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#### РЕКОМЕНДАЦИИ ПО УЛУЧШЕНИЮ КАЧЕСТВА ЖИЗНИ ПАЦИЕНТОВ С ПНЕВМОКОНИОЗОМ

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#### АННОТАЦИЯ

В данной статье рассматривается эффективность персонализированных реабилитационных программ, направленных на повышение качества жизни пациентов с пневмокониозом. В исследовании приняли участие 80 пациентов, разделённых на две группы: первая группа получала комплексную программу реабилитации, тогда как во второй группе применялись стандартные методы лечения. Оценка клинического состояния проводилась с использованием опросников SF-36 и SGRQ, а также по результатам спирометрического исследования. Согласно полученным данным, у пациентов первой группы наблюдались статистически значимые улучшения показателей качества жизни и функции внешнего дыхания ( $p < 0,05-0,01$ ), тогда как во второй группе изменения были незначительными. Результаты исследования подтверждают высокую эффективность комплексной реабилитации, основанной на биопсихосоциальном подходе, при лечении пациентов с пневмокониозом. Практическая значимость работы заключается в том, что она формирует научную основу для разработки новых, эффективных и индивидуализированных программ реабилитации в системе здравоохранения.

**Ключевые слова:** Пневмокониоз, хроническая сердечная недостаточность, лечение, реабилитация, улучшение качества жизни.

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## RECOMMENDATIONS FOR IMPROVING THE QUALITY OF LIFE OF PATIENTS WITH PNEUMOCONIOSIS

## ANNOTATION

The article explores the effectiveness of personalized rehabilitation programs in enhancing the quality of life of patients with pneumoconiosis. A total of 80 patients were analyzed and divided into two groups: the first group participated in a comprehensive rehabilitation program, while the second group received only standard treatment. The clinical condition of the patients was evaluated using the SF-36 and SGRQ questionnaires, as well as spirometric measurements. According to the findings, patients in the first group demonstrated significant improvements in both quality-of-life scores and spirometric parameters ( $p < 0.05-0.01$ ), whereas the second group showed only minor changes. These results confirm the high effectiveness of comprehensive rehabilitation programs based on the biopsychosocial approach for patients with pneumoconiosis. The practical significance of this study lies in its potential to serve as a scientific foundation for developing new, efficient, and patient-centered rehabilitation strategies aimed at improving health outcomes and overall well-being in individuals suffering from chronic respiratory diseases.

**Keywords:** Pneumoconiosis, chronic heart failure, treatment, rehabilitation, improvement of quality of life.

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## PNEVMOKONIOZ BILAN OG'RIGAN BEMORLARNING HAYOT SIFATINI YAXSHILASH BO'YICHA TAVSIYALAR

## ANNOTATSIYA

Maqolada pnevmokonioz bilan kasallangan bemorlarning hayot sifatini oshirishda shaxsiylashtirilgan reabilitatsiya dasturlarining samaradorligi o'rganilgan. Tadqiqot doirasida 80 nafar bemor ikki guruhga bo'lindi: 1-guruh bemorlari kompleks reabilitatsiya dasturini oldilar, 2-guruh esa standart davolash usullari bilan davolandi. Bemorlarning klinik holati SF-36 va SGRQ so'rovnomalari hamda spirometriya natijalari asosida baholandi. Tadqiqot natijalariga ko'ra, 1-guruh bemorlarida hayot sifatini baholovchi ko'rsatkichlar va spirometrik natijalarda sezilarli ijobiy o'zgarishlar kuzatildi ( $p < 0,05-0,01$ ), 2-guruhda esa o'zgarishlar nisbatan kam darajada bo'ldi. Olingan natijalar pnevmokonioz bilan og'rigan bemorlarda biopsixosotsial yondashuv asosidagi kompleks reabilitatsiyaning yuqori samaradorligini tasdiqlaydi. Tadqiqotning amaliy ahamiyati shundaki, u sog'liqni saqlash tizimida bemorlarning reabilitatsiyasiga oid yangi, samarali va individual yo'naltirilgan dasturlarni ishlab chiqish uchun ilmiy asos bo'lib xizmat qiladi.

**Kalit so'zlar:** pnevmokonioz, surunkali yurak etishmovchiligi, davolash, reabilitatsiya, hayot sifatini yaxshilash.

Recently, the issue of improving patients' quality of life has become increasingly important. The growing number of patients with chronic somatic diseases, the need for long-term basic therapy and rehabilitation, and the emphasis on quality of life in modern medical approaches have made this area one of the most pressing issues of our time. [1,4,6] According to the World Health Organization, quality of life is now considered a multi-component category, including physical health, psycho-emotional state, social environment, and the patient's level of satisfaction with their condition.

Currently, many domestic and international studies emphasize the need to identify factors affecting patients' quality of life and to develop treatment approaches aimed at improving it. For example, in a study by A. Smith et al. (2020), conducted among patients with chronic heart failure, it was found that individualized psychosocial support programs contribute to a partial improvement in quality of life indicators. [3,7,8] In similar situations, a number of clinical and practical studies conducted in our republic have scientifically confirmed that it is possible to stabilize patients' quality of life by increasing their psychological motivation for treatment and developing an orientation toward a healthy lifestyle. Moreover, a number of scientific papers based on an analysis of the psychoemotional state of patients have substantiated the effectiveness of an individualized approach as a factor in increasing the effectiveness of medical rehabilitation. The above and

other studies form the scientific basis for improving strategies aimed at improving the quality of life of patients with pulmonary diseases. Under the influence of etiologic factors in pneumoconiosis, the function of the respiratory tract is impaired, which leads to air retention in the lungs - a kind of "air trap" of the respiratory system, which largely determines the clinical manifestations of the disease. [1,2,4]. Drugs used in the treatment of patients with pneumoconiosis should effectively eliminate dynamic hyperinflation of the lungs, and modern long-acting inhaled bronchodilators - anticholinergics and  $\beta_2$ -agonists - meet these requirements [5,6]. Inhaled glucocorticosteroids have shown high efficacy as part of combination therapy in patients with bronchial hyperreactivity, elevated nitric oxide levels in exhaled air and the presence of eosinophilic sputum. (>3%) [8,9]. When selecting drugs for the treatment of pneumoconiosis associated with chronic heart failure, it is necessary to take into account reliable data on the safety of respiratory drugs, especially in the context of their potential cardiovascular risk.

The above studies demonstrate that rehabilitation of patients with pneumoconiosis during remission is a pressing issue in modern medicine. Based on the data obtained, we set ourselves the goal of developing new approaches aimed at improving the quality of life of patients with pneumoconiosis. Specific parameters such as disease type, age, psychoemotional state, level of social support, and aspects of the

quality of medical care will be comprehensively studied. Based on an analysis of previously obtained scientific data, effective approaches applicable in practice will be developed.

**Materials and methods of research**

To evaluate the effectiveness of rehabilitation measures in patients with pneumoconiosis, 80 patients aged 40 to 78 years were examined. They were divided into two groups. The study group included 40 patients (n=40) with pneumoconiosis who, in addition to standard drug therapy, underwent an individual rehabilitation program and received psychological support. The control group also included 40 patients (n=40) who received only standard treatment. The widely used SF-36 (Short Form-36 Health Survey) questionnaire was used to assess patients' quality of life. A questionnaire was also used to determine the severity of pneumoconiosis attacks and their degree of control. To

assess the patients' clinical condition, bronchial patency was measured using standard BTL spirometric equipment. All data obtained during the study were processed and analyzed using SPSS version 26 statistical software. Statistical analysis utilized means, standard deviations, Student's t-test, Pearson correlation analysis, and analysis of variance (ANOVA). Results were considered statistically significant at  $p < 0.05$ . The study received approval from the ethics committee, and written informed consent was obtained from all participants.

**Research results and their discussion.**

The results of the study showed that the main indicators of quality of life of patients in the main group, assessed using the SF-36 questionnaire, were significantly higher compared to the indicators in the control group (see Table 1).

1 – table

SF-36 Parameters			
SF-36 Parameters	Main group (n=40)	Control group (n=40)	p
Physical activity	73.5±6.3	62.0±7.1	<0.01
Mental health	66.6±5.7	57.8±6.5	<0.01
Overall satisfaction	72.4±4.6	61.05±5.7	<0.01

Table 1 presents the comparative results of the quality of life indicators in patients with pneumoconiosis in the main and control groups, assessed using the SF-36 questionnaire. According to our study, the use of an individual rehabilitation program and the provision of psychological support contributed to the improvement of the indicators in patients in the main group: the level of physical activity was 73.5 ±

6.3 points, mental health - 66.6 ± 5.7 points, and the overall indicator of life satisfaction - 72.4 ± 4.6 points. It was statistically reliably confirmed ( $p < 0.01$ ) that these indicators significantly exceed the corresponding indicators in 40 patients in the control group, which were 62.0 ± 7.1; 57.8 ± 6.5 and 61.05 ± 5.7 points, respectively.

2 – table

Some spirographic data.				
Indicators	Groups	Before treatment	After treatment	p
FEV1 (%)	1st group	62.2±4.6	69.5±5.8	<0.05
	2nd group	60.6±5.3	61.6±6.2	>0.05
FVC (%)	1st group	63.7±4.4	79.3±4.4	<0.05
	2nd group	62.9±5.1	73.3±6.1	>0.05
FEV1/FVC (%)	1st group	53.5±4.4	69.2±5.3	<0.05
	2nd group	51.8±4.6	72.4±5.1	>0.05
PEF (L/min)	1st group	115±22	284±29	<0.01
	2nd group	112±24	225±37	>0.05

The second table presents comparative spirometric indices of patients in the main (1st) and control (2nd) groups with pneumoconiosis. According to the results obtained after rehabilitation measures and standard treatment, the patients in the main group showed a statistically significant improvement in all spirometric parameters: FEV<sub>1</sub>% — 69.5 ± 5.8, FVC% — 79.3 ± 4.4, FEV<sub>1</sub>/FVC% — 69.2 ± 4.3, PEF — 284 ± 29, at a significance level of  $p < 0.05-0.01$ . In the second

control group, no significant positive changes ( $p > 0.05$ ) were observed. These results confirm the high efficiency of the comprehensive treatment program in improving the airway patency of patients (Table 2).

The objective condition of patients in both groups was assessed based on the SGRQ questionnaire.

3 – table

Results of the SGRQ questionnaire			
Indicators	1 – group (n=60)	2 – group (n=60)	p
Symptoms	62.9 [72.5-74.6]	57.1 [62.0-74.3]	< 0.05
Activity	10.5 [12.5-12.6]	10.5 [12.2-12.6]	< 0.05
Impact of the disease	22.8 [21.6-24.9]	22.8 [22.7-24.9]	< 0.05

General information	21.0 [26.9-29.1]	26.7 [26.4-29.0]	< 0.05
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The questionnaire yielded data on indicators reflecting the course of pneumoconiosis, such as "Symptoms," "Activity," and "Disease Impact." However, the "Activity" and "Disease Impact" parameters had low values. Statistical analysis revealed no significant differences between the study and control groups.

Our studies have shown that personalized rehabilitation and psychological support for patients with pneumoconiosis have a significant positive impact and are an important component of a comprehensive treatment strategy. In the study group, quality of life scores on the SF-36 questionnaire were statistically significantly higher than in the control group ( $p < 0.01$ ). Particularly significant improvements were noted in physical activity levels, mental health, and overall life satisfaction. An individualized approach that takes into account the psychosocial status of patients not only helps reduce the severity of disease symptoms but also improves overall quality of life.

Analysis of spirographic data revealed that patients in Group 1 showed a significant improvement in respiratory function ( $p < 0.05$ –

0.01). However, patients in Group 2 showed no significant changes ( $p > 0.05$ ). These results confirm the clinical significance of comprehensive rehabilitation measures in correcting respiratory failure caused by pneumoconiosis.

According to the SGRQ questionnaire results, patients in the study group showed improvements in the "Symptoms," "Activity," and "Impact of Disease" categories. Positive dynamics were recorded for all three parameters ( $p < 0.05$ ), highlighting the importance of a comprehensive approach that includes assessing not only functional indicators but also the subjective state of patients related to the disease course. The study results can serve as an important scientific basis for the healthcare system, demonstrating the need for a comprehensive approach to the rehabilitation of patients with pneumoconiosis. Specifically, individualized programs developed with key psychological support factors in mind not only alleviate the disease but also improve the patient's quality of life, enhance social activity, and stabilize disease control.

#### Список литературы/References/Iqtiboslar:

1. Всемирная организация здравоохранения. Всемирный доклад о раке 2022 года. – Женева: ВОЗ, 2022. – 128 с.
2. Sung H., Ferlay J., Siegel R. L., Laversanne M. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries // *CA: A Cancer Journal for Clinicians*. – 2023. – Vol. 73, № 1. – С. 1–33.
3. Kwon H. T., Rakhmatullaeva K. A., Lee H. K. et al. Challenges and Suggestions in Management of Lung and Liver Cancer in Uzbekistan: The Second Report of the Uzbekistan–Korea Oncology Consortium // *Frontiers in Oncology*. – 2022. – Vol. 12. – P. 885531.
4. Министерство здравоохранения Республики Узбекистан. Онкологическая статистика. Годовой отчет по данным Национального онкологического регистра за 2023 год. – Ташкент, 2024. – 52 с.
5. Silver J. K. Cancer rehabilitation and survivorship care: critical components of comprehensive cancer care // *American Journal of Physical Medicine & Rehabilitation*. – 2015. – Vol. 94, № 5. – P. 470–480.
6. Wang Y., Li Z., Li X. et al. Pulmonary rehabilitation improves exercise capacity and quality of life in lung cancer patients: A randomized controlled trial // *BMC Cancer*. – 2024. – Vol. 24. – Article number: 133.
7. Licht T., Crevenna R. Quality of Life in Cancer Rehabilitation – Topical Collection Introduction // *Cancers (Basel)*. – 2023. – Vol. 15, № 7. – P. 1889.
8. Institute of Medicine (IOM). From Cancer Patient to Cancer Survivor: Lost in Transition. – Washington, DC: National Academies Press, 2006. – 512 p.
9. American Cancer Society. Cancer Facts & Figures 2023. – Atlanta: American Cancer Society, 2023. – 72 p.
10. World Health Organization. Global cancer observatory: cancer today. – Lyon: International Agency for Research on Cancer, 2023. – Available at: <https://gco.iarc.fr>
11. . – Accessed: 31.03.2026.
12. World Health Organization. WHO report on cancer: setting priorities, investing wisely and providing care for all. – Geneva: WHO, 2020. – 120 p.
13. Bray F., Laversanne M., Weiderpass E., Soerjomataram I. The ever-increasing importance of cancer as a leading cause of premature death worldwide // *Cancer*. – 2021. – Vol. 127, № 16. – P. 3029–3030. – DOI: 10.1002/cncr.33587.
14. Allemani C., Matsuda T., Di Carlo V. et al. Global surveillance of trends in cancer survival 2000–2014 (CONCORD-3) // *The Lancet*. – 2018. – Vol. 391. – P. 1023–1075. – DOI: 10.1016/S0140-6736(17)33326-3.
15. Stout N. L., Silver J. K., Raj V. S. et al. Toward a national initiative in cancer rehabilitation: recommendations from a subject matter expert group // *Archives of Physical Medicine and Rehabilitation*. – 2016. – Vol. 97, № 11. – P. 2006–2015. – DOI: 10.1016/j.apmr.2016.05.002.
16. Pergolotti M., Deal A. M., Lavery J. et al. The prevalence of potentially modifiable functional deficits and the subsequent use of occupational and physical therapy by older adults with cancer // *Journal of Geriatric Oncology*. – 2015. – Vol. 6, № 3. – P. 194–201.
17. Schmitz K. H., Courneya K. S., Matthews C. et al. American College of Sports Medicine roundtable on exercise guidelines for cancer survivors // *Medicine & Science in Sports & Exercise*. – 2010. – Vol. 42, № 7. – P. 1409–1426. – DOI: 10.1249/MSS.0b013e3181e0c112.
18. Campbell K. L., Winters-Stone K. M., Wiskemann J. et al. Exercise guidelines for cancer survivors: consensus statement from international multidisciplinary roundtable // *Medicine & Science in Sports & Exercise*. – 2019. – Vol. 51, № 11. – P. 2375–2390. – DOI: 10.1249/MSS.0000000000002116.
19. Dennett A. M., Peiris C. L., Shields N. The role of exercise in cancer rehabilitation // *Current Oncology Reports*. – 2019. – Vol. 21. – Article number: 66. – DOI: 10.1007/s11912-019-0814-5.
20. Fong D. Y., Ho J. W., Hui B. P. et al. Physical activity for cancer survivors: meta-analysis of randomized controlled trials // *BMJ*. – 2012. – Vol. 344. – e70. – DOI: 10.1136/bmj.e70.
21. Mishra S. I., Scherer R. W., Snyder C. et al. Exercise interventions on health-related quality of life for cancer survivors // *Cochrane Database of Systematic Reviews*. – 2012. – Issue 8. – CD007566. – DOI: 10.1002/14651858.CD007566.pub2.