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**HEALTH STATE AND REHABILITATION OF CHILDREN IN THE PRESCHOOL
INSTITUTION "NURGUHUN" HATYLY CURAPCINSKIY ULUS**

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Summary

Currently the tendency of growth of number of chronic diseases in children by the time they start school, despite the fact that improving the health of children is a leading task of modern medicine, is marked.

We assess the health state and health improvement among pre-school children in preschool institutions. Recommendations for the implementation of the main forms of rehabilitation of children are developed. As a result of their introduction in 2009-2011 improvement of physical development indicators of children is noted.

Keywords: pre-school children, health groups, physical development, diseases.

Studies have shown recently the health of preschool children that are already on admission in pre-school educational institution up to 20% of children have chronic illnesses, a significant number of functional disorders, and high rates of acute illness. Currently, the high incidence of pre-school children do not have pronounced tendency to decrease [1, 2].

According to the Institute of Hygiene and prevention of diseases of children over the past decade, children's health has worsened: decreased number of children's health group I from 23.2 to 15.1%, increase in the number of children of group II (with different deviations) from 60.9 to 67.6% of children and group III (chronic diseases) - from 15.9 to 17.3%. The entire adult population of society is under threat, as the weakening health of the younger generation in a geometric progression threatens the health of future generations [3].

Analysis of morbidity in children of preschool institutions in the Republic of Sakha (Yakutia) (PG YARMIATS, MH (Yakutia), 2009) amounted to 2071.5 on 1000 children aged 0 - 7 years [4]. Specialized outpatient services are available for children's population of Yakutsk and its suburbs, while the regions of the republic under-staffed paediatricians and specialists. This

naturally reduces the work on the preventive, diagnostic and therapeutic measures aimed at protecting health and reducing morbidity.

Provision requiring the use of complex health improvement and preventive measures known. Due to the fact that organized most of the time a child spends in kindergarten are required to conduct health programs in preschools [5,6]. However, the solution of this problem is complicated by the fact that the present methods of improving and preventive work in child care centers are not fully developed. It is also one of the reasons for the low effectiveness of health promotion is its focus on the average child. Personal wellness and preventive work is carried out practically, because there is no experience in the design and implementation of individual directions of development of the child [7,8].

There are some publications on the health of schoolchildren. But there are few on the health status and methods of treatment of children in preschool. We haven't found any studies on the status of rural preschool children in the republic.

Objective: to study the health status of preschool and evaluate the results of sanitary measures.

Materials and Methods:

This work was carried out on the basis of pre-school educational institution called "Nurguhun" at Hatyly Churapchinskiy district from 2009 to 2011 years. Comprehensive medical examinations were carried out by pediatricians, otolaryngologists, neurologists, dentists. According to testimony, preschool children were viewing an ophthalmologist, surgeon, and podiatrist, ultrasonography of the abdomen, kidneys, electrocardiogram, complete blood count, and urinalysis. The results were filled in into the individual child's health cards.

The visiting committee had examined 51 children in 2009, 46 children in 2010 and 49 preschoolers in 2011. According to the survey for 2009: boys - 23 (45.1%) girls - 28 (54.9%).

Age Group: children aged from 1 to 2 years - 14 (27.5%); children aged from 3 to 4 years - 15 (29.4%); children from 5 to 6 years - 19 (37.2%); children aged from 7 - 3 (5.8%). The median age was: for girls 3.6 ± 1.5 and for boys 3.9 ± 1.5 .

According to the inspection held in 2010: 22 (47.8%) of boys and 24 (52.2%) of girls.

Age Group: children aged from 1 to 2 years 22 11 (23.9%); children aged from 3 to 4 years - 15 (32.6%); children aged from 5 to 6 years - 18 (39.1%); children of 7 years old - 2 (4.3%). The median age was: for girls 4 ± 1.6 and for boys 4 ± 1.9 .

According to the inspection in 2011 for boys - 27 (55.1%); for girls - 22 (44.9%):

Age Group: 17 children aged from 1 to 2 years (34.7%); 13 children aged from 3 to 4 years (26.5%); 11 children aged from 5 to 6 (22.4%) and children aged from 7 to 8 years (16.4%).

Children were divided into the following groups of health depending on the health state:

The first group (I). Healthy children who do not have abnormalities in all parameters of health, including children who have slight morphological abnormalities do not affect on the overall health and do not require correction.

The second group (II). Healthy, but with the functionality and some morphological abnormalities, as well as with decreased resistance of the organism, with minor and moderate disabilities and behavioral disorders. This group of children with a risk of chronic disease.

The third group (III). Children with chronic illness or congenital defect, in a state of compensation, with retained functionality organisms.

The fourth group (IV). Children with chronic illnesses or with congenital malformations, in a state subcompensation, with reduced functionality, but with no significant violations of well-being

The fifth group (V). Children suffering from severe chronic diseases or with severe developmental disabilities in a state of decompensation, with a significantly reduced functional capabilities of the body and children with disabilities since childhood.

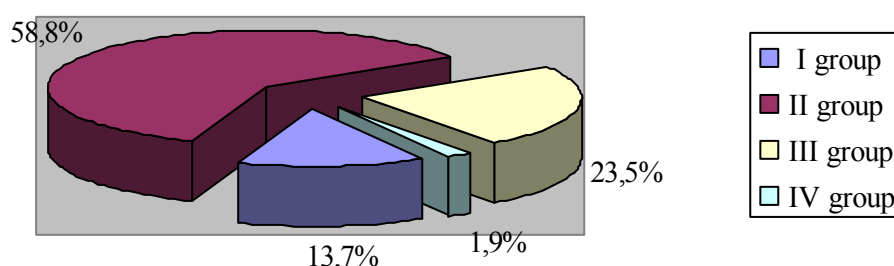


Fig.1. The distribution of health groups in 2009.

By groups of health in 2009. Before recovery: I group - 7 (13,7%), II group - 30 (58,8%), III group - 12 (23,5%), IV group - 1 (1,9%), V band - 0. (Fig. 1)

Results and discussion:

Analysis of the data showed that the majority of children has dominant mezosomy somatype in all age groups. Physical development of preschool children in 2009 showed: predominance of mezosomatotype type of children - 41 (80.4%), makrosomatotype type - 2 (3.9%) and preschool children - mikrosomatotype type 8 (15.7%). Three parameters of physical development were taken into account in determining the somatype: body length, body weight and chest circumference. (Table 1).

Table 1.

Physical development (PD) of preschool children in 2009

PD is below average		PD is average		PD is above average	
abs	%	abs	%	abs	%
8	15,7	41	80,4	2	3,9

The results of health assessments of children in 2009 showed a high percentage of morbidity Respiratory - 12 (23.5%) within children. This group has identified diseases such as hypertrophy of the tonsils of the 1st and the 2nd degree (8 children =15.6%), recurrent bronchitis (2 children =3.9%), the adenoids (2 children =3.9%).

Among the diseases of the digestive system were diagnosed: dysbiosis - 4 (7.8%), biliary dyskinesia - 2 (3.9%), Mts. gastro - 1 (1.9%).

Diseases of the nervous system manifested syndrome of increased neuro-reflex excitability and hypertensive. In addition, the identified logoneurosis, residual encephalopathy and delayed speech development in 6 (11.7%).

Diseases of the circulatory system - 2 (3.9%), CHD (VSD), operas and CHD (tetralogy of Fallot), operated on the girl in March 2008.

Diseases of the blood . Anemia - 3 (5.8%).

Caries of the ICD-X assigned to the class of diseases of the musculoskeletal system, but we viewed it as a separate dental pathology - 14 (27.4%). For diseases of the musculoskeletal system carried residual rickets - 3 (5.8%), impaired posture - 10 (19.6%), flat - 1 (1.9%). Endocrine: Stunting - 1 (1.9%), low weight - 4 (7.8%). Children with symptoms of atopic dermatitis attributed to a group of skin diseases 6 (11.7%). Diseases of the genitourinary system: kidney pyeloectasia - 2 (3.9%), chronic pyelonephritis, 1 (1.9%). Diseases of the eye: myopia - 1 (1.9%) with a high degree of ambliopatiey.

Improvement of pre-school included the following:

1) The rational mode of the day: the exclusion of overwork and overstimulation, increased sleep at 1:00. It is obligatory to have naps. In the presence of astheno-neurotic disorders were shown walking in the fresh air before going to bed.

2) Hardening and physical education. Tempering procedures (air baths, water treatment, stopoterapiya stones, pine cones) are combined with holding the massage of the chest and gymnastics. The massage is conducted 2-4 times per year, the course was 14 days.

3) Therapeutic exercises aimed at ensuring good drainage bronchus, increased tone of respiratory muscles.

4) Physical therapy techniques. During the winter months there was a general UV irradiation at the rate of 20 procedures. For children under 3 years the UV irradiation was carried out on an individual procedure.

5) Rinse the mouth and throat, using extracts of herbs that have antibacterial activity (St. John's wort, calendula, chamomile, celandine, eucalyptus, plantain, sage).

6) Oxygen cocktails with infusions of herbs (plantain, St. John's wort, chamomile). Applied on an empty stomach 30 minutes before meals, course duration up to 3 weeks, conducted two courses per year.

7) Vitamin therapy. Concentrates are used vitamin drinks of various companies, such as: Kaltsinova and Wibowit (KRKA, Slovenia), Tsevitana (Yugoslavia), Vitanova (Poland). One glass of drink provides 100% of the daily requirement of these vitamins for children at the age from 1 to 6 years.

8) The use of adaptogens and biogenic stimulators. This group includes substances that increase the overall resistance of the organism, they are: a) herbal products apilaktoza, apilikvirit, ginseng honey, politabs, tsernilton, propolis, extracts of Rhodiola rosea, Rhaponticum, eleuterakok b) products of animal origin: Pantocrinum c) anabolic agents: potassium orotate, nerabol, retabolil, safinor.

The performance by groups of health improved after implementing the program "Health activities in preschool".

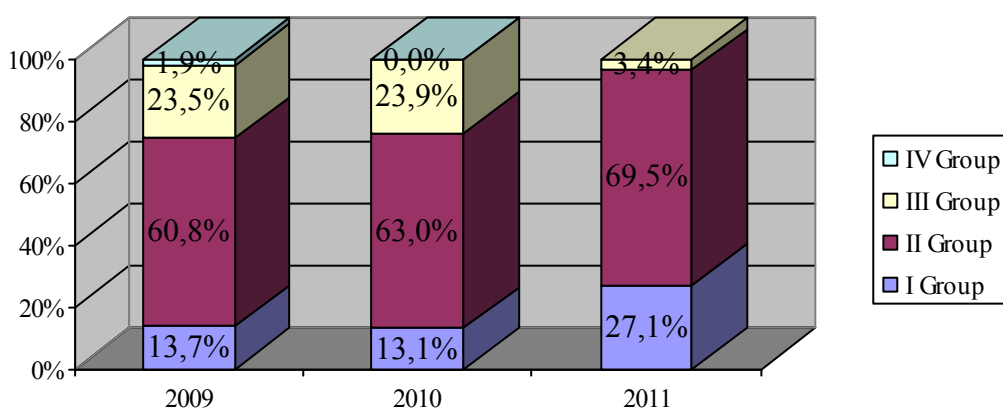


Fig. 2. Distribution by groups of health 2009 - 2011

During the period of recovery, the number of children in the 1st group of health (I) improved up to 13.4%; in the health group (II) by 8.7%. The number of children in the health group (III) decreased at 20.1% and in the health group (IV) decreased at 1.9% (Fig. 2).

In physical development, health improvement after the introduction of corrective gymnastics for toddlers, noted an increase in the number of children with an average physical development and also reduction of children with reduced physical development.

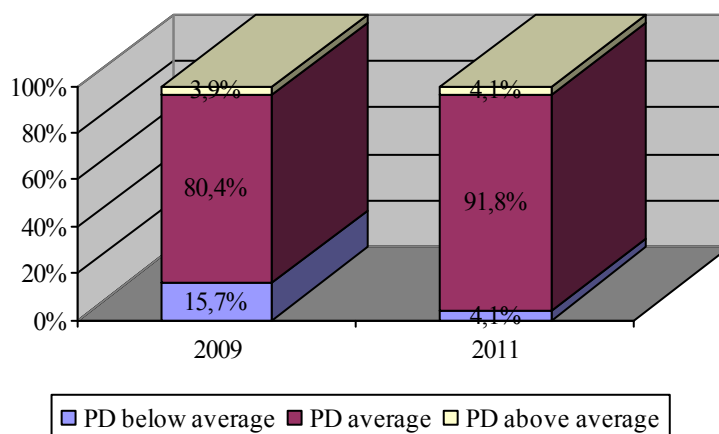


Fig. 3. Assessment of the physical development of preschool children for 2009-2011

Indices of physical development had improved during the period from 2009 to 2011: PD below average decreased by 3.8 times, respectively, the mean PD increased by 11.4% (Fig. 3). Out of the total incidence revealed a positive trend after the recovery program.

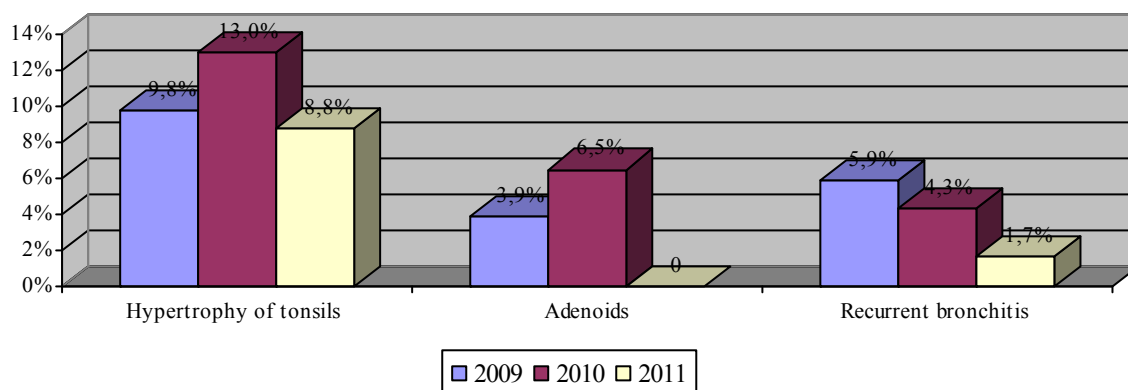


Fig. 4. Indicators of respiratory diseases in 2009 - 2011

These examinations for physicians in 2011 showed a significant reduction in respiratory diseases. Hypertrophy of the tonsils in 2011 compared to 2010 decreased by 4.2% and 6.5% for adenoids. Recurrent bronchitis in 2009 decreased by 4.2% (Fig. 4).

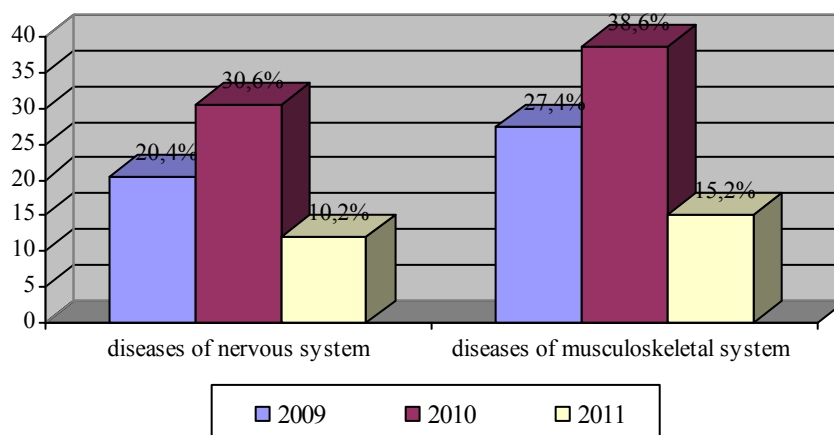


Fig. 5. Comparative analysis of diseases of the nervous system and musculoskeletal system during the period from 2009 to 2011.

In 2010, there was an increase in the number of children with disorders of the nervous system by 7.9%, delayed speech development - 13.0% compared with year 2009. Causative factors of child neurology may be called perinatal history laden, social conditions and other factors. The number of these diseases is reducing at 20.4% in the year 2011.

According to the results of medical examinations for 2009 - 2010 years there was a trend to an increase in the number of children with impaired posture and flat feet. In the preschool years, these manifestations are generally functional in nature and are determined mainly by the weakness of muscle tone and ligament. Special physical exercises are the main remedy for violations of the musculoskeletal system, as well as prevention of their violation.

In 2009, a cooperation agreement has been concluded between the kindergarten "Nurguhun" in Churapchinskiy ulus and the Federal State Higher Professional Education "Churapchinsky State Institute of Physical Culture and Sports." Remedial work to prevent incorrect posture and flat has been carried out in 2010. Corrective wellness gymnastics for toddlers has been performed on daily basis. According to data of 2011, the indicators of disease of the musculoskeletal system fell down by 23.4% (Fig. 5)

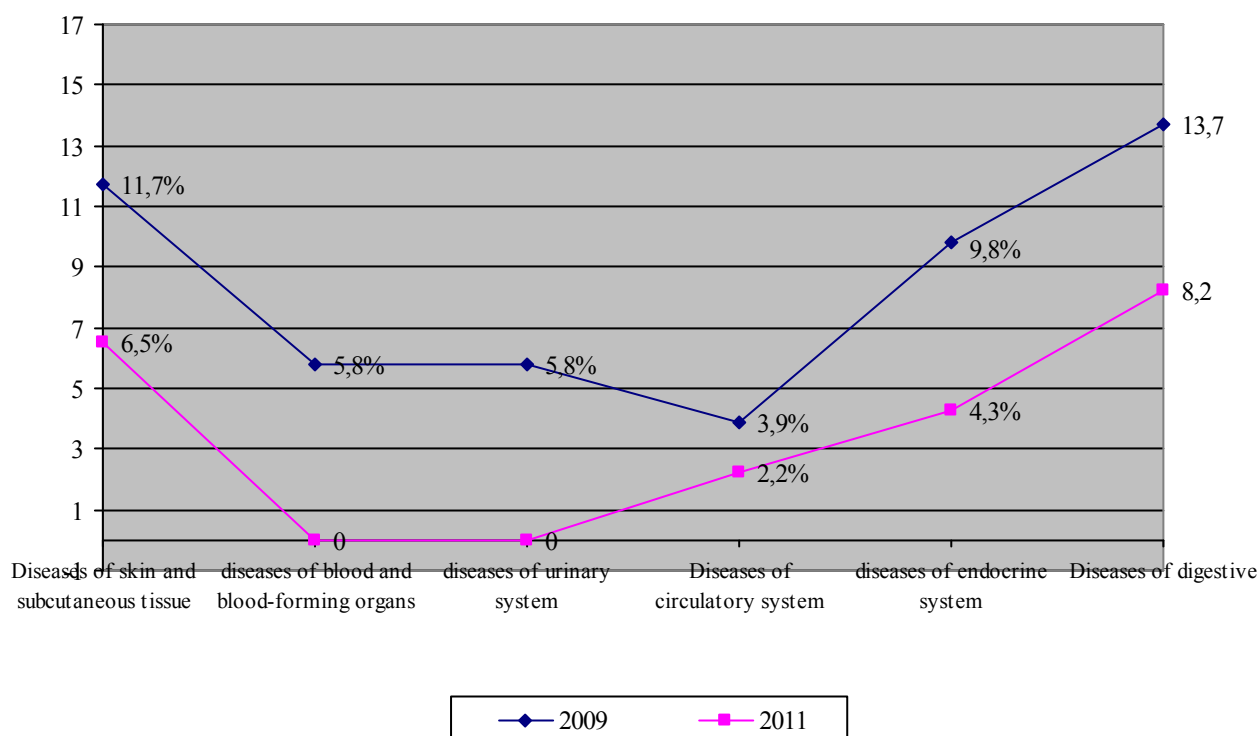


Fig. 6. The dynamics of the total incidence preschoolers for the period from 2009 to 2011
The rates of urinary system diseases and diseases of the blood and blood-forming organs decreased by 5.8%, compared with 2009. Prevalence of atopic dermatitis decreased by 5.2%.

Diseases of the circulatory system decreased by 1.7%, and endocrine, nutritional and metabolic diseases by 2.3 times. Digestive diseases decreased by 5.5% (Fig. 6).

Dental pathology (caries) increased by 5.2% in 2011, compared with 2009. It is due to the lack of a dentist. Children are not prevented and eliminated the formation of cariogenic situation in the oral cavity.

Conclusion.

Thus, the introduction of the program "Health activities in preschool," improved health indicators, and physical development of preschool children at preschool institution "Nurguhun" in the settlement of Hatyly at Churapchinskiy area. During the period of recovery, the number of children in the health group (I) improved to 13.4%, in the health group (II) by 8.7%. The number of children in the health group (III) decreased by 20.1% and in the health group (IV) by 1.9%. Physical development below the average decreased by 3.8 times. The average physical development increased by 11.4%, respectively.

Out of the total incidence decreased in all groups of diseases. Diseases of the respiratory system decreased by 9.1% on the digestive system and endocrine system by 5.5%, diseases of the nervous system by 20.4%, disease of the musculoskeletal system by 23.4%, diseases of the skin and subcutaneous tissue at 5, 2%, diseases of the blood-forming organs and diseases of the genitourinary system by 5.8%. Diseases of the circulatory system decreased by 1.7%.

Improvement of children requires a long, orderly and systematic implementation of complex medical and social measures.

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