicates supply of educational institutions with food products, and thus- organizations of feeding at kindergartens and schools; understaffed and not staffed educational institutions in terms of qualified professionals in catering.

Resulting from nutrition imbalance during study, a lot of students develop digestive tract diseases, anemia, hypertension, neuroses, etc. Results of research into actual feeding of vocational and higher educational institution students in Sakha evidenced lack in their diet of such relevant food products as dairy products, fish, and eggs. Their dietary intake showed excessive use of bakery, confectionary, sugar products and sweets.

Also issues of catering in welfare, medical and prophylactic institutions of Sakha are of great importance: lack of qualified professionals, insufficient supply with high-quality food products, lack of special products, etc.

Major reasons of reduction of the long living people number are unhealthy lifestyle, improper eating habits, low supply of the population with local food products, usage of imported foods. The average female life-span in Sakha makes 71.4 years, in males – 58 years. The difference makes 13.4 years (Demographic situation in rural areas of the RS(Y). – Yakutsk, 2007. – P.17.)

For the recent years an increase of anthropogenic and technogenic human-made impacts on the environment can be noted. Under extreme climatic conditions of Yakutia, environmental contamination rates are exclusively high. In this context, special attention is given to monitoring of contamination of the environment with various toxic substances along the food chain: soil→plants→crop sector and animal husbandry production→human. In Yakutia, the dominant indicators are the Yakutian horse and reindeer meat, passing the whole year, river and lake fish, plant growing production, and organic herbs. The most important indicators of the environmental state are health, disease rates in agreement with social and economic factors, sanitary and hygienic conditions, the ecological state of the environs, and the quality of food products.

Results of monitoring of the quality and safety of food material and food products evidence that during the last 2 decades, the portion of production not meeting the microbiological standards ranges between 12-11%, while in 2014 год this rate made 9.5%, thus exceeding an average Russian rates twice (In 2013, the Russian rates were equal to 4.6%). However, the last decade witnesses the stable trend towards reduction of volumes of substandard food samples: in milk and dairy products - by 2.1 (in 2000 - 20.2%, in 2014- 9.5%); in meat and meat products -



by 1.7 (in 2000- 11.6%, 2014 - 6.5); in bakery- by 1.5 (in 2000 - 10.5%, in 2014 - 6.7%). In Sakha people, a tendency of lower volumes of chemically substandard food samples has been noted: from 5.8% in 1997 to 0.5% in 2014, which is at the similar level as the Russian average (in Russia, in 2013- 0.6%). According to data of the Department of the Federal Service for Consumer Rights in the Sakha Republic, during last 8 years, a decrease of volumes of substandard food samples in terms of parasitological sanitary-epidemiological requirements by 0.5% (from 1.6% in 2007 to 1.1% in 2014) is observed.

The absence of unified feeding system results in various interpretations in elaboration of various programs on production, food supply, and distribution of budgetary funds, and rational nutrition of population in the Sakha Republic.

Many aspects of eating habits of indigenous population of the Extreme North: dairy products, kumyss-fermented milk, saltless diet, frequent consumption of food (particularly, fats) under low temperatures, etc. are considered reasonable and useful in terms of hygiene. The Sakha Republic holds unique natural raw materials to produce foods for common and special-purpose usage.

Under current ecological conditions, our objective is re-orientation of communities to consumption of healthy food products.

In the Russian Federation, state programs are operating aimed at improvement of nutrition, as one of the most important factors defining health of the population. Implementation of adopted documents in the Russian Federation subjects requires updating considering regional peculiarities and traditions.

To facilitate awareness of healthy food links with population health, since 2001, the Research Institute for Nutrition, North-Eastern Federal University, has begun monitoring actual feeding and eating habits of various group population living in Sakha, including the most fragile groups of pregnant females, breastfeeding mothers, children, adolescents, and elderly people. This work is performed within the framework of implementation of the Concept of State Policy in Healthy Nutrition of the Sakha Republic Population.

The Sakha Republic is a participant in international programs, one of which is prediction of chronic non-contagious diseases (CINDI). work on awareness creation of healthy lifestyle, including healthy eating habits is performed using the network of medical prophylaxis divisions and Centres for Healthcare, Health Ministry, Sakha Republic. In medical centers work Schools of Health, including programs of Schools of Nutrition and Schools of Breastfeeding aimed at medical workers and wider population (The order of the Health Ministry, Sakha Republic "On Extension of Network of Schools of Health №01-8/4-17, 26.01.2005.).

One more international program is "Mother and Child" on breastfeeding support which has been implemented since 2005. Improvement of the legislative basis of the Russian health care system aimed at protection and support of breastfeeding, implementation of the WHO and UNICEF initiative "Hospital Friendly to a Child" at obstetrics and child care centers distribute into positive dynamics of breastfeeding promotion. Within the framework of the program, in April, 2012, two medical organizations of the Ministry of Health RS(Y) were granted with international certificates "Hospital Friendly to a Child". The next step in breastfeeding promotion was establishment of the Scientific and Practical Center for Support, Promotion, and Stimulation of Breastfeeding, Health Ministry, Sakha Republic, and the Coordination Council on Support, Promotion, and Stimulation of Breastfeeding, Health Ministry, Sakha Republic in November, 2012 (the order of the Health Ministry, Sakha Republic "On Establishment of the Coordination Council on Support, Promotion, and Stimulation of Breastfeeding, Health Ministry, Sakha Republic", №01-8/4-1936, 17.11.2012.).

A special attention is given to children feeding. In 2006, by the decree of the Sakha Republic President was adopted the Sakha Republic Law "On Authorization of Bodies of Self-Governance of Municipal Districts and Regions of the Sakha Republic with State Powers of Provision of Children up to Three Years with Free of Charge Feeding" №2533, 07. 02. 2006.), which was prolonged by the decree of the Sakha Republic government, 16.04.2015, №105 "On the Order of Provision of Pregnant Women, Feeding Mothers, and Children up to Three Years with Feeding in the Sakha Republic (Yakutia)".

Issues of prediction and treatment of child diseases connected with feeding disorders are of special interest at advanced-level courses for medical workers on Sakha. Employees of children medical, recreational, vocational, higher educational, and research institutions studied at professional advancement courses.

In accordance with the "Plan of Organizational Activities of the Sakha Republic Government, 2010-2012", the session of the Scientific Council on Medical Problems of Nutrition, Russian Academy of Medical Sciences "Problems of Sakha Republic Population Nutrition" was conducted for the first time in Sakha, and the inter regional scientific-practical conference " Nutrition as Basis of Healthy Life and Population Health in the North" with participation of the Research Institute of Nutrition, leading Russian nutritionists representatives of various ministries and departments, research institutes, higher educational, vocational, and medical institutions, secondary schools and manufacturers.

Following the session the Agreement on Cooperation between the Sakha Republic government and the Research Institute for nutrition has been concluded. According to the Agreement, the major objectives of improvement of feeding structure and health rates to increase living standards of the Sakha Republic population should be fulfilled. The results of the activities was inclusion of the Sakha Republic into the federal program of updating school feeding in 2010-2011 within the framework of the priority national project "Education". Following elaboration of the program, in 2012, the Republican Centre for Recreation and Health Care of Children "Pine Forest" was established by the decree of the Sakha government, as a coordinator of work on healthy feeding promotion in educational institutions of the Sakha Republic (Yakutia).

It is relevant to rise awareness among population of healthy food and nutrition issues the essence of which is to be put as follows: healthy nutrition = ecological potential + healthy assortment of food products + levels of awareness of healthy foods.

Not only official mass media of the republic, but also commercial organizations should contribute into increase of awareness of healthy foods.

Health strengthening, reduction of alimentary-dependent disease distribution, and growth of an average life-span among local population and newcomers in the Sakha Republic due to development of the theory and practice of individual feeding, elaboration of efficient technologies and methods of prophylaxis of health disorders from the young age, and an increase of adaptations of local residents and newcomers to changing climatic conditions and globalization of the Arctic territories, as well as security of food safety of the republic are the most dire issues of the social and economic development of the region. effective interactions of the Sakha Republic government, Federal supervision, educational, and research institutions, businesses and non-governmental organization play the dominant role in solution of the issues.

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