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## [Efficacy of Low-Frequency Magnetic Therapy in Patients with COVID-19 Pneumonia]

[Article in Russian]

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**Abstract** in English, [Russian](#)

The number of patients who have had pneumonia caused by COVID-19 is increasing every month. However, despite the ongoing treatment, the consequences of this disease are possible, which may appear in the short term or after a while. Pneumonia caused by the new coronavirus infection COVID-19 is characterized by the presence of such complications as cough, shortness of breath, fatigue, sleep disturbances, appetite disorders, etc. Often, pneumonia leads to dysfunctions of the respiratory system, higher mental functions, functions of the cardiovascular system and, unfortunately, possible disability. The search and implementation of new methods of physical rehabilitation is an urgent task of modern medicine. Low-frequency magnetotherapy is one of the safest and most commonly recommended treatments for pneumonia.

**Objective:** To assess the effectiveness of the use of low-frequency magnetotherapy in the complex medical rehabilitation of patients who have had pneumonia in the phase of convalescence.

**Material and methods:** The study included 52 patients who had suffered from pneumonia caused by COVID-19 and whose average age was 56.2±5.7 years. Group I (main) group ( $n=30$ ), against the background of standard therapy on the 16th day after discharge from the hospital, received low-frequency magnetotherapy on the ALMAG-02 apparatus (Elamed, Russia) daily for 20 minutes, a course of 10-12 procedures. In the second (control) group ( $n=22$ ), therapy was carried out in accordance with the Temporary Clinical Recommendations of the Ministry of Health of the Russian Federation for the prevention, diagnosis and treatment of new coronavirus infection COVID-19 (version 8.1 of 01/10/2020), as well as the Temporary Clinical recommendations for medical rehabilitation for a new coronavirus infection (version 8.1 of 01/10/2020). Evaluation method: spirometry using a spirographMIR (Italy), chest excursion, rehabilitation routing scale (RRM), quality of life questionnaire (EQ-5D), Borg scale for patient assessment of exercise tolerance, ECG, oxygen saturation in the blood.

**Results and discussion:** The patients of the 1st group showed an increase in the vital capacity of the lungs by 16.4% in comparison with the 2nd (control) group; an increase in chest excursion by 45.6%, a decrease in the level of shortness of breath from moderate to mild by 64.1%, a decrease in disabilities by 62.7%, compared with the second (control) group. According to the data of the quality of life questionnaire (EQ-5D), the patients of the main group showed improvements in general mobility (mobility) by 44.5%, everyday activity by 26.1%, a decrease in pain/discomfort by 47.9%, anxiety and depression by 42.2%, compared with the control group ( $p=0.001$ ).

**Conclusion:** The inclusion of low-frequency magnetic therapy in complex rehabilitation contributes to the regression of respiratory disorders, reduces the level of anxiety and depression, reduces pain and discomfort, thereby improving the patient's quality of life.

**Keywords:** COVID-19; low frequency magnetotherapy; medical rehabilitation; pneumonia.

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