

City Clinical Hospital no. 15  
named after Filatov O.M.  
Health Department of  
Moscow city

Moscow State University of Medicine and  
Dentistry,  
Department of Exercise Therapy, Sport  
Medicine and Physiotherapy

## REPORT ON CONDITIONS TO USE INDIVIDUAL SIMULATOR INHALER FOR HEALTH RESTORATION

*Report on use of Individual Simulator Inhaler for the health restoration in patients with respiratory diseases (such as acute and chronic bronchitis, bronchial asthma, pneumonia), dystonia (hypo- and hypertonic types).*

Clinical research for Individual Simulator Inhaler was conducted at Moscow State University of Medicine and Dentistry, Department of Exercise Therapy, Sport Medicine and Physiotherapy; exact location: City Clinical Hospital no. 15. We tested 37 people, of which 21 females and 16 males. All the test persons had different forms of respiratory diseases, including acute, subacute, and remission forms. The diseases included acute and chronic bronchitis, bronchial asthma, pneumonia, dystonia of hypo- and hypertonic types.

All the patients underwent 2-weeks course of health restoration with application of the Individual Simulator Inhaler. At the end of the course, all the test persons showed improvement.

As the result of our research we revealed that the health restoring effect occurs due to the influence on the main factors of the lungs diseases.

There occurs restoration of the main bronchial function (draining); relief from bronchial spasm and respiratory collapse of small bronchi. The effect take place due to the vibration and massage effect of respiratory training, which targets bronchi and lung tissues, increases tonus of the nervous system and stimulates adrenal functions, and that has a spasmolytic effect. Also bronchial inflammation decreases, due to the free radical oxygenation of lipids that happens because of hypercapnic influence of the individual simulator inhaler; blood and lymph circulation in bronchial system increases with the help of restoration of diaphragmatic breathing that stimulates lymph flow. Alveoli ventilation optimizes, and so does the ventilation-perfusion proportion. Respiratory muscle tension decreases, and that is important in respect with therapy and prevention of a syndrome of respiratory muscles fatigue that constitutes a progressive respiratory failure.

Improvement of tissue respiration is recorded, hypoxemia and hypoxia of tissue; also possible emphysema and atelectasis are prevented, which results in improvement of external respiration. The proper breathing patterns develop due to the elimination of respiratory act misbalance, and changes in rate, rhythm and amplitude of breathing.

Restoration of the normal functioning of the immune system takes place due to adaptation to hypoxia and development of reactions of activation and training, and the increase of protective functions of airways. As a result, respiratory training means prevention of acute forms of respiratory diseases.

Patients with dystonia also showed improvement of processes in central nervous system: nervous excitement and inhibition normalization, better nervous and mental condition, better oxygenation of blood and tissues, and better processing of oxygen and microcirculation.

Respiratory training with individual simulator inhaler can be more effective when applying locally essential oils and herbs that influence bronchial tonus, improving bronchial patency, and influence bronchial receptors, improving neuro-regulative processes and normalizing psychosomatic condition of patients.

When testing the individual simulator inhaler, there recognized differences in application with patients who had different forms of the diseases (subacute, remission and when applying it with healthy people for preventive reason). The main difference is in gradual increase of complication of respiratory exercises, with particular attention to achieving longer breath in patients with bronchial-lungs pathologies of subacute form. And that can make the body adapt to the new conditions of respiratory metabolism.

### **Conclusion.**

Application of individual simulator inhaler is effective for different diseases of respiratory organs, and can be recommended for complex therapy as in hospitals, so at clinics and resorts, and at home. It can be recommended both for therapy and as a preventive measure, in order to increase functional capabilities of the body and to develop the proper respiratory stereotype in healthy people who improve their health at sport and medical centers.

Director of Exercise Therapy,  
Sport Medicine and Physiotherapy Department,  
Awarded scientists of Russia,  
Doctor of Medicine, professor            Epiphanov V.A.

Director of Methodology Department  
Master of Medicine, docent            Baukina I.A.

20.01.2006