

6. Dodanay M. Primary throat anthrax. A report of six cases / M. Dodanay, A. Almac, R. Hanagasi // Scand J Infect Dis.- 1986.- № 18.- P.415-419.
7. Duesbery N.S. Proteolitic inactivation of MAP-kinase-kinase by anthrax lethal factor / N.S. Duesbery, C.P. Webb, S.H. Leppla // Science.- 1998.- Vol. 280.- P.734-737.
8. Friedlander A.M. Anthrax / A.M. Friedlander // Sidell F.R., Takafuji E.T., Franz D.R., editors. Textbook of Military Medicine: Medical Aspects of Chemical and Biological Warfare. Washington, DC: Office of the Surgeon General, US Dept of the Army.- 1997.- P.467-478.
9. Hanna P. How anthrax kills / P. Hanna // Science.- 1998.- Vol. 280.- P.1671-1673.
10. Harrison L.H. Evaluation of serologic tests for diagnosis of anthrax after an outbreak of cutaneous anthrax in Paraguay / L.H. Harrison, J.W. Ezzell // J Infect Dis. - 1989.- Vol. 160.- P.706-710.
11. Inglesby T.V. Anthrax as a biological weapon: medical and public health management / T.V. Inglesby, D.A. Henderson, J.G. Bartlett // JAMA. - 1999.- Vol. 281.- P.1735-1745.
12. Lew D.P. Bacillus anthracis (Anthrax) / D.P. Lew // Mandell G.L., Bennett J.E., Dolin R. Principles and practice of infectious diseases. 5<sup>th</sup> ed. V. 2. p. 2215-2220.
13. Ndyabahinduka D.G.K. An outbreak of human gastrointestinal anthrax / D.G.K. Ndyabahinduka, I.H. Chu, A.H. Abdou // Ann Ist Super Sanita.- Vol. - 1984.- № 20.- P.205-208.
14. Singh Y. A dominant negative mutant of Bacillus anthracis protective antigen inhibits anthrax toxin action in vivo / Y. Singh, H. Khanna, A.P. Chopra // J Biol Chem 2001. - Vol. 276.- P.290-294.
15. Smego R.A. Cutaneous Manifestation of Anthrax in Rural Haiti / R.A. Smego, B. Gebrian, G. Desmangels // Clin Infect Dis. - 1998.- Vol. 26.- P.97-102.
16. Turnbull P.C.B., Kramer J.M. Bacillus / Turnbull P.C.B., J.M. Kramer // Balows A., Hausler W.J. Jr., Herrmann K.L., [et al.]. Manual of Clinical Microbiology, 5th ed. Washington, DC, American Society for Microbiology; 1991. p. 296-303.

---

## NN Shats, MM Shats

### SOME FEATURES OF REGIONAL PUBLIC HEALTH IN THE NORTH

(Medico-ecological aspects and ways to improve)

#### Introduction

In recent decades, the development of the Northern Territories, which occupies a large part of Yakutia, has led to serious harm done to the environment as a republic and state of health of its population. Previously been shown many health and environmental problems that inevitably arise in areas of intensive development, and on his condition close to intact.

#### Current status and basic problems problems

At the same time, the special natural, economic and social conditions of Yakutia, allow us to consider it as potentially one of the main centers of economic development. The main natural factors that have a material adverse effect on the body of inhabitants of republic first note the extreme climate of [1-5]. For this reason, some of the common climatic

factors contributing to the living conditions of the northern territories and their health status include:

a) extremely low winter temperatures, dropping down to the extreme values, truncated to three months in spring and autumn transition periods with sharp fluctuations in air temperatures and strong winds.

Average monthly air temperatures in January, the coldest month, dropped to -40°C and minimum - up to -60°C. This requires the use of special clothing and footwear (Fig.1), with total weight for children about a half to two kilograms, and for adults - 4-5 kg, and compliance with safety rules when you stay outdoors, even when morally be in the "milk" the fog is not easy. Low temperatures and strong winds in spring and autumn-winter periods, which reduce the time fresh air to a minimum, deprived children, including students, an important recreational and hygiene factors.

For the population of Yakutia is characterized by significant features of the causes and course of most diseases. This primarily refers to diseases of the respiratory system arising in extremely cold climates. Thus, in winter increases the frequency of respiratory illnesses such as laryngitis, tracheitis, bronchitis, especially in young and middle age. This is because the cold air when inhaling through the nose does not have time to warm up in the nasopharynx, and goes to the upper airway cold factors - the cold air, heavy clothing, covered with a scarf lower face - provoke exclusion from the act of breathing the lower parts of the lungs, which causes insufficient oxygenation of brain tissue and internal organs. Designated provoking climatic factors in winter periods contribute the majority of the population of the republic weakened immune system. Therefore, the seasonal growth of SARS and influenza has, in spite of extensive prevention activities in communities, towards a quantitative increase.

As a preventive measure for this group of diseases and to strengthen the immune system, but the use of immunomodulators, and vaccination against influenza in preschool institutions should pay serious attention to breathing exercises. Particular attention has never stipulated a similar thematic articles, the authors draw on the consequences of driving on poorly maintained roads of the city. For Yakutsk, like many northern cities of Russia are characterized by extremely complex permafrost-soil conditions, when the basis of many roads lie fragile to external shocks with very high permafrost. In addition, the entire road system, year-round naked and available to extremes, with an amplitude of up to 70 °, air temperature, is experiencing serious vertical and horizontal tensile strain. As a result, the surface pavement, and underlying his horizons and rock materials are in very poor condition, and this applies both to the city proper (Fig. 2-4) and to the backbone of the republican road network

(Fig.5).

When driving on such roads in the automotive and, especially, bus transport and is a traumatic impact of sharp fluctuations of the body on the spine with its structures, and articular cartilage of the lower extremities. Daily ride on the coating consisting of pits and potholes (Fig. 4), traumatic intervertebral discs and ligaments, resulting in cracks appearing rather quickly violated the elasticity and integrity of the anatomical structures. Thus, the preconditions for the occurrence of intervertebral disc hernia are created for this reason at an early age. Therefore, diseases of the spine in our time. tend to rejuvenation and progress in this direction. Naturally, the constant juxtaposition of provoking factors, which are mentioned above, aggravated radicular for osteoarthritis, muscular and vascular syndromes, which leads to impaired spine even in young people. Number of non-specific arthritis, triggered by a cooling factor and lead to arthritis, arthritic joints deformations, also tend to rejuvenation. As the prevention of osteochondrosis and osteoarthritis, in addition to carrying out physiotherapy, orthopedic aids and the use of medicines requires review of the relationship of departmental services to the quality of road surfaces. In 2011, major repairs of the road network of the city, and hence improving its status, highlighted the huge funds and their judicious use is essential to improve public health.

Growth of diseases of the genitourinary system in adolescents is associated with characteristic continued most of the year cold period omissions in the clothing and carefree attitude of youth towards their health. Therefore, in the junior growing number of cases of pelvic and urinary tract such as pyelonephritis, glomerulonephritis, cystitis, adnexitis (inflammation of the appendages). As a result, suffered in his youth adnexitis, comes secondary infertility among women of childbearing age. In terms of prevention of the listed diseases requires systematic education, both by doctors and by educators, sociologists and family. The second negative factor affecting the health of the population, is b) the absence or short-term intake of sunlight with a low degree of insulation in the long cold period lasting from September to March (polar night), as well as the long days and bright "white" nights during the summer. Polar night, when for a few months the sun never appears above the horizon, and the polar day, when it is somewhat shorter period does not go, seriously affect the natural physiological processes in the body like sleep and wakefulness.

Significant reduction in the quality of natural light in winter background with an extension of time under artificial light cause diseases of the view that due to the increased voltage of the visual apparatus, in both children and adults. Number of early visual defects in school increases for the whole school period. In high school, 70% of students have myopia of moderate and severe with the initial degenerative changes in the retina.

Orthopedic disease of the child population of the northern territories is directly related to a deficit of vitamin D3. A disease of the whole organism, as rickets, is widely known in areas with short sunny period, gives visible to the eye changes in lesions of bone and muscle systems of the child during the period of accelerated growth.

Vitamin D3 is essential for the absorption of mineral salts of calcium, magnesium, zinc, phosphorus from the intestine into the bloodstream and their uptake in the bone tissue. Without vitamin D3 mineral salts rapidly eliminated from the body, not assimilating into bone tissue, resulting in the loss of bone mass. As a result, the vertebrae and the bones of the lower limbs are deformed under the load. The children appear rachitic varus deformity of the lower limbs, there rachitic kyphosis of the spine in the form of a hump (gibus), especially noticeable in the sitting position, slowing the process of physical and psycho-emotional development. Since wearing warm clothing and heavy winter is a necessity since childhood, the vertebral structures (ligaments, joint capsules and discs) have an additional chronic stress. In the back muscles, shoulder girdle and limbs develop congestion with areas of muscle tension, which in no small measure contributes to the development of osteochondrosis in early adolescence with the typical symptoms of the disease [5].

In adults, osteoporosis, fraught with pathological fractures of vertebral bodies and pelvic bones in a vulnerable area of the hip joint. Therefore, in the northern areas is widely used prevention of rickets in infants. And the adults after the fortieth recommend regularly used drugs with the vitamin-mineral complexes.

The growth of mental illness associated with chronic stressful situation, when in the winter due to lack of sun naturally display depressed mood with pronounced vulnerability of the psyche and nervous system. Specialists are watching teenagers progressive increase in depressive states, which are badly special treatment and have a protracted nature. Forensic doctors ascertain the growth of suicide among children older than 10 years. The role of family, social workers, psychologists and psychotherapists in the prevention of such depression and suicide among young people is hard to overestimate. However, in the North, with widely scattered settlements, specialized psychological help is difficult.

#### Conclusion

Thus, the natural conditions, as well as specifics of life in some northern regions differ significantly, which should be considered for a correct assessment. The special attention needs to be turned on that vital terms, and together with them and the state of health of population of north regions RUSSIAN FEDERATION must become priority definitions in the system of estimation of quality of life of citizens of all age-related groups.