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Basics Of Sanatorium-Resort Rehabilitation For Persons With Asthma.

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ABSTRACT

Diseases of the broncho-pulmonary system, in particular, bronchial asthma, represent a significant social and medical problem in modern society. In terms of their share in total mortality, they occupy one of the first places, and the economic damage due to their high prevalence and development on their background of disability increases every year. The main goal of bronchial asthma therapy is to achieve sustained remission. The basis for the rehabilitation of such patients are non-drug methods of exposure. Objective: to identify the most important and promising areas of sanatorium-resort rehabilitation in bronchial asthma. It has been clearly proved that for the implementation of methods for restoring the health of people suffering from bronchial asthma, the sanatorium-resort stage of recovery is most favorable for rehabilitation. The high efficiency of recovery in the conditions of the sanatorium is due to the rational mode of activities and recreation using well-chosen various means of therapeutic, restorative and preventive effects on the body.

Keywords: bronchial asthma, spa treatment, physical rehabilitation, therapeutic physical culture, physiotherapy.

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INTRODUCTION

Modern practical biology is now experiencing a very large rise [1,2] due to the intensification of research of vital body systems [3,4], which can give researchers a better understanding of various aspects of the functioning of the body [5, 6]. To this end, work is actively conducted using not only humans [7, 8] as objects of observation, but also various species of mammals [9–12]. Using them as modules it is possible to more deeply understand the essence of the functioning of the organism of mammals and humans at different stages of ontogenesis [13–16], under the influence of various environmental factors [17,18], including physical exertion [19–21] under normal conditions [22], dysfunctions [23] and diseases [24]. The main goal of all these studies is to find means of healing and rehabilitating patients with the most common pathology.

The problem of rehabilitation of patients with bronchial asthma remains one of the most significant in pulmonology, from 4 to 10% of the population of the Earth (7.6 billion people) suffer from this disease of varying severity [25,26]. According to the social significance of this pathology comes to one of the leading places among the diseases of the broncho-pulmonary system [27,28]. The progression of the disease is promoted by the growth of chronic nonspecific lung diseases, the spread of smoking, an increase in the sensitization of the population due to the wide spread of chemistry in everyday life, production, an increase in the consumption of drug therapy, vaccination, an increase in the frequency of stressful situations [29,30].

Despite the promising achievements of modern pulmonology and medical rehabilitation, there has been an increase in the number of people with permanent disability suffering from bronchial asthma [31,32]. That is why in the rehabilitation of patients with bronchial asthma, non-drug methods of treatment (primarily physical methods) should play a large role [33,34].

An important link in the implementation of methods for the rehabilitation of people suffering from bronchial asthma is the sanatorium-resort stage of rehabilitation treatment, sanatorium-resort therapy can significantly reduce labor and material losses [35].

The advantages of the sanatorium-and-spa stage of rehabilitation include: a change in the living environment and, as a consequence, a restriction of the negative effect of allergens and infectious agents; application of various climatic factors; building and implementing a full-fledged rehabilitation course [36,37].

The use of rehabilitation facilities at the sanatorium-resort stage in case of bronchial asthma is carried out in the period of remission and is aimed at stabilizing the disease processes, increasing the ability to work and preventing further relapses [38].

The course of recovery in case of bronchial asthma in a sanatorium is divided into three periods: adaptation (preparatory period), period of active sanatorium treatment (main), and final period. The content of these periods is justified by increased sensitivity to changing climatic zones, increased thermolability, inconsistency of thermoregulation, a tendency to allergic reactions [39,40].

When organizing workouts at the sanatorium-resort stage of rehabilitation treatment, overloads should be avoided and the motor activity of people with bronchial asthma should be gradually increased. A contraindication for the training process is bronchial asthma with frequently repeated and severe attacks, as well as moderately relieved seizures, without stable stabilization of the process even against the background of hormonal intake [41,42].

The presence of side effects of drug treatment determines the urgency of the problem of optimizing rehabilitation treatment of pulmonary patients using physical methods of treatment (physical therapy, physiotherapy) that are most accessible and have a high percentage of effectiveness in sanatoriums [43,44]. In this regard, it seems relevant to review the methods of rehabilitation at the sanatorium-resort stage of rehabilitation treatment, which are actively used in bronchial asthma.

Objective: to identify the most important and promising areas of sanatorium-resort rehabilitation in bronchial asthma.

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TREATMENT OF PATIENTS WITH BRONCHIAL ASTHMA AT THE SANATORIUM-RESORT REHABILITATION STAGE

Practice shows that at the sanatorium-resort stage of recovery it is necessary to apply a complex of various methods (physiotherapy, therapeutic physical culture, climatotherapy). Non-drug rehabilitation methods are devoid of side effects, but methods used in clinical practice are inferior to drug-based efficacy [45].

PHYSIOTHERAPY IN THE SYSTEM OF SANATORIUM AND RESORT REHABILITATION

Physiotherapy is aimed at preventing attacks of bronchial asthma and increasing the body's defenses by normalizing the autonomic regulation of bronchial tone, reducing body sensitization, improving the drainage function of the bronchi, preventing and eliminating inflammatory manifestations, normalizing hormonal dysfunction and central nervous system conditions (sedative, psycho-relaxing methods), enhancing oxygen capacity of the blood, improving the adaptation of the cardiovascular and respiratory systems to the increased requirements m load conditions [46-48].

THERAPEUTIC PHYSICAL CULTURE IN THE SYSTEM OF SANATORIUM AND RESORT REHABILITATION

Therapeutic physical culture in bronchial asthma contributes to the normalization of the central nervous system tone, the elimination of a congestive pathological focus (balancing the excitation and inhibition processes in the cortex and the subcortex of the brain), relieving the bronchial muscle spasm, the ability to control breathing (forming a quiet, shallow breath and a long, smooth exhalation) training diaphragmatic breathing to increase the mobility of the chest, prevent complications, enhance trophic processes in tissues, create a positive psychological attitude, an increase in the strength of the respiratory muscles [49].

During the implementation of therapeutic physical culture in bronchial asthma, it is necessary to note the mechanisms of the therapeutic action of physical exercises: stimulation of external respiration function, increased chest mobility, stimulation of the diaphragm excursion, strengthening of the respiratory muscles, improvement of respiration mechanisms and coordination of breathing and movements; increasing cough productivity, stimulating the receptor apparatus and cough center, improving sputum clearance; improvement of blood and lymph circulation in the lungs and pleura, thereby contributing to a more rapid resorption of the exudate; stimulation of regenerative processes and adaptation of the structures of regenerating tissues to functional requirements; improving lung tissue elasticity and lung mobility; mobilization of auxiliary circulatory mechanisms; improved blood oxygenation, increased oxygen consumption by the tissues; reduction of hypoxia, normalization of gas exchange by affecting the external and tissue respiration; improvement of redox processes; stimulation of metabolic processes; the formation of rational compensation; normalization of impaired function of external respiration as a result of restructuring of the pathologically changed regulation of external respiration; restoration of full uniform breathing (correct ratio of inhalation and exhalation, necessary depth and frequency of breathing); the formation of an arbitrarily controlled respiratory act, fixed in the process of training on the mechanism of formation of conditioned reflexes; increased physical performance, tonic and tonic effects on the body as a whole [50,51].

BREATHING EXERCISES AND TECHNIQUES IN THE SYSTEM OF SANATORIUM-RESORT REHABILITATION

The main special means of recovery for bronchial asthma in a sanatorium are: static and dynamic breathing exercises; static breathing exercises that enhance diaphragmatic breathing; breathing exercises that form a full and long exhalation; breathing exercises using inflatable toys (the goal is to increase the duration of exhalation); exercises aimed at reducing the minute volume of breathing - learning the skill of “full” breathing: while inhaling, the anterior abdominal wall bulges with simultaneous or subsequent lifting of the chest, while exhaling the chest falls, the stomach retracts; lengthening inhalation with respect to exhalation.

An effective method of recovery in bronchial asthma is sound gymnastics, contributing to the development of the ratio of inhalation and exhalation of 1: 2. With a slow quiet inhale with a pause after

inhalation, the most complete gas exchange in the alveoli occurs and the complete shift of the exhaled air with the alveolar. Vibration arising from the pronunciation of sounds, relieves bronchospasm during exhalation.

Methods of volitional elimination of deep breathing by K.P. Buteyko. The main methodological technique of K.P. Buteyko is shallow breathing through the nose, with exhalation delays; According to the author, this reduces the deficiency of carbon dioxide in the lungs.

Paradoxical gymnastics A. N. Strelnikova. The emphasis is on inhalation, which should be short and active, with a lot of repetition at a high pace. Inhalation is performed during compression of the chest, and exhalation during dilution of hands (in the traditional method, on the contrary). This contributes to the development and strengthening of the respiratory muscles, as well as the muscles of the chest and upper limbs.

Forms of therapeutic physical culture in case of bronchial asthma in the conditions of a sanatorium: morning hygienic gymnastics, therapeutic gymnastics, self-study, dosed walking, therapeutic swimming, health path [52].

Currently, in addition to drug therapy, there is a diverse arsenal of means and methods of physical rehabilitation for this disease (physiotherapy methods, inhalation therapy, halotherapy, speleotherapy, herbal medicine, physiotherapy, massage, balneotherapy) that help improve the quality of life of people suffering from asthma [53]. A competent individual approach to every person, with bronchial asthma, is required when developing treatment methods. It is important to choose exactly those means and methods of physical rehabilitation that will have a pronounced and long-lasting therapeutic effect [54]. You should also remember the risk factors that can lead a person to the development of asthma or provoke an attack, contribute to the prevention of this disease [55,56].

CONCLUSION

Today there are plenty of opportunities to prevent and treat asthma. In addition to the classical treatment regimens (the use of drugs), one should always remember about the benefits of asthma therapy at the sanatorium-resort rehabilitation stage using a variety of physical methods. Today, there is a huge number of specialized medical institutions (sanatoriums), in which, in addition to rehabilitation activities, people with asthma are provided with a wide variety of services for organizing leisure and active recreation, which in turn contributes to an increase in the emotional background and a positive attitude.

At the sanatorium-and-spa stage of rehabilitation treatment, almost all types of procedures are needed to normalize the condition of people with bronchial asthma. Therapy in specialized sanatoriums is today one of the main components of the treatment of people suffering from bronchial asthma. After treatment in a sanatorium a patient has a long period of remission, the need for medication is reduced, and the attacks of bronchial asthma are reduced and facilitated. In the present work, a review was made of available information on rehabilitation opportunities and the most effective and physiological methods of influencing a person suffering from bronchial asthma.

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