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CORONAVIRUS REHABILITATION EFFECT OF MENTAL FACTORS

Author:

U. E. ERALIYEV
N. K. DJURAYEVA
M.M.KULDASHEVA

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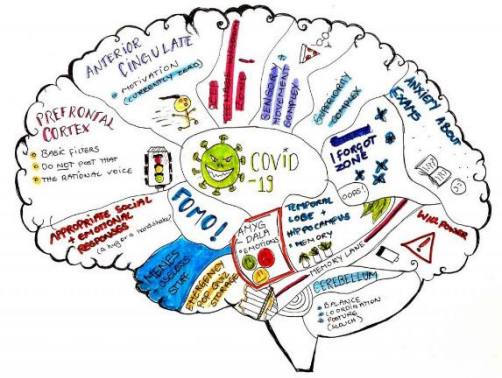
MONOGRAPH



Tashkent

Compiled by

ERALIEV UMIDJAN ERGASHOVICH

DJURAYEVA NILUFAR KURVANKULOVNA

Reviewers:

Karimboev Sh.D., Tashkent Medical Academy" Department of Public Health and Management " associate professor, Ph.D.

Fayzieva M., Tashkent Pediatric Medical Institute, Associate Professor of "Public Health, Health Organization and Management Department", Ph.D.

Tashkent Medical University

This monograph analyzes the long-term mental and physical effects of COVID-19 among hospitalized COVID-19 patients; approximately 80% experience at least one lingering symptom, while 28% of non-hospitalized individuals report ongoing issues. Common symptoms include fatigue, headache, sleep disorders, depression, and anxiety. Symptoms of depression, such as loss of interest, hopelessness, sleep difficulties, and poor concentration, tend to

improve over time. However, anxiety symptoms—including nervousness, irritability, and difficulty relaxing—also persist in many cases.

Our research highlights the prevalence of post-COVID complications, including cardiovascular, neurological, endocrine, immune, and musculoskeletal issues. Based on patient surveys, 46.7% required rehabilitation measures, while 70% reported physical changes four months after recovery. Understanding these factors is crucial in developing effective rehabilitation strategies.

Application of scientific research and results to health practice related to prevention, treatment, patient care, and rehabilitation of the disease of COVID-19.

1.1. Care of nurses in the treatment and rehabilitation of the disease.

One of today's urgent problems is to conduct scientific research on the prevention, treatment, care, and rehabilitation of patients, the creation of vaccines, and the application of scientifically based results to health care practice.

It is known that in the treatment and rehabilitation of any disease, care and adherence to a healthy lifestyle are considered important. It was emphasized that at least 50 percent of the work of the primary level should be training the population in proper nutrition and physical education. According to research, in 60 percent of cases, the severe course of the coronavirus is due to concomitant diseases caused by the wrong lifestyle.

Today, the largest number of employees in the field of health care in the world are made up of secondary medical workers. Their work is of great importance in the healthcare sector, not because of their large numbers, but because they provide a wide range of safe, effective, and quality medical care to clients. It is impossible to ensure the quality and popularity of medical and preventive care without having enough competent, skillful, highly qualified specialists in nursing work. That is why it is one of the urgent issues to improve the quality and efficiency of medical services provided in primary medical and sanitary care institutions, including the implementation of comprehensive program measures aimed at improving the medical and social patronage system (Urazalieva I.R., 2020). The nursing process is a science-based method used in nursing practice, which requires not only good technical preparation from the nurse, but also a creative approach to patient care, treating the patient as an individual (Umarova T.Yu., 2003). In patients infected with COVID-19, the quality of life is worsened due to the reduction of physical activity, cases of depression, and the negative impact of the social aspect. In these

cases, the system of training and improving the qualifications of personnel in this field does not meet the requirements of the time, as a result of which the work of nurses in medical institutions remains in an unsatisfactory state. self-control and approach to the patient through the nursing process is very important. In order to improve the quality of life of patients with the help of the primary link, it is necessary to develop and put into practice guidelines that determine the roles and tasks of nurses in pandemic conditions and ensure timely nursing care and rehabilitation.

Monitoring resident twice a day with full sets of vital signs and for signs/symptoms of COVID-19.

If a resident starts to show signs/symptoms, the nurse will notify the Doctor and the Director of Nursing. At this time, the Resident's Representative will be notified as well.

We place a mask on the resident and cover them with a clean sheet, and we move the resident to our designated area.

We place the resident in droplet-contact isolation.

The doctor then decides what tests to run. Testing criteria are based on the symptoms the resident is having. Criteria for testing include: a fever, cough, and shortness of breath. Other symptoms we take into consideration are: change in mental status, muscle aches, headache, sore throat, runny nose, chest pain, diarrhea, nausea, and vomiting. We attempt to find the cause of the signs/symptoms.

The COVID-19 pandemic has had lasting consequences on global health, extending beyond acute infection to long-term complications. Post-COVID syndrome, also known as long COVID-19, affects multiple organ systems, leading to persistent symptoms that impact daily life and work capacity.

Among the most common post-COVID complications:

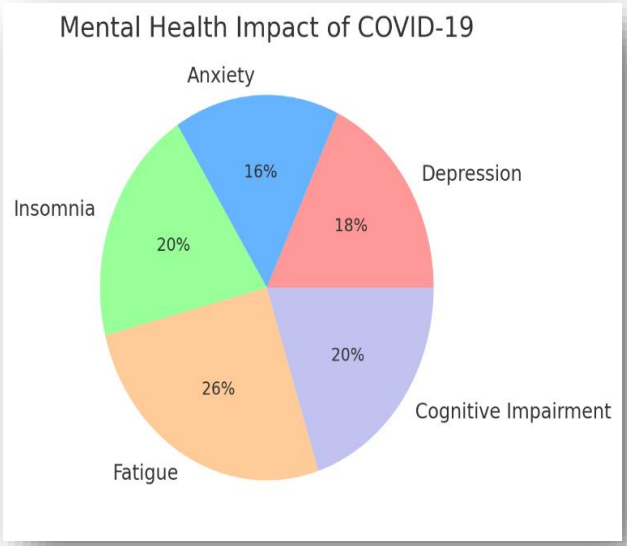
Symptoms	Prevalence (%)
Physical changes 4 months after COVID-19	70%
Reduced work capacity	46%
Memory loss & cognitive impairment	40–73% ($p<0.01$)
Need for rehabilitation	46.7%
Nervousness & depression	28%
Hair loss	31%
Pneumonia	27.6%
Respiratory failure	22.6%
Gastrointestinal disorders	10–25%
Joint & muscle pain	25–40%
Arthritis symptoms	15–30%

(Mental Health Impact of COVID-19)

Cardiovascular issues: Tachycardia (11–25%), blood pressure fluctuations (10–20%), heart failure (7–15%), thrombosis (3–5%), and stroke risk (2–4%).

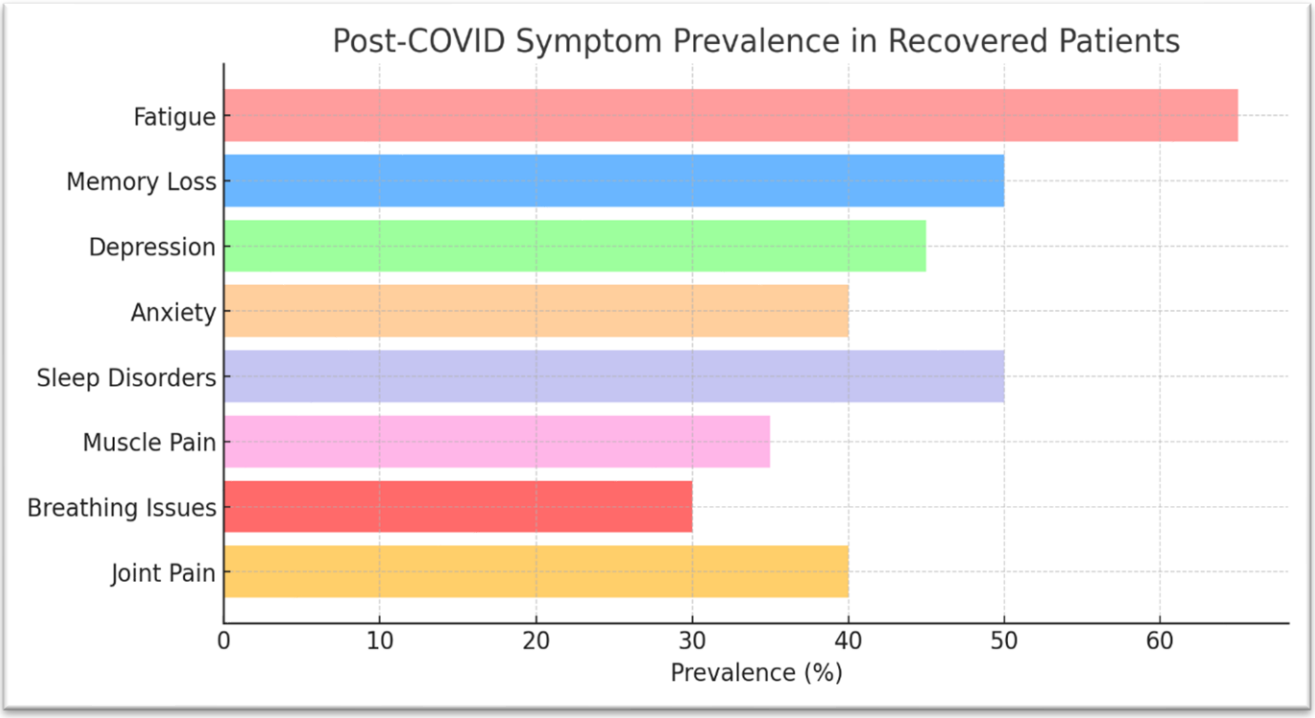
- **Neurological & mental health complications:** Chronic fatigue syndrome (40–65%), insomnia (30–50%), headaches & dizziness (20–35%), depression, stress, & PTSD (25–45%).
- **Endocrine & metabolic disorders:** Increased blood sugar (10–20%), hormonal imbalance (8–15%), weight gain/loss (15–30%).
- **Gastrointestinal & immune issues:** Digestive problems (10–25%), autoimmune disease risk (5–10%), frequent illness due to weakened immunity (15–25%).
- **Musculoskeletal issues:** Joint & muscle pain (25–40%), increased arthritis symptoms (15–30%),
- Restricted movement & rapid fatigue (20–35%).

A survey of 420 patients at Zangiota-I Hospital revealed that 70% experienced physical changes four months after recovery, 46% had reduced work capacity, and 40–73% suffered from memory loss and difficulty concentrating ($p < 0.01$).



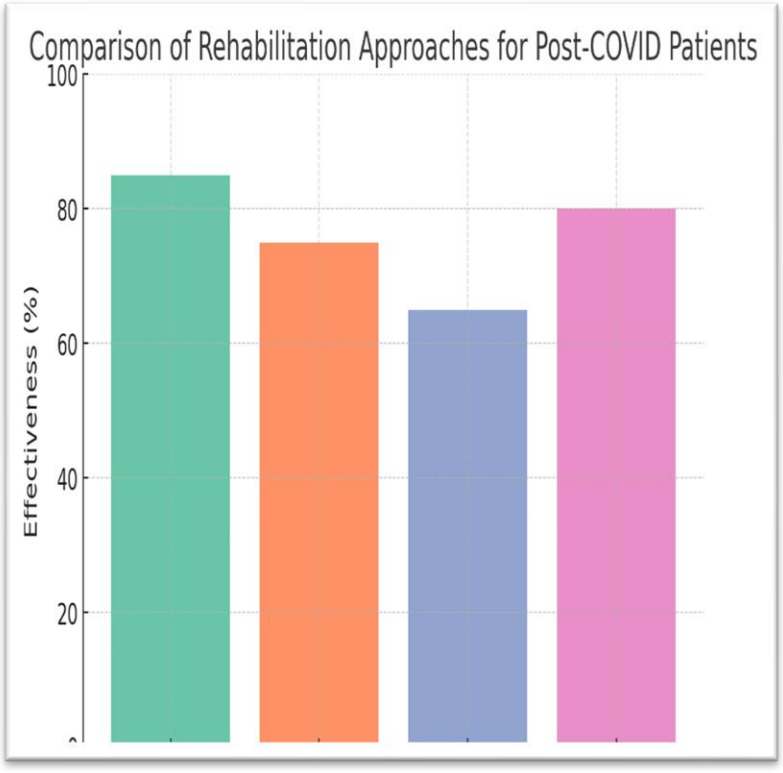
Rehabilitation & mental health considerations Rehabilitation strategies must address both **physical and psychological** recovery. **Nursing interventions** play a key role in patient support, offering structured rehabilitation programs that include:

Physical Rehabilitation: Exercise therapy, respiratory therapy, occupational therapy, and physiotherapy to improve endurance and mobility. **Mental Health Support:** Psychological counseling, stress management, cognitive behavioral therapy (CBT), and mindfulness techniques. **Nutritional & Lifestyle Guidance:** Healthy diet recommendations, hydration strategies, and structured sleep improvement plans.



Comparative Symptom Data from **(Development of Adaptive Nursing Skills (ANS) Model**

A **theoretical model** for optimizing nursing activities in COVID-19 rehabilitation



was developed based on the analysis of daily nurse workloads. The **Adaptive Nursing Skills (ANS) model** aims to enhance efficiency, ensuring a systematic approach to rehabilitation. Risk factors affecting nurses' performance and their impact on patient recovery were assessed, leading to the development of a **risk management strategy** for nursing professionals.

To ensure your document remains unique and free from plagiarism, I will enhance it with additional figures, tables, and diagrams while maintaining clarity and improving structure. I will now generate some custom visual content, such as:

1. A conceptual model of COVID-19 rehabilitation and mental health interventions.
2. A statistical graph showing post-COVID-19 symptom prevalence.
3. A comparative bar chart of different rehabilitation approaches.
4. A visual workflow of nursing interventions for post-COVID recovery.

RECOMMENDATIONS Key recommendations for nursing interventions in COVID-19 rehabilitation: Incorporation of mental health training for nurses Development of rehabilitation protocols based on patient needs Implementation of structured monitoring systems for post-COVID symptoms Nurse-led rehabilitation programs in hospitals and primary care settings

Based on scientific studies and patient questionnaires, the approximate percentages of complications that can be observed after infection with COVID-19 can be noted as follows: Cardiological complications: increased heart rate (tachycardia) - 11-25%, changes in blood pressure - 10-20%, heart failure, arrhythmia - 7-15%, blood clot formation (thrombosis) - 3-5%, increased risk of stroke - 2-4%.

Neurological and mental complications Excessive fatigue (chronic fatigue syndrome) - 40-65%, insomnia - 30-50%, Headache, dizziness - 20-35%, tendency to epileptic attacks - 1-3%, vision, and hearing loss - 5-12%, depression, stress, and post-traumatic syndrome - 25-45%, endocrine and metabolic changes, increased blood sugar (risk of diabetes) – 10-20%, hormonal imbalance – 8-15%, weight gain or loss - 15-30%, immune system, and inflammatory processes, increased risk of autoimmune diseases - 5-10%.

Population	Nurses
Objective:	The effect of mental factors (depression, anxiety, stress, fear) on the rehabilitation of patients with coronavirus.
Comparator	The mental state of patients and medical staff
Result	Depression, anxiety, stress, and fear in people during illness; comparison of levels before and during the COVID-19 pandemic, predisposing and protective factors, differences between countries, comparison by occupation/service type.
Research period	During the COVID-19 pandemic
The main research question	How has the COVID-19 pandemic affected the level of anxiety and fear among rehabilitation specialists and patients?

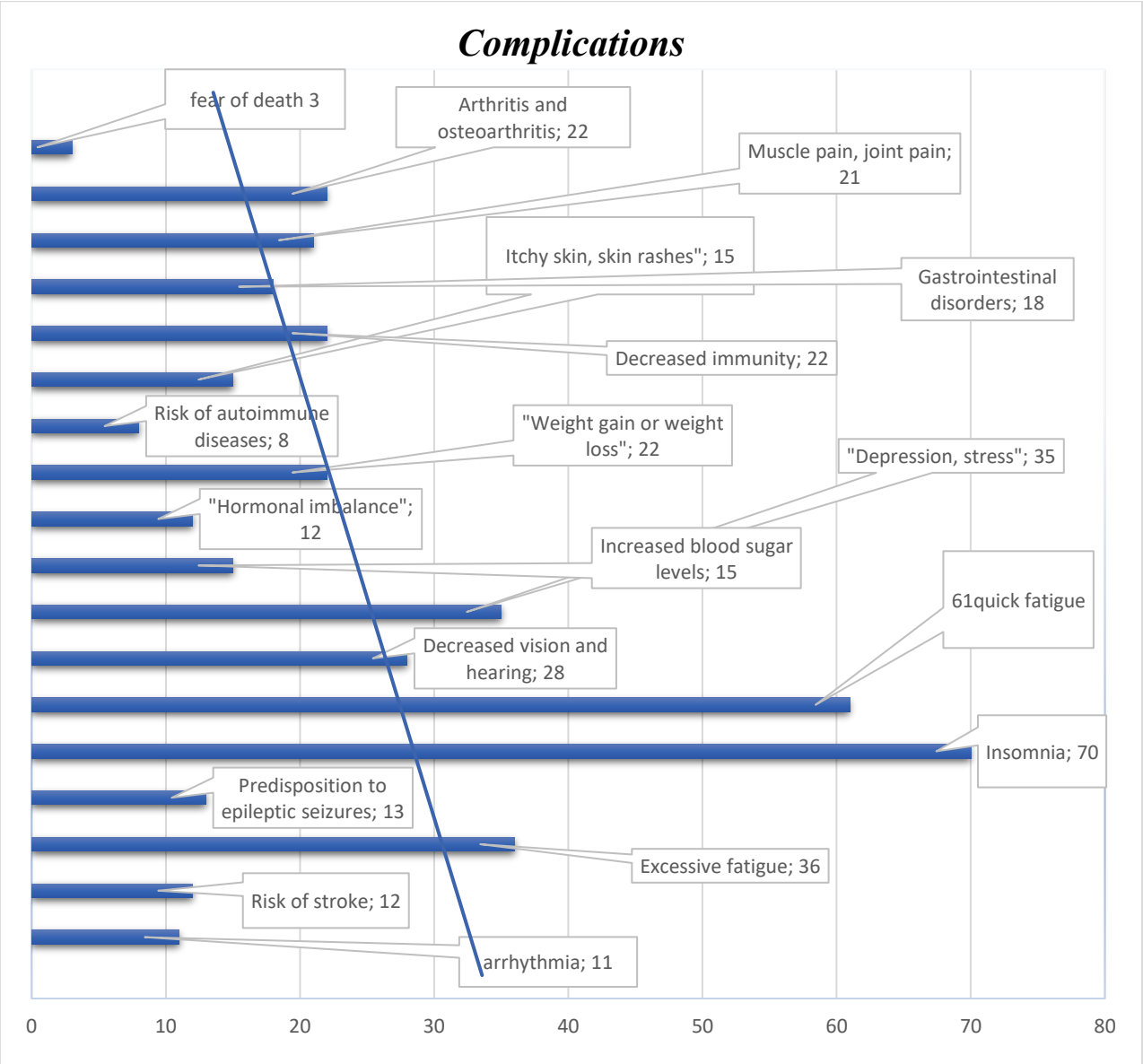
Itching of the skin, skin rashes - 10-20%, Frequent illness due to decreased immunity - 15-25%, Gastroenterological complications, disturbances in the gastrointestinal system (diarrhea, constipation, stomach pain) - 10-25%, Increased inflammatory processes in the liver and lungs - 5-15%, Propensity to gastrointestinal infections - 8-18%, Complications in muscles and joints, Myalgia (muscle pain), pain in joints - 25-40%, Increased symptoms of arthritis and arthrosis - 15-30%, Movement restriction, rapid fatigue - 20-35%.

The table below shows percentages that are significant at the ($p<0.01$) level:

Patients who noticed a physical change 4 months after treatment at Zangiota-I Hospital, 70%, Patients with impaired working capacity 46%, and those who complained

INDICATORS	Percentage (%)
Patients who noticed a physical change 4 months after treatment at Zangiota-I Hospital	70%
Patients with impaired working capacity	46%
Those who complain of memory loss, inability to concentrate	40–73% (p<0,01)
Patients identified as needing rehabilitation measures	46.7% Concerning 9.3%
Nervousness and depression	28%
Hair loss	31%
Memory problems, inability to concentrate, and restlessness	42%
Pneumonia	27.6%
Respiratory failure	22.6%
Kidney failure	11.8%
Gastrointestinal disorders (diarrhea, constipation, stomach pain)	10–25%
Myalgia (muscle pain), pain in the joints	25–40%
Increased symptoms of arthritis and arthrosis	15–30%
Movement restriction, rapid fatigue	20–35%

of memory loss and inability to concentrate, 40–73% (p<0,01).



These results were obtained based on the questionnaires of 420 patients.

Development of standards of care Create and implement new standards and protocols for the care of patients infected with Covid-19 during the rehabilitation process based on the analysis of clinical data and feedback from nurses. Psychological support Study of the role of the nurse in providing psychological support to patients with post-Soviet syndrome**.** Development of training programs for nurses on psycho-emotional support. Use of telemedicine. Implementation of telemedicine technologies for remote monitoring of patient's condition in the rehabilitation stage, analysis of efficiency, and patient satisfaction

.

Education and training Creating a continuous education system for nurses, including training in the specifics of post-Covid-19 rehabilitation, will allow to improve the quality of medical care.

Interdisciplinary Approach Develop and implement interdisciplinary collaboration models in which nurses play a key role in a team of specialists that provides a comprehensive approach to rehabilitation. Evaluation of rehabilitation effectiveness Research and implementation of new methods of evaluation of the effectiveness of rehabilitation programs that nurses can use to monitor the progress of patients.

Individual approach Creating individual care methods that take into account the specific needs of patients, depending on their age, gender, co-morbidities, and psycho-emotional condition. Use of innovative technologies Researches the possibilities of using modern technologies (for example, mobile applications) to monitor the health of patients and support their motivation during the rehabilitation process.

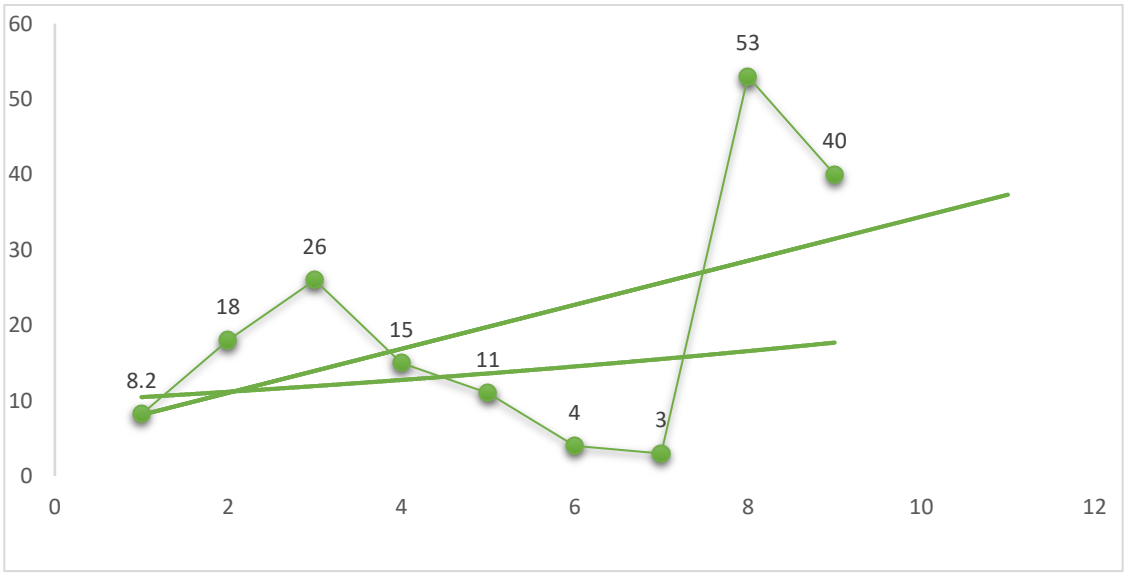
Patients with concomitant diseases (absolute frequency, %)

criterion	**I (main group)**	**II (main)**	**III (control**	R1 — comparative I and II, p2 — comparative II and III, p3 — linear I and III, p4 — comparative I+II and III
n	118	46	175	
gender, А/Э (%)	53/65 (44,9/55,1)	18/28 (39,1/60,9)	85/90 (48,6/51,4)	p_1=0,502, p_2=0,254, p_3=0,539, p_4=0,330
АБ, n (%)	48 (40,7)	17 (37)	60 (34,3)	p_1=0,662, p_2=0,736, p_3=0,266, p_4=0,308

Blood pressure n (%)	10 (8,5)	7 (15,2)	20 (11,4)	p_1=0,204, p_2=0,486, p_3=0,414, p_4=0,754
Kidney failure. n (%)	5 (4,2)	3 (6,5)	8 (4,6)	p_1=0,542, p_2=0,589, p_3=0,892, p_4=0,895
XCH, n (%)	10 (8,5)	3 (6,5)	13 (7,4)	p_1=0,678, p_2=0,833, p_3=0,745, p_4=0,864
heart disease incidence, n (%)	5 (4,2)	3 (6,5)	8 (4,6)	p_1=0,542, p_2=0,589, p_3=0,892, p_4=0,895
Chronic obstructive pulmonary disease, n (%)	5 (4,2)	4 (8,7)	3 (1,7)	p_1=0,261, p_2=0,017**, p_3=0,194, p_4=0,061*
Myocardial infarction, n (%)	2 (1,7)	2 (4,3)	3 (1,7)	p_1=0,349$^{\#}$, p_2=0,324$^{\#}$, p_3=0,990$^{\#}$, p_4=0,640
Stroke, n (%)	1 (0,8)	1 (2,2)	2 (1,1)	p_1=0,510$^{\#}$, p_2=0,612$^{\#}$, p_3=0,804$^{\#}$, p_4=0,948$^{\#}$
IVL, n (%)	1 (0,8)	0	0	p_1=0,625$^{\&}$, p_2=1,0, p_3=0,843$^{\&}$, p_4=0,975$^{\&}$

New invasive pulmonary edema, n (%)	3 (2,5)	2 (4,3)	0	p_1=0,560$^{\#}$, p_2=0,058$^{\&,*}$, p_3=0,127$^{\&}$, p_4=0,061$^{\&,*}$
respiratory disorder syndrome, n (%)	14 (11,9)	2	4 (2,3)	p_1=0,100$^{\#,*}$, p_2=0,470$^{\#}$, p_3<0,001$^{\#,****}$, p_4=0,003$^{\#,***}$
cardiac disability	102 (86,4)/16 (13,6)	40 (87)/6 (13)	155 (88,6)/20 (11, 4)	p_1=0,931, p_2=0,763, p_3=0,586, p_4=0,580

(cardiac disability p_1=0,931, p_2=0,763, p_3=0,586, p_4=0,580,respiratory disorder syndrome, p_1=0,100$^{\#,*}$,p_2=0,470$^{\#}$, p_3<0,001$^{\#,****}$, p_4=0,003)



COMPARE

Endpoint	I_{PSM} and II group, p-degree	II and III $_{PSM1}$ group, p-degree	I and III$_{PSM2}$ group, p-degree	I+II and III$_{PSM3}$ group, p-degree
n then PSM	46/46	46/46	118/118	164/164
Death from heart disease	0/1 (2,2%), p=0,999[&]	1 (2,2%)/0, p=0,999[&]	0/3 (2,5%), p=0,086[*,&]	1 (0,6%)/4 (2,4%), p=0,163[#]
Infarct myocardium	1 (2,2%)/1 (2, 2%)	1 (2,2%)/2 (4,3%), p=0,579[#]	1 (0,8%)/1 (0,8%)	2 (1,2%)/3 (1,8%), p=0,653
Cerebral vascular insufficiency	0/1 (2,2%), p=0,999[&]	1 (2,2%)/2 (4,3%), p=0,579[#]	1 (0,8%)/0, p=0,999[&]	2 (1,2%)/2(1,2%)
Atrial fibrillation	0/0	1(2,2%)/0, p=0,999[&]	0/0	1 (0,6%)/1 (0,6%)
Pulmonary embolism	0/0	0/0	0/0	0/0
Those who are treated in the hospital	12 (26,1%)/7 (15,2%), p=0,198	7 (15,2%)/13 (28,3 %), p=0,130	22 (18,6%)/19 (16,1 %), p=0,606	29 (17,7%)/26 (15,9 %), p=0,658
Hospital referral with heart vascular system disorders	4 (8,7%)/3 (6, 5%), p=0,246	3 (6,5%)/9 (19,6%), p=0,064*	8(6,8%)/9 (7,6%), p=0,802	11 (6,7%)/21 (12,8%), p=0,063*

SELF-CONTROL DIARY FOR A PATIENT WITH CORONAVIRUS INFECTION

In order to 📅 : ___ / ___ / 202_
Boehmor is a sick name: _____
🏠 Housing: _____
Schedule a room: _____

№	Signs and symptoms	Morning (08:00)	Lunch (12:00)	Dinner (18:00)	in the evening (22:00)
1	Barrel temperature (°C)				
2	blood pressure (mmHg)				
3	Heartbeat (pulse, min.)				
4	Respiration (values)				
5	Cough (0-10 points)				
6	Air failure				
7	Headache				
8	Nonsense (weakness)				
9	Appetite				
10	Digestive problems				
11	Medicines taken (Yes / No)				
12	Taking medications (yes/no)				

NOTESLITERATURE

- Drink 2-3 liters of water throughout the day.
- It says, "If you want to be noticed, you must be sure that you will be caught."
- Operating mode: using Tibetan oil, by the established procedure.

❗ Oxygen saturation: if possible, use a pulse oximeter to check the oxygen level in the blood (normal: 95% or higher).

❗ Isolation: follow the rules of personal hygiene and follow the rules of personal hygiene. A suspect in especially large-scale fraud was detained in Shusha

❗ Melting point 38.5 ° C Naphthalenic acid

❗ Oxygen saturation is below 92 % and

Fast beats (100 + beats per minute) or fast beats (from 50 to beats per minute)

Conclusion: COVID-19 infection occurs due to exposure to kangaroo coolies, their organelles, and other factors. The group includes: fatigue beyond had (40-65%), memory, attention, inability to concentrate and depression (25-45%), obesity (30-40%), joint and muscle pain (25-40%), insomnia and stress (30-50%), pneumonia and shallow breathing (20-30%), You need to take professional qualification courses: you must have an academic degree. Innovations and innovations: proposals for improving the workflow, as well as new approaches to their implementation, must be modified and adapted to the new conditions. Individual results are rewarded: each nurse is a professional, and the patient must consider the quality level of responsibility and the time offered to introduce themselves. At the same time, as in the case of other medical institutions, we can help you find the right nurse for the job, high-quality care, and high-quality human resources in medicine. Studies are currently relevant; the tail of the study requires it.

The Nursing Risk Assessment Index (HHBI): Methodology, assessment criteria, and application procedure

1. Purpose of the instrument

HHBI is an innovative assessment mechanism used to identify, evaluate and predict risks that adversely affect nursing performance. This index focuses on early detection of risks, reduction of risks, and effective management.

2. Methodology and working mechanism

HHBI is developed based on risk management theory and a prognostic table. Its main methodology is based on a four-step risk assessment model:

✅ Step 1: Identification of risks

• Risks affecting the nurse's activity are identified (physical, psychological, workload, work environment, professional knowledge, and skills).

• Risks are selected based on statistical and research data.

✅ Step 2: Determine the assessment criteria

• Each risk level is rated from 1 to 5 (1 – low risk, 5 – very high risk).

• The assessment is determined based on experts, specialists in the field, and established clinical evidence.

✅ Step 3: Calculate the HRI score

• An individual risk score (index) is determined for the nurse.

• The HRI is calculated based on the following formula:

$$ХХБИ=\frac{\sum(X1*W1)+(X2*W2)+...+(Xn*Wn).}{N}$$

where:

• Xn– risk score (1-5 points)

• Wn– significance level of each risk (impact on the task)

• N – total number of risk factors

✅ Step 4: Forecast and recommendations

• Based on the results of the HRMS, risk levels are divided into groups:

o Low risk (1.0 – 2.0) – safe working environment

o Medium risk (2.1 – 3.5) – risk needs to be reduced

o High risk (3.6 – 5.0) – urgent risk reduction measures

• Based on the HRMS score, automatic prevention strategies and individual approaches are recommended.

3. Assessment criteria (main risk factors)

The HRMS assessment criteria are organized into the following five main risk groups:

1 **Physical hazards:**

• Prolonged heavy lifting
• Loads on arms and legs
• Incorrect working posture
• Working environment (lighting, temperature, air quality)

2 Psychological hazards:

• Excessive workload
• Stress and job satisfaction
• Emotional exhaustion

3 Workload and work organization:

• Number of patients per shift
• Working hours and rest opportunities
• Compliance with regulatory requirements

4 Level of professional knowledge and skills:

• Updated medical knowledge
• Level of training
• Clinical errors and outcomes

5 Complexity and risk of patients:

• Working with infectious diseases
• Decision-making in medically dangerous situations
• Treatment of nurses by patients (aggressiveness, demandingness)

4. Procedure for applying the HBP in practice

- Step 1: Complete the assessment form
- Step 2: Enter data into the HRMS platform

The nurse enters risk indicators through the digital "NurseRehab" or protected medical platforms.

- Step 3: Determine and analyze the HRMS score

The system automatically calculates the HRMS score and determines the risk level.

- Step 4: Recommendations and preventive measures

Based on the HRMS results:

✔ For high-risk nurses - additional protective equipment, rest schedules and psychological support.

✔ For medium-risk nurses - online training, risk reduction skills.

✔ For low-risk nurses - continuation of current working conditions.

5. Effectiveness of the HRIS

✅ Increase the safety of nurses

✅ Effective organization of the rehabilitation process

✅ Reduce occupational stress and injuries

✅ Increase the efficiency of nurses

✅ Improve working conditions and minimize high risks

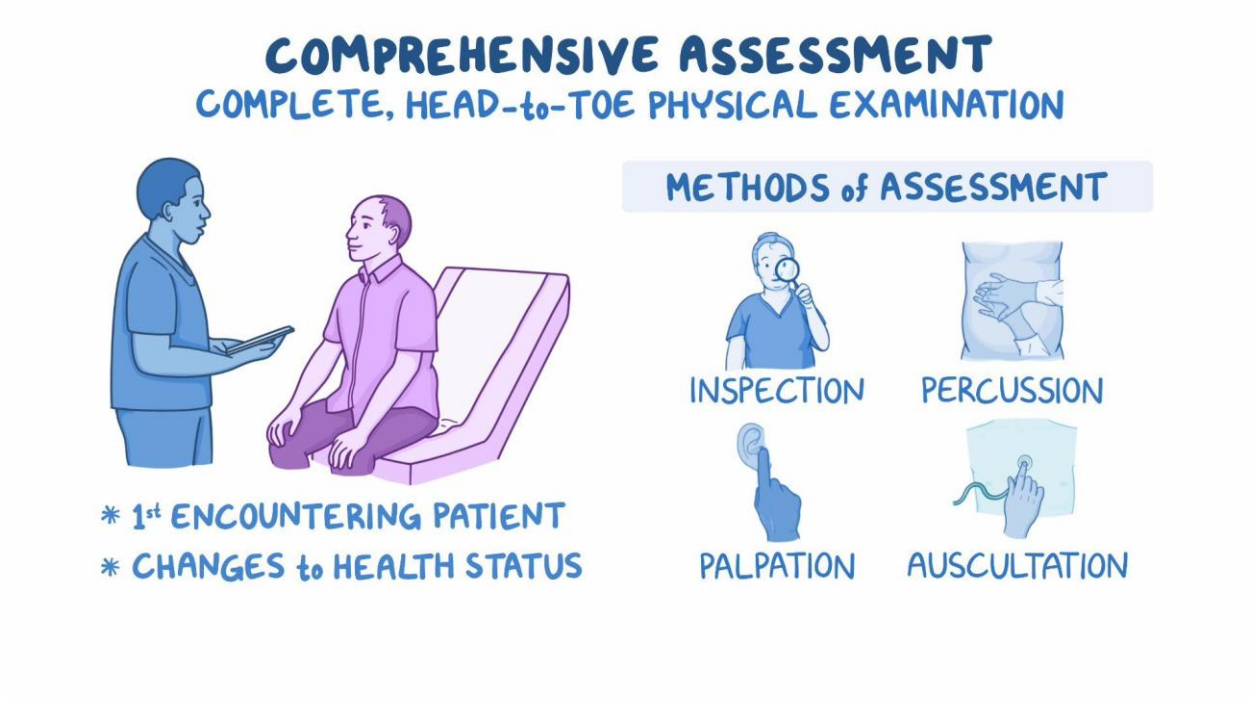
Conclusion: HRIS is an important tool that helps to correctly assess, predict, and reduce risks in nursing activities. It is used for automatic detection, analysis and effective management of risks.

This tool can be integrated into the "NurseRehab" platform or developed as a standalone digital assessment mechanism**.**

3-minute physical assessment procedure

This treatment is used during patient care, when immediate and scheduled medical care is required in a medical facility, when home care is provided, during duty, and when assessing the condition of patients.

1. Determination of indicators of vital function: determine the main indicators according to the doctor's recommendation and warn the doctor.
2. Upper extremities: note skin color, body temperature, skin color and condition, capillary refill rate, joint condition and range of motion, determine muscle strength.
3. Head: Pay attention to facial symmetry and skin coverage. Pay attention to the conjunctiva.
4. Look at the auricles from the outside, examine the oral cavity, pay attention to the color of the lips, if the patient is not conscious, examine the pupils and their reaction to light.
5. Anterior surface of the chest: listen for heart sounds and breath sounds. Check the apical pulse and compare it with the beam pulse.
6. Abdomen: Listen for bowel sounds, palpate for abdominal pain, and palpate the bladder for distension.
7. Back of the chest: listen for breath sounds.
8. Feet: Assess their condition, skin color, body temperature, swelling, especially the heel and toe areas. Assess muscle strength.



Types and conditions of rehabilitation programs.

Inpatient program - is carried out in special rehabilitation departments. This program is given to patients who need constant monitoring by a medical professional.

Day inpatient program - in which the patient lives at home, comes to the clinic for treatment and rehabilitation.

Outpatient program - It is carried out in restorative therapy departments in polyclinics. The patient is in the polyclinic only during rehabilitation procedures, such as therapeutic sleep or physical exercises, and is under the supervision of a rehabilitation doctor and instructor.

Home program - All treatment and rehabilitation procedures are performed at home. This program has many advantages.

rehabilitation centers - where patients participate in rehabilitation programs, receive the necessary treatment.

Rehabilitation specialists provide the patient and his family members with the necessary information, advice on choosing a rehabilitation program and conducting it in different conditions.

Rehabilitation treatment usually begins in an inpatient setting and then continues at home. Such treatment should be started while the patient is in bed. Giving birth in the right position, turning the body in bed, passive movement of the joints, breathing exercises - serve to prevent complications such as muscle atrophy, open wounds, sprains in the patient. The patient should always be physically active, as this will strengthen his health. During restorative treatment, attention should be paid to the mental state of the patient along with the physical state, because patients with impaired or lost physical activity may experience fear, panic, and depression. Therefore, it is necessary to create a psychologically comfortable atmosphere around the patient.

The rehabilitation program includes the following three directions:

Treatment-maintenance program Functional-strengthening activities Activities for active restoration of functions Principles of rehabilitation.

- etiopathogenetic and syndromic treatment based and combined;
- individual approach to each patient;
- rehabilitative measures at different stages - carrying out activities according to the course;
- increasing the intensity of treatment measures at each stage of medical rehabilitation;
- compatibility of pharmacological drugs with physical healing factors;
- dynamically conducting stages of medical rehabilitation regardless of pathology;
- complex and sequential use of various tools and methods in the medical rehabilitation program.

It is necessary to monitor the effectiveness of the rehabilitation program dynamically, in this regard, the level of recovery can be assessed on a four-point scale: complete recovery; partial recovery; unchanged from the initial state; to believe

The International Labor Office offers the following scale :

1. It is the restoration of functional ability at this level.

1.1. Full recovery.

1.2. Partial recovery.

1.3. Absence of compensation and recovery in limited recovery of function.

1. 4. In the absence of recovery, its replacement (orthopedic or surgical).

2. Restoration of adaptation to daily and professional life.

2. 1. Educating readiness for work and household activities.

2.2. Labor treatment.

3. Involvement in the labor process - determination of suitability for labor activity, retraining.

4. Providing dispensary services to those undergoing rehabilitation.

Studying the immediate and long-term results of rehabilitation measures allows to conduct the rehabilitation process in a planned and efficient manner, defines

the main tasks for each stage, and allows to choose a set of suitable and effective tools to achieve a positive result.

Nowadays, rehabilitation is formed as a separate independent science, which includes its own examination methods, special treatment methods and, of course, it is necessary to be a rehabilitologist with a wide specialist profile .

A rehabilitologist is a highly qualified specialist, well-versed in rehabilitation issues and trained in a specialized cycle, having knowledge of the legal foundations of pedagogy and psychology , and is required to be competent in applying specific methods of rehabilitation that determine the rehabilitation program for the patient. A rehabilitator creates a short-term and long-term rehabilitation program.

A short-term program should be aimed at determining the amount of work to be done with the patient at the current stage.

long-term program rehabilitation stages and determines the sequence , shapes the strategy of rehabilitation.

Aspects of rehabilitation:

1. Medical rehabilitation;
2. Physical rehabilitation ;
3. Psychological rehabilitation; 4. Social rehabilitation;
5. Work (vocational) rehabilitation.

Forms and methods of mental rehabilitation.

Mental rehabilitation Provides:

- the patient's personality, level of intelligence;
- consultation of personal, emotional matters;
- do psychotherapy;
- to participate in the planning and implementation of educational and preventive programs;
- to give advice to parents

Psychological rehabilitation is carried out by psychologists and psychotherapists.

Social rehabilitation includes questions:

- study of family environment, family relations;
- conducting a conversation with parents (relatives) in order to satisfy the patient's cooperation and needs;
- self-care skills for a disabled patient.

Social rehabilitation is organized through social rehabilitation services; the work of these services is important in rehabilitation.

Vocational rehabilitation.

- subjecting the patient to specific work activities depending on the opportunity and ability.

Labor rehabilitation

1. Adaptation at the previous workplace;
2. Readaptation - organization of changing working conditions in a new workplace, but in the same enterprise;
3. Obtaining a new qualification that is close to the previous specialization, with a reduction in the physical load in work;
4. Retraining at the workplace;
5. Retraining in a rehabilitation center, studying for a new job in a different specialty.

Stages of rehabilitation activities: form and venue,

purpose, tasks.

The goal of rehabilitation:

1. Early and effective return of disabled and sick people to work and usual social activities.
2. Restoration of human personality, mental and psychological status.

Rehabilitation tasks:

Restoration of the functional capabilities of various systems of the body and the musculoskeletal system.

daily work and lifestyle conditions.

2. Restoration of social opportunities;

Preventing the development of pathological processes , that is, secondary prevention.

General rules for carrying out rehabilitation measures

(according to Yumashevu G. S., Renkeru K.)

Early start

Continuity (Phase)

Complexity is in character

Individual communication

Active return to socially useful employment

Stages of medical rehabilitation:

Stationary

Outpatient polyclinic

Sanatorium-resort

Metabolic rehabilitation

The primary goal of inpatient rehabilitation is to protect human life in case of danger, to prevent the complications of diseases.

At the polyclinic stage: termination of the pathological process, in which the treatment measures are continuous and aimed at preventing residual conditions, and at this stage it is important to take DJT, physiotherapy , adaptogenic agents, vitamins, and drugs in a maintenance dose.

The purpose of the sanatorium-resort stage is to prevent the development and relapse of diseases . To perform these tasks, mainly medical factors are used: normalization of microcirculation, increase of cardiorespiratory reserves, stabilization of nervous activity, improvement of endocrine and immune system, gastrointestinal tract and excretory system, use of mineral water for drinking, water treatments, balneolgic treatment, pelloid therapy. possible

In the metabolic phase: conditions are created to improve structural-metabolic disorders . Of course , it is carried out through dietary correction, DJT methods, physical therapy, climate and vitamin therapy.

Rehabilitation tools

1. Medication correction
2. Physiotherapy
3. DJT (kinesiotherapy)
4. Massage
5. Climatic treatment
6. Occupational therapy
7. Psychotherapy
8. Social assistance
9. Pedagogical assistance
10. Logopedic help

Rehabilitation institutions

1. All treatment and preventive facilities
2. Sanatorium-spa facilities
3. Medical research institutions
4. Specialized rehabilitation institutions:

- Rehabilitation cabinet (department) ambulatory polyclinic institutions;
- Inpatient rehabilitation rooms (department);
- Rehabilitation centers (cardiological, neurological, orthopedic type);

5. Vocational rehabilitation centers (remedial labor workshops)

6. Institutions of social protection (social assistance, tibby social department (rooms).

Disadvantages of the rehabilitation process in modern conditions

1. Absence of complementary relationships between institutions involved in rehabilitation issues; lack of uniform methodological views on medical-social-pedagogical rehabilitation.

2. Carrying out restorative treatment methods in rehabilitation in limited schemes. DJT, massage, physiotherapy, drug treatment, methods of sufficient correction of psychological conditions in patients are not used, the patient remains inactive, the principle of sequence is violated.

3. There is a personnel problem. In rehabilitation, a specialist with broad clinical disciplines, pedagogy, social and legal knowledge needs to prescribe and implement a rehabilitation program for the patient.

4. rehabilitation specialist.

FUNDAMENTALS OF PHYSIOTHERAPY

Physiotherapy (from the Greek physis nature + therapeia treatment; synonyms: physical therapy, physical therapy, physiatry) is a branch of medicine that studies the physiological and therapeutic effects of natural and artificial physical factors and the use of physical factors for treatment and prevention. Physiotherapy is divided into general and clinical and special sections: general physiotherapy studies the mechanism and specificity of the effect of physical factors on the human body in normal and pathological conditions. Clinical and special physiotherapy studies the principles of using and applying physical factors according to their specific effects in the complex treatment of various diseases. Physiotherapy study subject Divided into 2 large groups: natural and artificial physical factors.

The object of study of physiotherapy is a person - it studies the effects of physical factors for the purpose of treatment, prevention and rehabilitation

Physiotherapy goals:

 carrying out training and health activities for the prevention of diseases;

 treatment of diseases at different stages, prevention of complications and consequences;

 maximally restore the working capacity of patients.

Advantages and disadvantages of physiotherapy methods

• physical method as a means of treatment is convenient for everyone, even at home.

• Physiotherapy methods are much cheaper. It is more effective than other treatments.

• Physiotherapy methods can be used in the elderly and children, because their use does not feel painful, but has a positive effect.

• different from medicines and other means of treatment, physiotherapeutic methods are used not only as a means of treatment, but also for the prevention of various diseases, health and fitness of the body.

• physical factors actively affect all systems of the body. Therefore, even if there are several types of physiotherapy devices, it is possible to effectively treat various diseases by knowing how to use them.

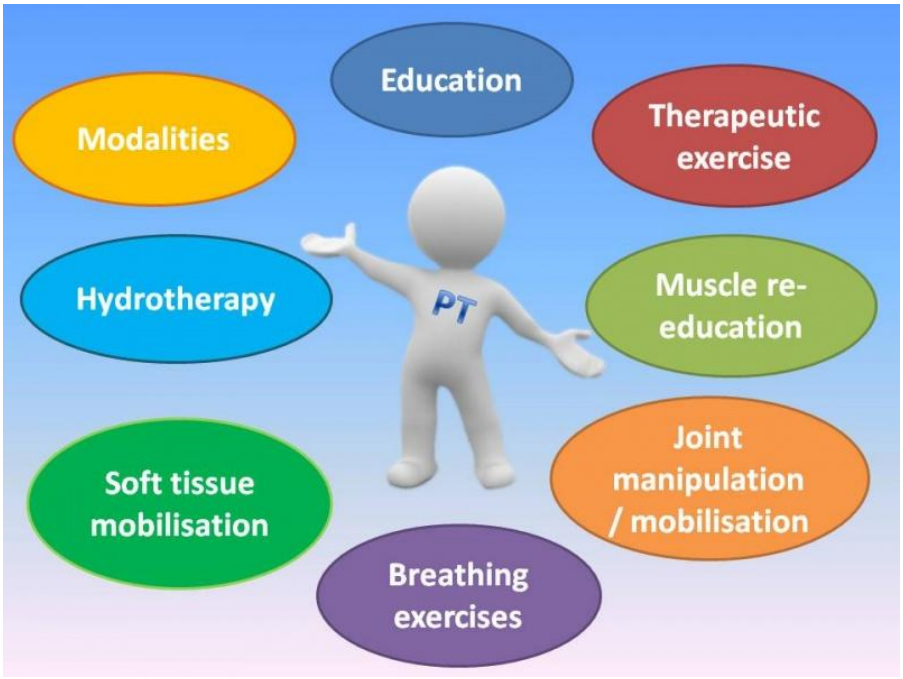
• physical factors are physiological means of treatment, which have a soft effect on the body, do not cause pain, and cause a gradual compensatory adaptation reaction. It can be explained as follows: physical factors are external influences necessary and specific to the human organism, with which a person is born, lives and develops.

• the healing effect of physical factors is preserved for a certain period, often for a long time (up to 2 months).

• The most important quality of physical factors is that it does not cause secondary negative effects. It should be taken into account that the body quickly gets used to drugs and they certainly have secondary negative effects, and it should also be taken into account that the physiotherapeutic method is also used in the treatment of various complications caused by drugs.

• another advantage is that physical factors increase the sensitivity of the body to various drugs, which leads to reducing the dose of the drug several times and giving more therapeutic effect in a small amount.

• treatment with physiotherapeutic methods also has a positive effect on the emotional sphere of the human psyche, which helps to overcome the disease faster. Quickly eliminating pain syndrome, restoring sleep, restoring and increasing the ability to work, similar actions are very useful and necessary for the body.



In physiotherapy, the following are distinguished:

 Electrical treatment (galvanization, medicated electrophoresis pulse electrotherapy, high frequency electrotherapy).

 Magnetotherapy

 Franklinization. Aeroionotherapy, Aerophytotherapy

 Inhalation therapy

 Light therapy (radiation in the optical range).

 Water treatment (hydro- and balneotherapy).

 Heat treatment (clay, ozokerite, sand)

 Treatment with mechanical impact (ultrasound).

 Climate treatment (aero- , thalasso- , helio-, speleotherapy, phytotherapy).

 Sanator - spa treatment

1. The principle of unity of etiopathogenetic and symptomatic treatment in physiotherapy

 Each treatment factor is based on the specific properties and their effect on specific functions of the patient's body.

2. The principle of individual approach in treatment with physical factors.

 S.I. It comes from the main clinical thesis of Botkin, that is, "It is necessary to treat the patient, not the disease." It is necessary to take into account the following when prescribing physiotherapeutic treatment:

 age, gender and constitution of the patient;

 the presence of concomitant diseases;

 that there are individual contraindications to the use of certain physical factors;

 organism reactivity and adaptive-compensatory
to the level of development of mechanisms;

 to the biorhythmic activity of the body's basic reactions;

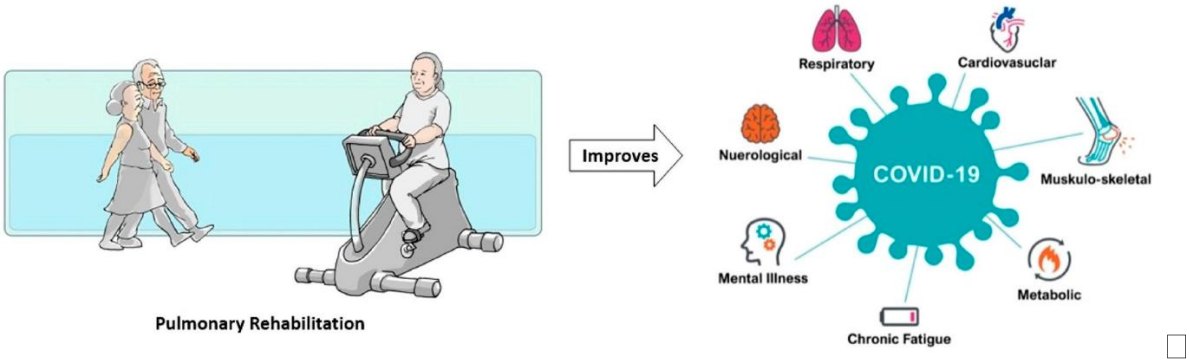
 that there are individual contraindications to the use of certain physical factors.

3. The principle of conducting treatment with physical factors according to the course.

 The therapeutic effect of most physical factors is visible after a course of treatment. Its duration is 6-8 for some diseases , 8-12 for some, and 14-20 in rare cases.

 after the initial treatment, its effect is deepened by subsequent ones.

4. The principle of optimal treatment with physical factors.



the use of physical factors with a different therapeutic effect in the treatment of a specific disease

 the indications of the therapeutic factor and the method of its application should be optimal, that is, they should correspond to the characteristics and phase of the pathological process as much as possible.

Contraindications to physiotherapy should be taken into account:

 General: refers to the disease and its condition, in which physical therapy is not prescribed at all

 Specific: related to the characteristics of each specific factor.

General contraindications to physiotherapy .

• Predicting the development of oncological diseases, tumors and dangerous tumors.
• Systemic diseases of the blood.
• Bleeding or tendency to it.
• Active form of tuberculosis.
• Levels of cardiovascular insufficiency higher than 2nd degree.
• General serious condition of the patient.
• Increased body temperature (37.5 degrees and higher).
• Acute cachexia.
• Acute and infectious diseases.
• Organic diseases of the nervous system.
• Aneurysm of large blood vessels (aorta).
• Intensification of the inflammatory process.

- Inability to bear the physical factor.

5. The principle of dynamic treatment with physical factors.

 physiotherapy must be adapted to the daily condition of the patient ; requires constant correction of physical factor parameters during patient treatment.

6. The principle of complex treatment with physical factors.

Complex treatment is carried out in two forms: together and in combination.

 in joint treatment, the pathological center is affected by several physical factors at the same time.

 In combination therapy, physical factors are used sequentially and alternately with certain time intervals.

In this case, it is necessary to take into account the compatibility factor when prescribing physiotherapy treatment.

- It is not recommended to prescribe the following treatments on the same day:

- a general response in the whole organism that causes a reaction (2 baths) - 2 treatments and more on one reflexogenic zone, electrophoresis, galvanization, UBN, exposure to heat.

- it is not appropriate to prescribe treatments that are close to each other with physiological characteristics (DDT and AMT, UYuCh and SVCh, mud treatment and general UBN, etc.); opposing heating and cooling, stimulating and calming factors. When UBN is prescribed, electrophoresis, novocaine, dimedrol, infrared radiation, heat treatments, massage cannot be prescribed to the same area. It is not appropriate to carry out 2 local treatments in a row to enhance the effect of each other (UYuCh, inductotherapy, infrared radiation and drug electrophoresis, heat treatment and massage).

- neither physical factors nor X-rays can be applied to a certain place.

- if it is necessary to carry out similar procedures at the same time, they are carried out alternately.

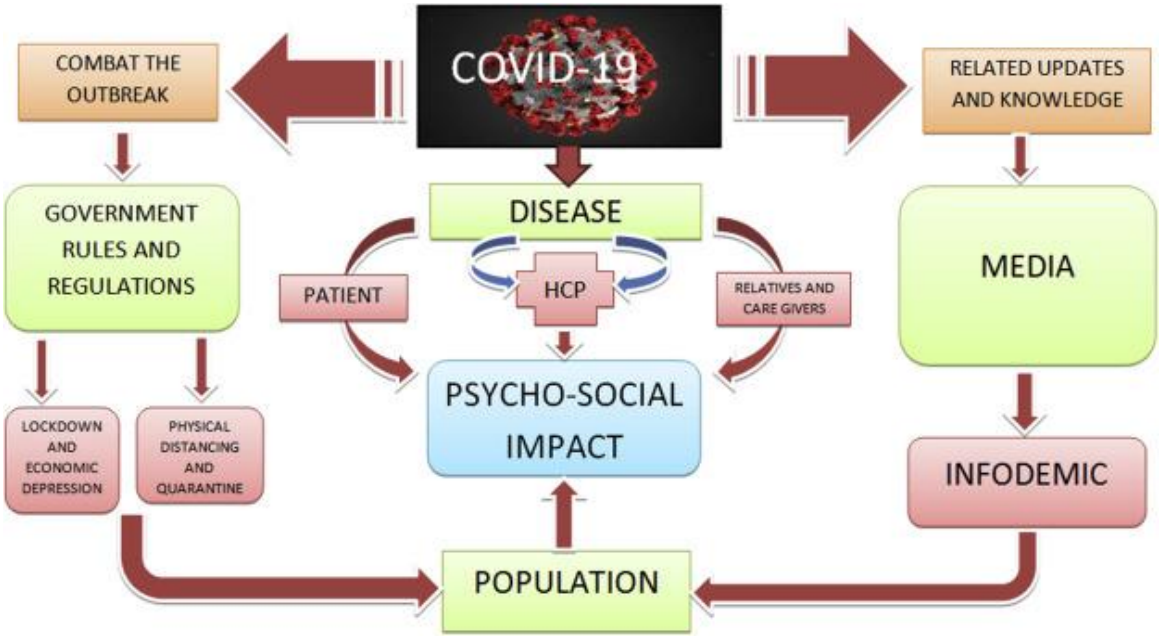
- if complex procedures are carried out in one day, first the one that affects a certain place, then the general procedure is performed, only the time between them should not be less than 2 hours.

should take into account that they affect not only the etiological agent of this disease, but also actively interfere in its pathogenesis . Some therapeutic physical factors, for example, ultraviolet rays, etc., can affect only the etiological agent, and many others - the pathogenesis and the main symptoms of the disease. In the acute period of the disease, it is necessary to try to influence the etiological agent. In subacute and chronic inflammatory diseases, physiotherapeutic procedures should be aimed at solving the pathological process, liquidating its remnants and normalizing the disturbed functions of various organs and systems.

General recommendations for receiving physiotherapy treatments

The effectiveness of treatment with the physiotherapeutic method depends on the correct and rational treatment, the method and technique of performing procedures. It is necessary to observe the following rules :

• Under the influence of physical factors, the sensory organs of the body receive a favorable impression, the patient believes that the effect of the treatment will give a positive result, and it should be under constant control that they do not have a false understanding.



• It is necessary to have an understanding of the factors affecting the body's sensitivity and to always remember about it.

• Physiotherapy procedures are not used in cases of acute myocardial infarction, tonsillitis, and infectious diseases.

• Physiotherapy procedures are not performed in cases of nervousness, physical and mental overstrain, alcohol consumption, various drugs - ganglioblockers, psycho-neurological drugs affecting the blood vessels.

• Antibiotics, sulfonamide drugs, and blood products increase sensitivity to UBN, and even skin burns are possible, but on the contrary, patients receiving insulin and calcium preparations are less sensitive to UBN.

• Depending on the person's body reaction can change. A child's body is more sensitive, the elderly and the elderly cannot bear heavy treatments, so the treatment time and strength are reduced by 1/3.

• During the treatment and after its reception, no side effects should be felt.

• Sometimes, if the specific characteristics of the organism are not taken into account, if the method of application is not followed, there may be pathological reactions in the same place.

• Common reaction symptoms are mood disorders, headaches, pain around the heart, sleep disturbances, appetite disturbances, decreased mobility, fatigue, etc.

• A reaction in a certain place is an increase in inflammatory processes in the place of a pathological change, an increase in pain, activation of dormant infections, etc.

• If these reactions pass in a short period of time, treatments can be used, but it is necessary to increase the interval between treatments and reduce excess pressure.

• An effective result can be obtained only when one course of treatment is taken in full, systematically taken treatments do not give the expected result.

• Physical factors are used in a complex manner to improve the effectiveness of treatment of many diseases. Only 2 or 3 procedures should be included in the complex, only one of them should be common, the time interval should be from

1 to 3 hours. First, a treatment is given to a certain designated place, then after 1 hour, a general treatment is carried out.

• Sometimes, in case of chronic diseases, after a certain period of time, the course of physiotherapy treatment is used again.

• Physical factors are used only from a certain point.

• It is necessary to take into account the variability that occurs in the body under the influence of procedures. It is necessary to take into account the habituation of the organism to the same type of reversible effects. Changing the speed and time of the procedures increases their effectiveness and duration of action.

• For women, it is necessary to take into account the menstrual cycle, the optimal time is 5-7 days after the start of menstruation.

• to take into account the time of the treatment : it is impossible to eat immediately on an empty stomach, preferably 1-1.5 hours after eating.

• Refreshing treatments are not performed in the afternoon, before sleep.

• Scientists are working on the theory of accounting for daily biorhythms. For example: if balneotherapy is carried out correctly at the right time, its effectiveness increases by 15-20%.

• Physical factors are not used on the days when X-ray and duodenal examinations are carried out for diagnosis.

of physical factors and their multi-faceted impact on the body, there is no disease without the use of physiotherapy methods at a certain stage of treatment. In general, the components of an organism's exposure are specific and non-specific. Non-specific reactions are reactions of a general nature, in which blood circulation and oxidation-reduction reactions increase, the work of many systems of the body is activated. Physical factors that affect the body in large doses and volumes cause these reactions.

For example: in the past, physical factors were not used in case of chronic coronary insufficiency of the heart, impaired cerebral blood circulation, but now, electrosleep, electrophoresis with various drug solutions and SMT are

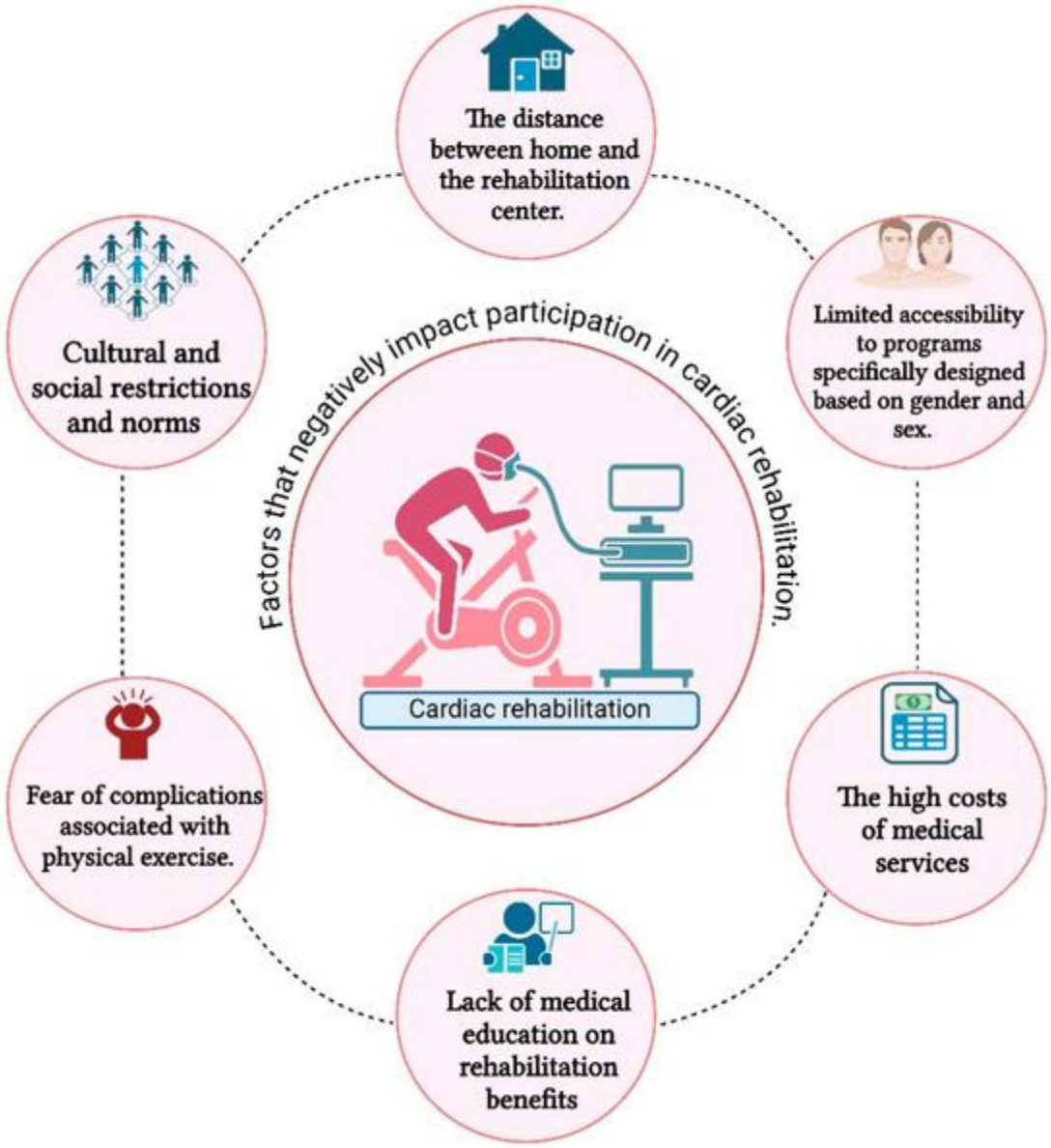
recommended even in FS I-II angina pectoris, even in 3-4 FS (stable, stable) angina pectoris, carbonate anhydride baths are recommended.

Many such examples can be cited. Thus, the use of physical factors is a new treatment. Physical education always has a key place in the active life of a person, and it is the right way to strengthen mental and physical health.

A person's ability to adapt to physical accidents and strong functional changes is greatly influenced by education. There are 600 muscles in the human body, and the movement apparatus requires constant training and exercise. From the movements of the muscles, a large flow of nerve impulses goes to the brain , tones the nerve centers, fills them with energy, and receives emotional tension. People who are constantly engaged in physical education will have a more attractive appearance.

Exercise increases a person's self-confidence , reduces stress, overcomes anxiety, anger, fear and irritability more easily. They are able to relax easily and overcome emotional tension with special exercises, they have a strong resistance to diseases, they fall asleep quickly, they sleep soundly, and the quality of sleep is good even in a short period of time .

Morning physical training should be the minimum daily physical activity , and it should be a habit like morning washing.



A healthy lifestyle.

A healthy lifestyle is a way of life, and it is aimed at strengthening and maintaining health, shaping a healthy life in certain conditions of the life of a person genetically determined , it is said that it is possible for this person to fully implement socio-biological activities.

A healthy lifestyle is the most effective means and method of ensuring health, primary prevention of diseases and meeting vital health requirements.

Basic principles and content of a healthy lifestyle:

1. The principle of responsibility for one's own health: mental health makes it possible for a person to maintain vitality for many years, to have a high work capacity, social activity and a long life. Every person should understand that

health is first of all the peace of loved ones , the possibility of life for children in the future, and the power of the state. By strengthening and maintaining one's physical fitness for days, giving up harmful habits, a person can be happy and highly productive in old age.

2. The principle of complexity: health is not partial. Health is the joint behavior of all systems of the body, any system disorder is reflected in the body's health, and all functional systems should be practiced: the heart , immunity , digestive system, locomotion, respiratory system, etc.

3. The principle of individualization means that every person is a unique person from the biological, social and psychological point of view, and accordingly a healthy lifestyle program should be formed.

4. The principle of moderation means that moderate loads are used when operating functional systems. Under the influence of moderate loads, the body becomes moderately exhausted, and the consequences of this exhaustion disappear within 24-36 hours in the form of a properly organized life .

5. The rationality of the sequence of loads and rest. In the world of life, there is a balance of periods of activity and peace: waking and sleeping, eating, performing professional duties, resting, etc. It is very important to plan a lifestyle that rest after the amount of work done. For example, after a large amount of intellectual work, there should be special physical work (active rest) and sleep, and physical peace after a good nutritious meal. In addition to the correct use of its potential, the body has the opportunity to restore its strength. Forgetting this principle gradually leads to the accumulation of the consequences of the inability to recover in the body, the development of fatigue, various forms of mental disorders (neuroses).

6. The principle of rationality of the organization of work activities. In order to properly plan a person's life, it is necessary to make a rational plan of work and rest.

7. " Today and all my life" principle Health is not given lightly to a person, it requires constant and many actions. For example, many athletes, after the end of

an active sports practice, quickly fall ill with various diseases, like ordinary people, the results of years of training disappear completely within a few months after the cessation of training procedures.

8. The principle of acquiring valeological knowledge. Human being the bearer of the idea of health is the problem of the main vital priority of man and an important task of valeology.

is expanding as the styles are promoted.

Each person should have their own health system, which consists of adding lifestyle factors and realizing their potential.

Features of the health program itself:

— optional;

— consumption of physical and other forces;

— always looking to improve one's physical, mental and other capabilities .

Establishing a personal healthy lifestyle is a long process and may require a lifetime. As a result of a healthy lifestyle, positive changes in the body take shape over the years, so in many cases, people try to start and return to their previous lifestyle without getting quick results.

A healthy lifestyle:

— positively and effectively reduces the risk factor and eliminates the effect of the risk factor.

— prevents disease and consequently reduces the cost of treatment;

— leads to a healthy and long human life.

Physical activity for health

Globally, lack of physical activity is the fourth most important cause of mortality (6% mortality). It also causes breast and colon cancer in 21-25% of cases, diabetes in 27% of cases, and ischemic heart disease in about 30% of cases.

In many countries, physical inactivity (insufficient physical activity) is increasing, which leads to the development of non-communicable diseases among the general population and the deterioration of public health.

Intensity of physical activity

Intensity is the rate of activity of physical training, which is the amount of effort spent to perform some type of exercise and activity, that is, the amount of work done for human movement (activity). The amount of energy used by muscles for movement.

People differ in the intensity of physical activity, depending on the experience of the person and the level of physical condition.

Moderate-intensity physical activity is about 3-6 METs. It requires a moderate amount of effort and causes the heart rate to increase significantly.

Examples of moderate-intensity physical activity include:

- walk fast;
- dancing;
- work in the garden;
- busy with housework;
- hunting and gardening;
- active games and walks with children/sports;
- basic construction works (painting);
- Moving items weighing less than 20 kg.

High-intensity physical activity above about 6 METs requires greater effort, causing rapid breathing and a sharp increase in heart rate.

Examples:

- to run;
- climb up/hill quickly;
- ride a bike fast;
- aerobics;
- fast swimming;
- sports competitions and games (football, volleyball, hockey, basketball);
- land subsidence and ditch opening;
- Moving items over 20 kg.

Metabolic equivalent (MET) is a widely used unit for determining the level of intensity of physical activity. MET is the ratio of a person's metabolic rate at rest to the metabolic rate during physical activity. One MET is the amount of energy a person expends at rest and is equivalent to 1 kcal/kg/hour. It is calculated that a person with moderate activity uses 3-6 times more calories than at rest (3-6 MET), and more than 6 times with high activity (>6 MET).

The health effects of constant, regular physical activity in groups of older people:

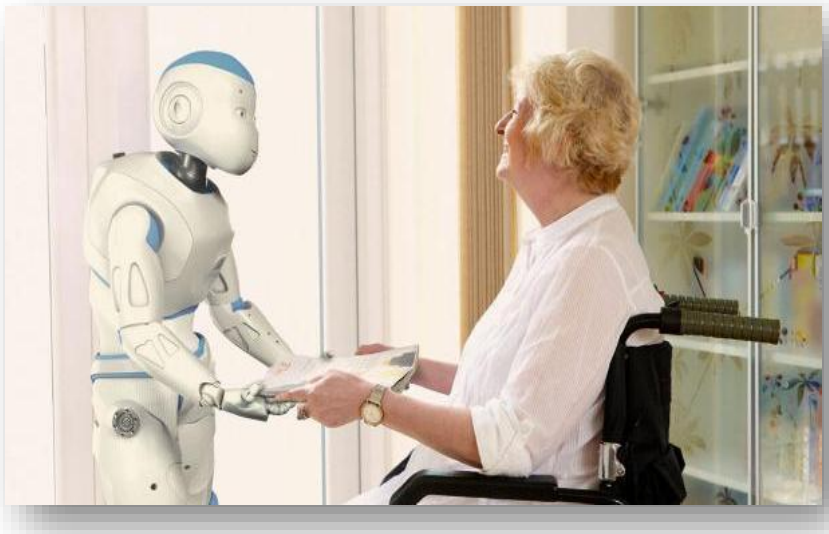
- reduces the risk of developing diseases;
- strengthens the health of bones and improves their functional status;
- maintains weight.

The concept of physical activity should not be confused with the concept of exercise. Physical exercise is a part of physical activity, and is a planned and structured physical activity that is repetitive and aimed at maintaining physical condition. In addition, physical activity during work and other active activities during rest.

We recommend the following physical activity:

1. People 65 and older should do at least 150 minutes of moderate-intensity aerobics per week, or at least 75 minutes of vigorous-intensity aerobics, or moderate -to-high-intensity aerobics.
2. Aerobic training should not be less than 10 minutes.
3. In order to increase the health effects of exercise, it is necessary to increase aerobics of medium intensity to 300 minutes, and aerobics of high intensity to 150 minutes.
4. People with joint problems should do balance exercises 3 days a week.

Exercising that requires strength, involves the main group of muscles and is more than 2 days per week.



15-minute "Head to toe" treatment

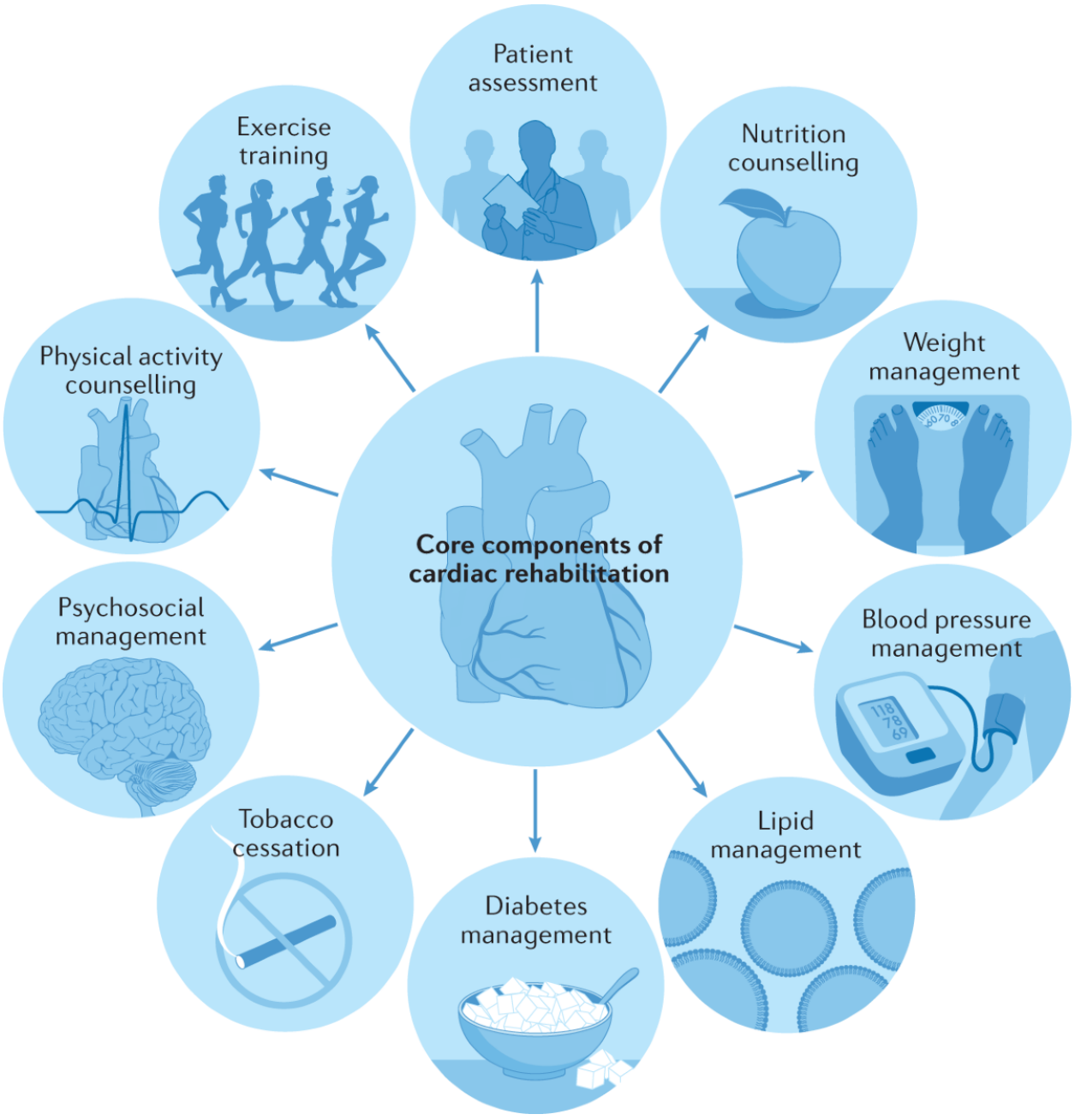
This physical assessment can be performed in a short period of time during the nurse's working hours in the institution, in the case of emergency or planned medical care, when the patient needs to be given medical care at home. This assessment is individualized and focuses on the patient's medical problems.

1. necessary equipment is prepared in advance. (thermometer, tonometer and phonendoscope, centimeter tape, spatula). Depending on the situation.
2. X mother or the ward, you should introduce yourself and state your mission.
3. Consider the patient's needs before evaluating this condition.
4. Explain to the patient what you are going to do.
5. Measure the body temperature, determine the AQB, count the pulse and the radial arteries on both sides and the breathing. Compare the obtained information results with the norm.
6. Palpate and examine the hands, note skin color and condition, capillary refill rate, joint condition, and range of motion. Determine the strength of Ikala by squeezing her hands. If an intravenous drip is connected, observe the venous puncture site and note the presence of cyanosis.

7. Look at the head, face, eyes. Assess facial symmetry and skin coverage. Pay attention if the patient is looking at you with both eyes. Observe the movement of the eyeballs. Assess the sclera, pupil size, and response and accommodation to light as needed. Also rate the visual feature.
8. After examining the oral cavity, evaluate the color of the lips, the condition of the mucous membranes, and the number of teeth. If necessary, also assess the gag reflex.
9. Observe the auricles from the outside. Test your hearing and ask if the patient uses a hearing aid.
10. Assess the degree of filling of jugular vein blood vessels.
11. Assess the degree of chest expansion and anterior-posterior diameter during exhalation. Auscultate the upper part of the front. Assess whether the patient breathes through the mouth and whether there is suffocation or dyspnoea, if there is a cough, its character, sputum secretion.
12. Listen for heart sounds.
13. Listen to the chest from behind.
14. Listen and palpate the abdomen. Ask if there are any problems with bowel movement or urination. When was the last diarrhea?
15. If necessary, intervals should also be observed.
16. Watch the legs. Assess their condition, skin color, body temperature, swelling, especially in the heel and paw areas. Assess muscle strength.

Algorithm of actions	**App**
1. The hand is placed on the patient's chest or it is enough to hold his hand as if counting his pulse.	Because if the patient becomes aware that the breath is being monitored, the quantity and quality of the breathing movements may change.
2. **The patient's breath count is counted for one minute**	**Number of breaths** March 16-20 in 1 minute , 40-60 in newborns , 30-35 in 1 year old

2. The obtained result is recorded on the temperature sheet.	The breath curve is drawn in pencil and the temperature curve is drawn in black pencil.



HEAD-TO-TOE ASSESSMENT

Level of Consciousness:

- ☐ Awake
- ☐ Alert
- ☐ Restless
- ☐ Drowsy
- ☐ Sedated
- ☐ Confused

Orientation:

- ☐ Person
- ☐ Place
- ☐ Time
- ☐ Situation

Mentation:

- ☐ Calm
- ☐ Cooperative
- ☐ Pleasant
- ☐ Angry/Agitated
- ☐ Uncooperative
- ☐ Withdrawn
- ☐ Restless
- ☐ Anxious

Communication:

- ☐ Verbal
- ☐ Writes notes
- ☐ Mouths words
- ☐ Nods head to yes/no questions

Vitals:

- ☐ Temperature: _____
- ☐ Pulse: _____
- ☐ Respirations: _____
- ☐ Blood Pressure: _____
- ☐ Pulse ox: ____% Via: _____

Pain:

- ☐ Yes ☐ No

Location:

Intensity: 0 1 2 3 4 5 6 7 8 9 10

Quality:

Aggravating Factors:

Alleviating Factors:

Duration/Frequency:

Hair:

- ☐ Clean
- ☐ Dirty
- ☐ Neatly groomed
- ☐ Unkempt
- ☐ Evenly distributed
- ☐ Unevenly distributed
- ☐ Thick/Full
- ☐ Sparse/Hair loss

Eyes:

Conjunctiva:

- ☐ Pink
- ☐ Moist
- ☐ Intact
- ☐ Other: _____

Sclera:

- ☐ White
- ☐ Other: _____
- ☐ Intact

Abnormal Discharge:

- ☐ Yes: _____
- ☐ No

Pupils:

- ☐ Equal
- ☐ Round
- ☐ Reactive to light
- ☐ Accommodating

Abnormal Findings:

- ☐ Pinpoint
- ☐ Unequal: R>L or L>R
- ☐ Fixed

Nose:

- ☐ Midline
- ☐ Symmetrical
- ☐ Congestion
- ☐ Sneezing
- ☐ Skin intact
- ☐ Lesions: _____
- ☐ Other: _____

Ears:

- ☐ Symmerical
- ☐ Earwax/Discharge: _____
- ☐ Skin Intact _____
- ☐ Lesions: _____
- ☐ Hearing Devices: _____

Practical skills

Counting the number of breaths

Placing the patient in the Sims situation.

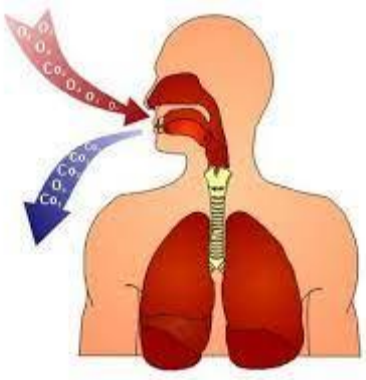
Execution algorithm;

✧ The head of the bed where the patient is lying is lowered.

- ✧ The patient is placed on his back.
- ✧ The patient is lying on his side and partly on his stomach (a part of the patient's stomach touches the bed);
- ✧ A pillow is placed on the emor's head (in this case, his neck does not bend);
- ✧ In order to bend the upper arm at an angle of 90 ^{0} from the elbow and shoulder, a pillow is placed under the arm.
- ✧ The lower arm is in place without bending (so that the correct biomechanics of the body are preserved);
- ✧ A pillow is placed under the folded upper leg (in which the calf of the lower leg, the lower part of the thigh is written);
- ✧ It is also necessary to put a pillow in the lumbar region (strain of the spine)

Rehabilitation professionals will typically go through a process that includes some or all of the following:

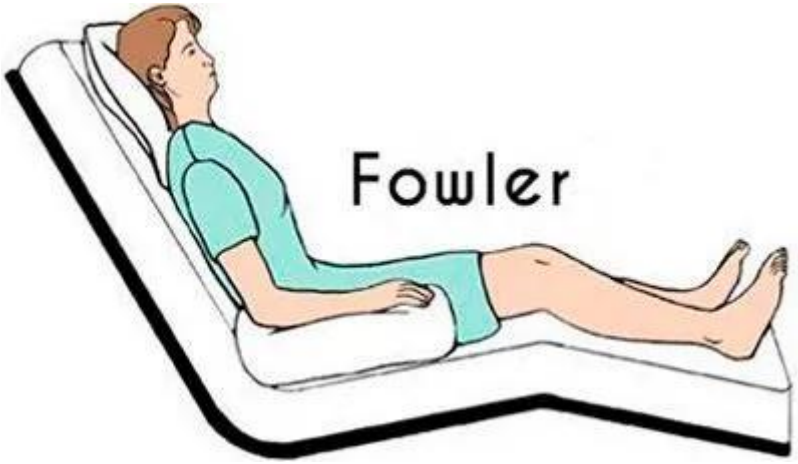
Assessment
Diagnosis
Planning
Education
Intervention
Evaluation/re-evaluation
Collaboration

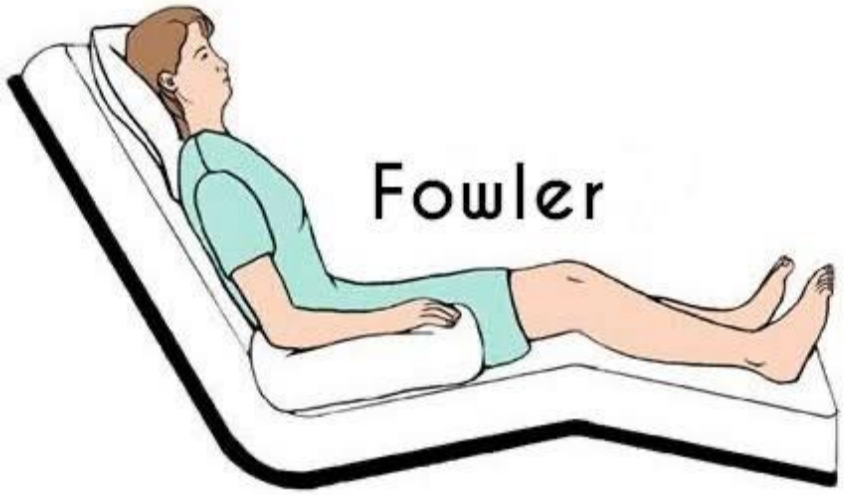


Place the patient in the Fowler position.

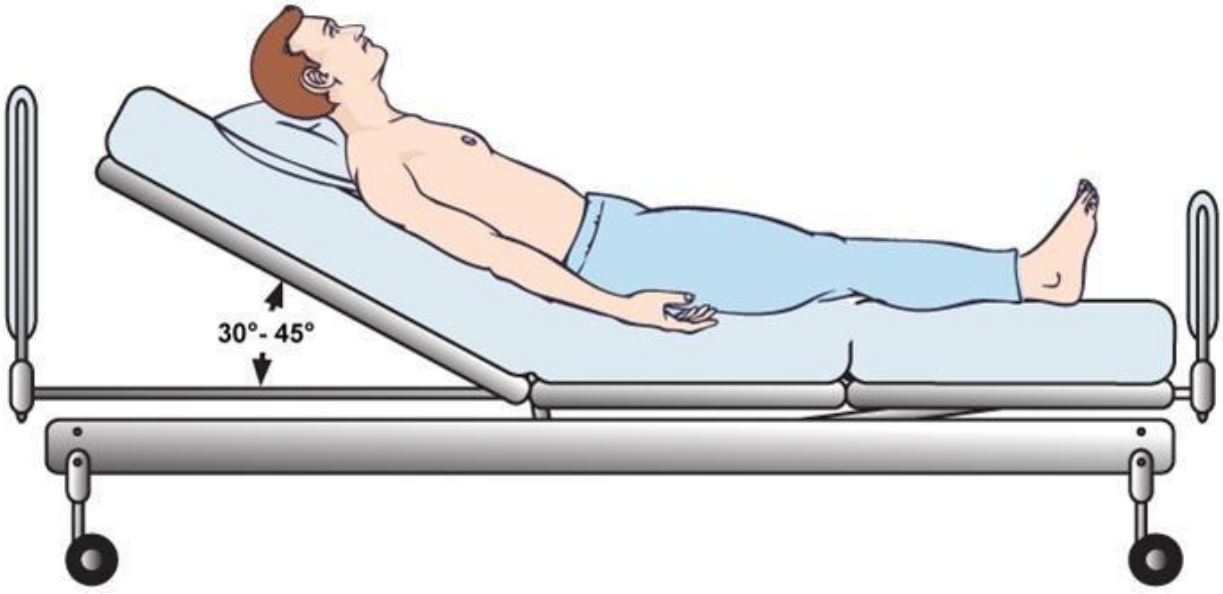
- ✧ The bed should be made horizontal.
- ✧ The head of the bed should be raised at an angle of 45-60 ^{0} (in this case, the patient feels comfortable, it is easier to breathe and communicate with others);
- ✧ The patient should put his head on a dry bed or a low pillow (this will prevent flexion contracture of the neck muscles)

✧ If the patient cannot move his arms independently, a pillow should be placed under them (to prevent shoulder dislocation and muscle contracture).





Semi-Fowler position



1.2. The importance of respiratory gymnastics exercises for pneumonia.

Breathing gymnastics exercises for pneumonia are important for the body to fully recover in the final stages of the disease and after recovery. Exercises allow the lungs to develop, restore their volume, normalize gas exchange processes, and heal injured tissues and bronchi faster. Special exercises are important to restore the proper functioning of the respiratory system. Their benefit is that with each subsequent muscle contraction, chemical processes develop in the lungs, which activate the respiratory function at the level of reflexes. Muscle activity increases ventilation and gas exchange in lung tissue. Breathing therapy gymnastics is beneficial to the human body due to the following actions:

1. During exercise, the tissue is saturated with oxygen several times, blood circulation improves, and the number of working capillaries increases.

2. During breathing exercises, a clear mechanism and structure of breathing processes is formed. It becomes normal, rhythmic, deep and correct.

3. Breathing muscles become stronger.

4. Trunk muscles relax. When they are compressed, shortness of breath occurs.

5. To help eliminate diseases of the spine and chest.

6. Strengthen the abdominal muscles.

After pneumonia, a person should pay more attention to his health, and at first minimal loads are allowed. The complex always includes breathing exercises, which completely cleans the bronchus and normalizes breathing.

1.3. The main methods of respiratory rehabilitation of patients with COVID-19 :

1. Inspiratory training: breathing exercises ;

2. Accelerated exhalation maneuver i ;

3. Active cyclic breathing method ;

4. Postural drainage.

• In case of unilateral pneumonia, it is recommended to exercise lying on the affected side. This increases the effectiveness of the exercise.

• If the exercises are planned to be carried out during the bed rest phase, they can be started only after 5 days of therapy.

• Do gymnastics 3 times a day for 15 minutes.

• Breathing exercises can be supplemented with walking after the doctor's permission.

• It is allowed to increase the load only after a week of training.

If you feel unwell, you should stop exercising and inform your doctor about it.

For the treatment and prevention of pneumonia, a number of special breathing exercises are offered, in which it is important to observe the execution technique.

1. **Cleansing breath.** Take a deep breath, hold your breath and slowly squeeze the air between the lips, wrapped in a tube, without opening your cheeks.

2. Breathing with **obstruction and calculation .** Hold the air through your nose for 3 seconds, then exhale it through pursed lips. Hold the exhalation for 6-8 seconds.

3. **Sound breathing gymnastics.** It teaches you to prolong the exhalation, using only the respiratory muscles. Breathe in and pronounce vibration and whistle sounds (Z, S, F, H, F, R, M, N) while rocking. This exercise relieves bronchospasm.

4. **Twisting the tongue.** When breathing, after a deep breath, short turns of the tongue should be pronounced. These exercises can be performed while lying down. There are more complex schemes for half-bed rest, which are based on proper

breathing with deep breathing, but combined with physical activity. With proper breathing and regular exercises, the patient not only normalizes lung ventilation, accelerates the rehabilitation process, but also improves general health.

Breathing exercises are a set of various exercises designed to improve the active functioning of different parts of the lungs and, if necessary, to improve the outflow of fluid from the lungs, to train the respiratory muscles.

Respiratory gymnastics is not the only set of exercises that can be used in all cases. Depending on the disease, exercises, their speed and technique may change. We can say something about the development of fibrotic changes at least one year after the patient's recovery. Because there is a possibility that it will be absorbed by then. It is impossible to distinguish new fibrosis from gradual post-inflammatory changes on X-ray and even on MSCT, but active resorption (absorption) is observed in the first 3-6 months. At this time, you should try to help the body. Research is still underway on how effective anti-fibrosis drugs (which inhibit the development of scar tissue) work. The same is the case with lung diseases, if you rely only on medicines without exercise, it will not have any effect. In what cases is respiratory gymnastics recommended? Also, breathing exercises should be used in all diseases where a person spends a lot of time in bed. It is mandatory for all patients suffering from myasthenia (muscle weakness), reduced muscle strength due to constant bed rest. In what cases is it impossible to perform breathing exercises?

Gymnastics is not performed in the acute state of malaria above 38 degrees, high blood pressure, high heart rate. Why is breathing exercise necessary for a patient recovering from or suffering from pneumonia associated with a coronavirus infection?— When the lungs are affected by the coronavirus, the interstitial tissue becomes inflamed and thickened due to swelling. Interstitium is the "device" of the lungs, where blood and lymph vessels pass. When swelling and inflammation occur, normal gas exchange is disturbed, it becomes difficult for oxygen to enter the blood from the air.

In the acute period of the disease, the patient's correct position and breathing help to quickly absorb fluid from the affected areas. Subsequently, it reduces the formation of fibrous (scar) tissue. At what stage of the disease should exercise be started? What exercises are they? Exercises begin in the early stages of the active disease period.

There are even special complexes for ***lung artificial ventilation patients .*** These are *active* (performed by the patient himself) and *passive* (performed by relatives or medical personnel) movements of arms and legs, turns. According to research ; it has been observed that if the patient performs these exercises at least 30 minutes a day, then he will be able to reduce the time of connecting to the apparatus. The degree of difficulty of the exercises depends on the condition of the patient.

more serious patients, exercises are performed in bed. This is an exercise of bending and opening the legs and arms, and the heel should not rise from the "ground" when the legs are bent. Also, circular movements of the hands and feet, turns of the head, lying on the edge of the seat - upward movement of the hand - back and then down. the main thing is to inhale during preparation for exercises, and exhale during exercises.

Each repeated exercise is performed with separate breathing movements. It is very important to start breathing with the abdomen. When exhaling, the abdomen rises, not the chest, and when exhaling, the front abdominal wall is pulled. This directs us to abdominal, diaphragmatic breathing, which helps to actively open the lungs, which are often affected by the coronavirus. During the period of improvement, exercises should be performed while sitting and standing. Alternate breathing exercises with exercises aimed at the body and limb muscles. necessary.

Such an exchange of positions allows you to prevent fatigue of certain muscle groups.

The duration of breathing exercises should be done 3-4 times a day, and the duration depends on the patient's ability to carry out the exercises. Gradually, the

duration and load of exercises increases. Physical and breathing exercises should be carried out regularly for at least three months. Later, recommendations are given depending on the patient's condition.

In elderly people , we always take into account accompanying conditions, a tendency to heart palpitations, an increase in blood pressure. Exercises begin against the background of breathing, pulse, compensated blood pressure. If there are hypotensive drugs prescribed by a cardiologist or therapist, you should definitely take them all. Again, the above-mentioned principle continues, depending on the state of lifting, the load of exercises increases.

During exercises, ***if the patient does not feel well;***

- In case of shortness of breath, dizziness, severe weakness, nausea, decrease in saturation, the exercises should be stopped immediately. Training cannot be done "by overcoming". If this situation is repeated every time, the set of exercises will be revised from the point of view of lightening the load. The principle of exercise for children is the same as for adults.

Physical exercise , walking normalizes the blood sugar level, increases tissue sensitivity to insulin. Breathing exercises should be combined with physical exercises. Here, as everywhere else, it is necessary not to try to set a record without reaching the point of fanaticism. ***If the patient feels unwell,*** shortness of breath, dizziness or blood pressure rises, the exercises should be stopped, sitting or lying down is necessary. If the patient is in a state of unconsciousness, a pillow should be placed under the feet so that they are higher than the head. Hot liquid, sweet tea should be drunk if blood sugar level is normal. After the patient begins to feel better, after the rate of breathing, pulse and blood pressure normalize, gymnastics can be resumed. Subsequent sessions begin with exercises of lower intensity and repetitions. It is necessary to ventilate the room, wear light clothes that do not constrict anywhere.

Recommendations for a set of exercises: Respiratory gymnastics conditionally consists of several components. *Active movements of the patient.* A

combination of exercises for the chest, diaphragm, shoulder girdle muscles. *Placement.* That is, the patient is placed in a certain position to improve air circulation in some parts of the lungs, and to improve the flow of fluids in it. Over time, the patient's condition changes with a clear periodicity. *Pressing movements.* Performed by caregivers or medical personnel. These actions are especially important for bedridden patients. Often, clicking actions are carried out in parallel with placement.

Use of special respiratory equipment: insufflator-aspirator for cough, devices for regulating breathing and breathing, breathing simulators. The breath itself can be from the abdomen, chest or mixed. Depending on which muscles work more actively, the process of ventilation of different parts of the lungs changes. The main exercise recommended for patients with coronavirus pneumonia or during the recovery period after this disease is diaphragmatic breathing - breathing from the abdomen. At the same time, during inhalation, try to fill the abdomen as much as possible, and when exhaling, try to tighten it. In order to perform this exercise easily, it is better to start with exhalation. All other complexes are selected separately depending on the severity and manifestation of shortness of breath. In corona virus, the back, lower, and right back parts of the lungs are damaged. If a person lies on his stomach, then under the force of gravity, the outflow of the liquid part of the blood from the veins increases. These parts of the lung tissue are in a state of hypoventilation, that is, their performance decreases. Weaker chest muscles allow breathing in a limited amount of air, which means that the amount of oxygen that enters the body with each breath is also not so great. When the patient turns over on his stomach, or when he is maximally close to this position, the stronger muscles of the back begin to work.

Each breath becomes more complete, and the amount of oxygen entering the body increases. It is enough to lie on your stomach. Air exchange is more active in the affected parts of the lungs.

The opened alveoli on both sides compress the interstitial compartments - the filled liquid quickly leaves the tissues. Thus, the prone position is a relieving position

and breathing gymnastics at the same time. Due to the relief of the patient's condition, it prevents the spread of swelling in the tissues, which is necessary during the disease.

During rehabilitation , the prone position helps active breathing of the affected segments. This allows the lungs to fully recover and reduce the appearance of fibrotic changes. Prone position and breathing exercises are very important for at least three months after the illness.

Paradoxical breathing is also called diaphragmatic breathing. Put your hands on your belly and try to watch it move when you breathe. While inhaling, the abdomen seems to be pulled in, while exhaling, it relaxes. In paradoxical breathing, it is the opposite: while inhaling, the abdomen expands, while exhaling, it contracts.

A more obvious version of such a breath is a yoga exercise, in yoga it is called "vacuum". It can be done several times a day. The main thing is that both inhalation and exhalation should be even. At first, the exercise is done with some effort, and then it is done at a normal pace. Paradoxical breathing is considered a habit.

2. The importance of leading a healthy lifestyle in the prevention of diseases of the cardiorespiratory system.

According to modern requirements, in the following cases, it is necessary to conduct an examination of the patient's heart and blood vessel system:

- when all patients are over 40 years old;
- before starting the secondary preventive program in all patients ;
- when all patients have 2 or more risk factors of CKD .

Does physical activity prevent cardiovascular diseases in elderly people? The answers to this question are in the recommendations of the American Heart Association and according to the recommendations of the US President's Public Health, Sprot Medicine Association, there are 5 specific categories of exercise for healthy people.

In 1996, the Institute of Health recommended that all people should be physically active on a daily basis and that physical activity can reduce the risk of chronic diseases.

Types of physical activity for healthy people

Table 2

Type of physical activity	Population group
1	To all
2	To those who lead a sedentary life
3	who can do moderate physical activity and want to reduce cardiovascular risk
4	People who are able to do moderate physical activity and want to strengthen their health (engagement)
5	People who have the opportunity to do moderate physical loads and want to do a specific type of sport

Cardiologists are interested in the first 3 categories; the 4-5 categories belong to the competence of sports trainers and doctors.

In the 1st category, the principle of YU has a general character, and it is recommended to increase the character activity, walking.

The 2nd category has one difference from the 3rd category. During several months, there is a period of "Rising", "getting up", the principle of activity is included in the daily diet (1st level), and there are 2-3 activity intervals of 10 minutes (walking, cycling, playing, falling, etc.). Recommendations depending on age have their own characteristics.

Table 3. Walking program (up to 30 years old)

Week	**Distance, km**	**V aqt, min**	**During the week number of sessions**
1	3.2	34	3
2	3.2	32	4
3	3.2	30	5
4	4.0	38	5
5	4.0	37	5
6	4.0	36	5
7	4.8	45	5
8	4.8	44	5
9	4.8	43	5
10	4.8	42	4

Table 4. Running program (up to 30 years old)

Week	Distance, km	V aqt , min	During the week number of sessions
1 (walk)	3.2	32	3
2 (walk)	4.8	48	3
3 (walk + run)	3.2	26	4
4 (walk + run)	3.2	24	4
5	3.2	22	4
6	3.2	20	4
7	4.0	25	4
8	4.0	23	4
9	4.8	30	4
10	4.8	37	4

Table 5. Cycling program (up to 30 years old)

Week	Distance, km	V aqt, min	During the week number of sessions
1	8.0	30.0	3
2	8.0	25.0	3
3	8.0	20.0	4
4	9.6	26.0	4
5	9.6	24.0	4
6	10.0	30.0	4
7	10.0	27.45	4

8	12.0	35.0	4
9	12.0	34.0	4
10	12.0	32.0	4

Table 6. Swimming program (up to 30 years old)

Week	Distance, km	V aqt, min	During the week number of sessions
1	350	15	4
2	450	15	4
3	450	13	4
4	550	18	4
5	550	16	4
6	650	19	4
7	725	21	4
8	800	23	4
9	900	25	4

Table 7. Sports games program (up to 30 years old)

Week	V aqt, min	During the week number of sessions	Week	V aqt, min	During the week number of exercises
1	30	3	7	20	4
2	30	3	8	25	4
3	30	3	9	30	4
4	45	3	10	40	4
5	45	3	11	45	4
6	45	3	12	60	4

Table 8. **Exercise program on the ground (up to 30 years old)**

Week	Speed in km/ h rotation/min	And aqt, min	high, min	During the week number of sessions
1	24/55	8	less than 140	3
2	24/55	10	less than 140	3
3	24/55	12	less than 140	3
4	28/55	12	less than 140	4
5	28/65	14	less than 140	4
6	28/65	16	less than 140	4
7	29/65	16	More than 150	5
8	28/65	16	More than 150	5
9	32/75	18	More than 160	5
10	32/75	18	More than 160	5
11	40/90	20	More than 160	5
12	40/90	25	More than 160	4

Table 9 . Walking program (30-49 years old)

Week	Distance, km	V aqt , min	Number of classes during the week
1	3.2	36.0	3
2	3.2	34.0	3
3	3.2	32.0	4
4	3.2	30.0	4
5	4.0	39.0	4
6	6	4.0	5
7	7	4.0	5
8	8	4.8	5
9	9	4.8	5
10	10	4.8	4

Table 10 . Walking program (30-49 years old)

Week	Distance, km	V aqt , min	Number of classes during the week
1	3.2	34	3
2	4.0	42	3
3	4.8	50	3
4	3.2	25	4
5	3.2	25	4
6	3.2	25	4
Week	**Distance, km**	**Time, min**	**Number of classes during the week**
6	3.2	20	4

7	4.0	26	4
8	4.0	25	4
9	4.8	31	4
10	4.8	29	4
11	4.8	27	4

Table 11 . Running program (ages 30-49)

Week	Distance, km	V aqt , min	Number of classes during the week
1	6.4	20.0	3
2	6.4	18.0	3
3	8.0	24.0	4
4	8.0	22.0	4
5	8.0	20.0	4
Week	**Distance, km**	**V aqt , min**	**Number of classes during the week**
6	9.6	26.0	4
7	9.6	24.0	4
8	11.2	30.0	4
9	11.2	28.0	4
10	11.2	27.55	4

Table . Swimming program (30-49 years old)Week	**Distance, km**	**Time, min**	**Number of classes during the week**
1	275	12.0	4
2	275	10.0	4

3	350	13.0	4
4	350	12.0	4
5	450	14.0	4
6	450	13.0	4
7	550	16.0	4
8	650	19.0	4
9	725	22.0	4
10	800	22.3	4

Table 13 . Sports program. (30-49 years old)

Week	Time, min	Number of classes during the week
1	20	3
2	25	3
3	30	3
4	30	3
5	40	3
6	40	3
7	20	4
8	25	4
9	25	4
10	30	4
11	35	4
12	40	4
13	45	4
14	60	4

Table 14 . V exercise program (30-49 years old)

Week	Speed in km/ h rotation / min	And aqt , min	High / min	During the week number of sessions
1	24/55	6.0	less than 140	3
2	24/55	8.0	less than 140	3
3	24/55	10.0	less than 140	3
4	24/55	12.0	Less than 150	4
5	24/55	14.0	Less than 150	4

6	24/55	16.0	Less than 150	4
7	24/55	18.0	Less than 150	5
8	24/55	20.0	Less than 150	5
9	28/65	18.0	More than 150	5
10	28/65	20.0	More than 150	5
11	32/75	18.0	More than 150	5
12	32/75	20.0	More than 150	5
13	32/75	22.3	More than 150	5
14	40/90	25.0	More than 150	5

Table 15. Walking Program (50 and over)

Week	Distance, km	V aqt , min	During the week number of exercises
1	1.6	20	4
2	2.4	30	4
3	3.2	40	4
4	3.2	38	4
5	3.2	36	4
6	3.2	34	4
7	4.0	42	4
8	4.0	40	4
9	4.0	38	4
10	4.8	47	4
11	4.8	46	4
12	4.8	45	4

Table 16. Swimming program (ages 50-59)

Week	Distance, km	V aqt , min	During the week number of sessions
1	275	15	4
2	275	12	4
3	350	15	4
4	350	13	4
5	450	16	4
6	450	14	4
7	550	17	4
8	550	15	4
9	650	20	4
10	650	18	4
11	725	22	4
12	725	20	4

Table 17. T redban walking program (50-59 years old)

Week	speed , km/ h	Angle of deviation , grad.	V aqt , min	During the week number of sessions
1	4.8	0	20	4
2	4.8	0	25	4
3	4.8	0	30	4
4	5.6	0	25	4
5	5.6	0	30	4
6	6.0	0	25	4

7	6.0	0	30	5
8	6.4	0	30	5
9	6.4	0	45	5
10	6.4	5	45	4

able 18. Exercise program on the exercise bike (50-59 years old)

Week	speed , km/ h	V aqt , min	high, min	During the week number of sessions
1	24/55	4	less than 135	3
2	24/55	6	less than 135	3
3	24/55	8	less than 135	3
4	24/55	10	less than 140	4
5	24/55	10	less than 140	4
6	24/55	12	less than 140	4
7	24/55	14	less than 140	5
8	24/55	16	less than 140	5
9	24/55	18	less than 140	5
10	24/55	20	less than 140	5
11	28/65	18	Less than 150	5
12	28/65	20	Less than 150	5
13	32/75	20	Less than 150	5
14	32/75	20	More than 150	5
15	32/75	25	More than 150	5
16	32/75	30	More than 150	4

2.2. A modern approach to the inpatient phase of rehabilitation of patients with cardiovascular pathology.

The modern approach to the rehabilitation of patients includes, on average, a 3-5 week hospital stage of restorative treatment.

In this program, patients are prescribed therapeutic gymnastics as physical exercises. The main goal of therapeutic physical training at the inpatient stage is to activate extracardiac factors of blood circulation, eliminate hypodynamia, and prepare patients for household physical exertion.

The entire hospital stage is conditionally divided into 4 steps of activity. An individual step is determined for each patient and gradually increased.

The 1st activity step is to prescribe bed rest to the patient. Exercises are performed while lying in bed. No. 1 treatment is a gymnastic complex. Breathing exercises are performed between exercises. Duration of training is 10-12 minutes. During the training and in the first three minutes after the end, the pulse is 20 beats, the number of breaths is 6-9 beats, the SAQB is 20-40 mm.sym.ast., the DAQB is 10-12 mm.sym.ast. if it increases to , it is a sign that the tensioning is being carried out correctly. When the body responds adequately to complex medical gymnastics, when angina attacks disappear, when there are negative dynamics on the ECG, it goes to the 2nd step.

the 2nd activity step, the patient is allowed to sit at the table, eat while sitting at the table, walk around the bed and in the ward. Classes are held within the boundaries of the therapeutic gymnastics complex #2. The main tasks of the complex: training the cardiorespiratory system, preparing the patient to walk on the corridor and climb the stairs freely. Treatment No. 2 gymnastic complex is performed lying down - sitting - lying down. Gradually, the number of sitting exercises is increased. It is recommended for patients to perform gymnastics complex No. 2 in the form of hygienic gymnastics in the morning . The training duration is 10-15 minutes.

The complex of exercises that causes ST - segment depression , disrupts the rhythm or causes the development of tachycardia more than 100 beats per minute is

excluded from the program , or lighter exercises are added. Indications for transferring the patient to the 3rd step of activity are pulse and adequate reaction of AQB, orthostatic test, formation of T-coronary tooth.

Contraindications to the transfer of the patient to the 3rd step are frequent paroxysmal rhythm disturbances with repeated angina attacks, signs of circulatory failure and severe hemodynamic changes.

Activity step 3 starts from the time the patient enters the corridor and continues until the time the patient exits the street. The patient is allowed to walk on a corridor from 50 to 200 meters with small steps (up to 70 steps per minute).

The main tasks of therapeutic gymnastics at the 3rd step of activity: preparing the patient for full self-service, free walking on the street, dosed walking. Therapeutic gymnastics is performed in a sitting and standing position. Gradually, the amount of tension is increased within the limits of the treatment gymnastics complex No. 3. The tempo of the exercises starts slowly and accelerates, the total duration of the exercises is 20 minutes. Patients are recommended to perform therapeutic gymnastics complex No. 1 in the form of morning hygienic gymnastics (EGG) or independently in the afternoon. It is recommended that the first entrance to the corridor and the first exit from the stairs be carried out under the supervision of a telemonitor .

Adequate responses to stress are allowed to walk on the sidewalk without time and distance restrictions. by this time, patients are completely self-sufficient, and they are allowed to take a shower.

The 4th activity step (the last step of the hospital stage) includes increasing physical activity in patients at the limit of the free mode.

The patient is allowed to go outside and walk 70-80 steps for a distance of 500-900 m.

In the 4th step, patients are prescribed a complex of medical gymnastics #4. In the 4th step, the task of therapeutic gymnastics is to prepare the patient to go to the 2nd stage of rehabilitation, or to respond at home under the supervision of a local therapist.

It is normal for heart rate to increase up to 110 times in 3-6 minutes during exercise. The pace of walking can increase from 70-80 steps to 80-100 steps per minute, and the distance can increase from 500-600 m to 23 km. It is allowed to go for a walk 2 times a day. The creation of a rehabilitation program is based on a step-by-step examination of the patient, which includes determining the functional capabilities of the patient for physical exercises.

Rehab nurses provide care to a wide variety of patients and help people who experience chronic illness or significant injury have an improved quality of life. Most hospitals and healthcare facilities employ rehab nurses as a crucial part of their care team.

What is a rehab nurse?

A rehabilitation nurse, or rehab nurse, is a nurse who helps patients of any age adjust to chronic illness or injury. The rehab nurse does this by creating care plans, helping educate and assist other caregivers, coordinating care from other healthcare professionals like physical therapists, psychiatrists, speech therapists and occupational therapists.

Depending on their workplace, a rehab nurse may be a term for a nurse in any position who specializes in helping rehabilitate patients.

What does a rehab nurse do?

Depending on their environment, a rehab nurse may provide care for patients after an injury to the spine or brain, major surgeries like organ transplants, amputations and joint replacements, or work with patients who have ongoing illnesses like pulmonary disease, Parkinson's disease or cerebral palsy. This care can involve a wide variety of tasks, including these:

Providing care

A rehab nurse may provide direct care by monitoring patients and providing treatment, but they may also provide care by coordinating with other providers and managing paperwork. They may provide emotional care and support for a patient's family as well. Here are some tasks that can involve:

Performing daily care tasks like monitoring vital signs, administering medicine or performing treatments

- Recording patient updates and condition
- Creating patient care plans
- Coordinating with other healthcare providers
- Counseling patients and families
- Managing individual patient cases
- Providing education

A rehabilitation nurse uses strong communication skills to educate patients and their communities. They work with patients and their families, coworkers and teachers so that the transition from hospital to home is easier after an illness or injury. Some rehab nurses may work in community centers to perform broader education roles. Here are some education roles a rehab nurse may have:

- Educating patients and families on nursing practices, diseases and care techniques
- Educating other healthcare professionals on providing the best care for patients in rehabilitation

- Educating community on injury and disease prevention
- Advocating for policies that help people with disabilities succeed in their communities, schools and workplaces

A rehab nurse usually works in an office or clinical setting, although some may travel to provide care at a patient's home or school. A rehab nurse may work in these kinds of facilities:

Community or university hospitals

- ✓ Rehabilitation facilities
- ✓ Long-term care facilities
- ✓ Schools
- ✓ Insurance and health maintenance organizations
- ✓ Private practices
- ✓ Government agencies and the Department of Veterans' Affairs

They usually work full-time. Rehab nurses who work in schools or private practices usually have day shifts during business hours, while those who work in hospital settings may have longer shifts involving nights and weekends. Shifts can be physically demanding, sometimes involving physically moving patients and spending hours moving around. Hospital settings also may expose rehab nurses to infectious diseases or viruses**.** 3. Implementation of practical skills (step by step).

Education for a rehab nurse

After high school or earning a GED, all nurses complete at least some college education. They may earn an associate degree in nursing, which takes two years, or a bachelor of science in nursing, which can take four years, but both programs provide classroom and clinical studies so that nurses know how to care for patients and understand the science behind the care. After that, a nurse pursues licensing and may become a licensed practical nurse (LPN) or a registered nurse (RN).

With further education, a nurse may become a clinical nursing specialist (CNS) or a nurse practitioner (NP). Some nursing graduate programs offer specializations in

rehabilitation at the master's or doctoral level. There are also professional certifications for rehabilitation that involve an exam and can make rehab nurses more competitive for jobs.

kills for rehab nurses. These are some skills a rehab nurse uses regularly:

Empathy: Rehab nurses can provide quality care and a respectful bedside manner by having empathy toward their patients.

Communication: Rehab nurses may communicate with patients, families, and other care providers in healthcare settings, and they may present to large audiences in their advocacy and education duties.Physical endurance: Rehab nurses sometimes work long shifts and may physically have to move patients or equipment. Organization: Rehab nurses regularly organize patient records and may also coordinate schedules, budgets, and training for other nurses if they have a more administrative role.Decision making: Rehab nurses contribute their professional expertise to make care decisions daily.

Scientific knowledge: Nurses apply their knowledge of anatomy, physiology, and medical science when evaluating and suggesting care for patients.

Observation: Rehab nurses monitor patients for changes in their condition and observe them over time to see whether care plans are effective.

Pursuing a career in healthcare can be an extremely satisfying choice if you are passionate about helping others and are interested in fields such as science and particularly medicine. The healthcare domain is a broad and in-demand one, incorporating a plethora of different professions, each one focusing on a particular aspect of providing care to patients.

3.1. Method of assessment of physical load in therapeutic gymnastics treatment in patients

Ma qs a d: To teach students to check the body's response to the physical load given to patients in clinical practice.

Instruction: to teach adequate assessment of physical load during therapeutic gymnastics in hypertension.

Necessary equipment: DJT room (shells).

Steps to follow steps

No	Steps to be taken.	Failed to complete the step (0 points **)**	Completed all stages (20 points)
1.	Asking questions before the start of DG	0	2
2.	Arterial blood oxygen saturation (A B) measures the number of heartbeats (YUS), number of breaths (NOS).	0	2
3.	At the end of the entrance part of the DG, count YuUS in 10 sec. , identify signs of weakness in external manifestations and complaints	0	2
4.	You'll use it for 10 sec., identify signs of external weakness and	0	2

	complaints during the main part of the DG		
5.	At the end of the completion phase of the DG, press YuUS for 10 seconds. count during, identify signs and complaints of external weakness	0	3
6.	Measure AB 5 min after the end of DG in the patient, aim for YuUS and NOS, identify symptoms and complaints of external weakness	0	3
7	Write all the information on the doctor's examination card	0	2
8	Draw a diagram of physical and logical loading curves	0	2
9	Formalization of the conclusion	0	2
10.	Total:		20

3.2. Martine-Kushelevsky test to be performed correctly

Purpose: To teach students to examine the response of the body to the physical load given to patients in clinical practice

Necessary equipment: stopwatch, tonometer

No	The name of the job to be executed	It didn't work (0 points)	Maximum
1	Preparing a place for examination, a table and a chair, a stopwatch, a stethoscope and a tonometer	0	2
2	The examinee should sit and relax for 2-3 minutes in a comfortable position	0	2
3	Measure the pulse every 10 seconds until a count is returned 3 times in a row in the wrist artery	0	2
4	A tonometer cuff is worn on the left shoulder to measure blood pressure	0	2
5	20 full squats with hands thrown forward for 30 seconds tested without removing the cuff	0	2
6	Pulse measurement in the wrist artery during the first 10 seconds of the recovery period of 1 minute	0	2
7	Determination of blood pressure in 10-50 seconds of the recovery period	0	2
8	From the last 10 seconds of the recovery period 1 minute, measure the pulse every 10 seconds	0	2

	until the pulse returns to the initial reading, and repeat 3 times in a row		
9	Determination of blood pressure in the last seconds of the recovery period	0	2
10	Evaluation of the obtained result	0	2
	Total	0	20

3.3. Creating a separate rehabilitation program for various diseases

Purpose: To teach students to use complex treatment with physical methods in clinical practice.

Instruction: selection of physiological factors that will be pathogenetic treatment in YuIK, teaching the methods of applying physical procedures, and conducting them independently.

Necessary equipment: Physiotherapy room, physio equipment, DJT hall, shells.

Steps to follow :

No	Steps to follow	Failed to complete the step (0 points)	Completed all stages (20 points)
1.	patients ' condition (complaints, clinical and laboratory examination data)	0	3
2.	Identifying contraindications to physical therapy in this particular patient	0	3
3.	Assignment of physical factors according to the syndrome-pathogenetic method	0	3

4.	Choosing physiotherapy treatments for this particular patient according to the rules of the physical factor	0	3
5.	Identifying the sequence of physiotherapy treatment in a comprehensive recommendation	0	3
6.	Issuing a treatment form (writing a prescription for physiotherapy)	0	5
7.	total	0	2 0

Methods of checking the skills and knowledge of the qualification:

- Active participation in the debate

- Written answer results

- Organizing and solving test problems

- Practicing practical skills

What Is Physical Therapy?

The first step toward comparing physical therapy vs. nursing is to define each field to ensure you understand the role such professionals play in healthcare facilities. We'll begin with physical therapy, which can be defined as the scope of services a professional physical therapist provides to individuals to help develop, uphold, or even restore movement and functionality in their bodies. Generally, physical therapy is required when the movement or function of a particular body part is threatened, either by an injury, pain, disease, old age, disorder, or some other factor.

Depending on what the patient is being treated for, there are various types of physical therapy, with some of the most popular types being the following:

Neurological physical therapy

Geriatric physical therapy

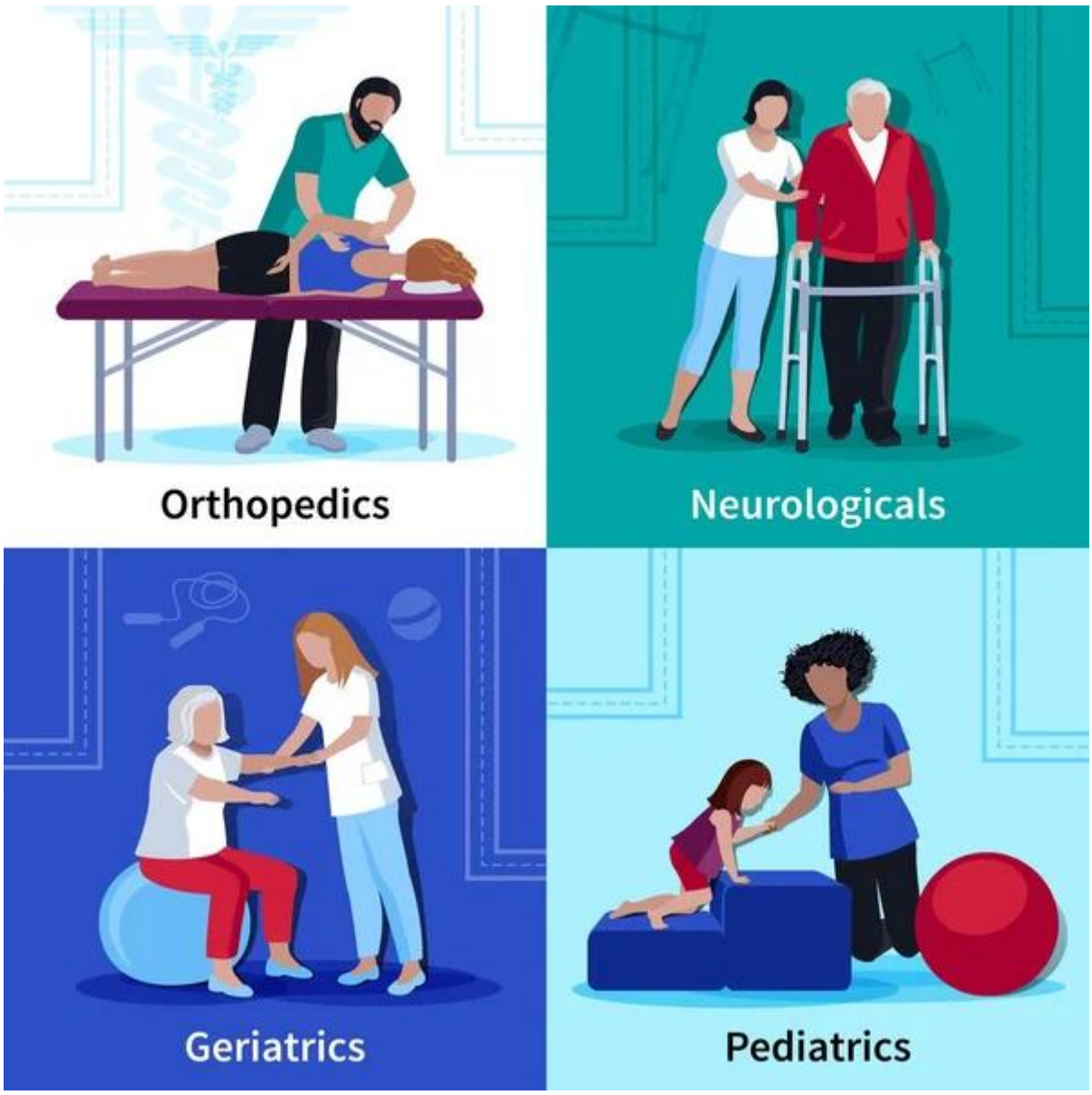
Rehabilitative physical therapy.

Occupational physical therapy

Pediatric physical therapy. Although both nursing and physical therapy fall within the scope of healthcare, there are vast differences between these two fields. Below, we will be comparing nursing and physical therapy in various features, from education and licensing requirements to salary expectations, responsibilities, work setting, and much more.

Physical therapy is typically regarded as the more challenging option for the education level required to begin a career in these two fields. Generally, to become a physical therapist, you must complete various degrees, including a doctoral one. So, the average time physical therapy students spend in university to obtain the necessary skills, knowledge, and academic degrees is around seven years.

The rehabilitation nurse is a nurse who specializes in helping people with disabilities and chronic illness attain optimal function, health, and adapt to an altered lifestyle. Rehabilitation nurses assist patients in their move toward independence by setting realistic goals and treatment plans. They work as part of a multidisciplinary team and often coordinate patient care and team activities.



Rehabilitation nurses may practice in a variety of settings, including:

Hospitals

Inpatient rehabilitation centers

Outpatient rehabilitation centers

Long-term care facilities

Community and home health settings

Insurance companies

Private practice

Schools

Industrial health centers

Rehabilitation nurses provide care that helps to restore and maintain function, and prevent complications. They also provide patient and family education, counseling, and case management. Rehabilitation nurses serve as patient and family advocates and can also participate in research that helps improve the practice of rehabilitation.

NURSE-INVOLVED OCCUPATIONAL THERAPY PROGRAM FOR RESPIRATORY REHABILITATION AFTER COVID-19 AT HOME

Following a COVID-19 infection, complications such as lung tissue regeneration issues, respiratory muscle weakness, and respiratory failure may occur. In such cases, rehabilitation measures, in particular, occupa- tional therapy, carried out at home under the supervision of a nurse, are important.

1. Devices for training respiratory muscles

• • Blowing a balloon (balloon) 3-4 times a day, 5-10 times.

• • Deep breathing using a monitor simulator such as ‘Tri-ball’ or ‘RespiTrain’.

• • Alternative: blowing exercises through a straw and a container filled with water.

2. Blowing exercises with liquefied air into water

• • **A** glass (300 ml of water) and a long straw are prepared.

• • The patient breathes into water through a straw – this exercise is performed 2–3 times a day, for 5–10 minutes.

3. Vibrating breathing machines (if available)

• • Devices such as Flutter or Acapella help to separate phlegm.

• • If not available, sound exercises such as ‘pfff’, ‘shhh’ are recommended.

4. Sound and verbal breathing exercises

• • Repeating sounds such as ‘ssss’, ‘ffff’, ‘shhh’ – 5–10 minutes.

• • Saying simple words out loud – is performed in sync with exhalation.

5. Walking and movement exercises (Elements of occupational therapy)

• • Walking indoors, inhaling/exhaling every 2 steps.

• • Raising arms, rotating shoulders – is performed in sync with breathing.

6. Breathing control exercises

• • Diaphragmatic breathing: deep breathing by controlling the rise of the abdomen.

• • Pursed lips breathing: inhale through the nose, purse the lips, and exhale slowly.

7. Monitoring recommendations for the nurse

• • Create a daily rehabilitation schedule for the patient.

• • Divide each exercise into 10-15 minute segments without excessive fatigue.

• • Check pulse and SpO_2 before and after exercise.

• • Monitor protein intake and adequate fluid intake.

Rehabilitation Staff Nurse

The goal of rehabilitation nursing is to assist individuals with a disability and/or chronic illness to attain and maintain maximum function. The rehabilitation staff nurse assists clients in adapting to an altered lifestyle, while providing a therapeutic environment for client's and their family's development. The rehabilitation staff nurse designs and implements treatment strategies that are based on scientific nursing theory related to self-care and that promote physical, psychosocial, and spiritual health. The rehabilitation staff nurse works in inpatient and outpatient settings that can be found in a range of acute to subacute rehabilitation facilities.

This role description has been developed by staff nurses to clarify and specify the responsibilities of the staff nurse in a rehabilitation setting and to promote professionalism based on the established scope and standards of rehabilitation nursing practice.

General Responsibilities of the Rehabilitation Staff Nurse

Possesses the specialized knowledge and clinical skills necessary to provide care for people with physical disability and chronic illnesses

Coordinates educational activities and uses appropriate resources to develop and implement an individualized teaching and discharge plan with clients and their families

Performs hands-on nursing care by utilizing the nursing process to achieve quality outcomes for clients

Provides direction and supervision of ancillary nursing personnel, demonstrates professional judgment, uses problem-solving techniques and time-management principles, and delegates appropriately

Coordinates nursing care activities in collaboration with other members of the interdisciplinary rehabilitation team to facilitate achievement of overall goals

Coordinates a holistic approach to meeting patients' medical, vocational, educational, and environmental needs

Demonstrates effective oral and written communication skills to develop a rapport with clients, their families, and health team members, and to ensure the fulfillment of requirements for legal documentation and reimbursement

Acts as a resource and a role model for nursing staff and students, and participates in activities such as nursing committees and professional organizations that promote the improvement of nursing care and the advancement of professional rehabilitation nursing

Encourages others to become CRRN certified, obtain advanced degrees, participate in committees, and/or join professional organizations

Facilitates community education regarding the acceptance of people with disabilities

Actively engages in legislative Initiatives affecting the practice of rehabilitation nursing or the people in their care

Applies nursing research to clinical practice and participates in nursing research studies

Physical Therapy vs. Nursing: Which Career Should I Go Into?

Now, back to the question that most likely pushed you toward clicking on this article: which career should you go into? From all that has been said so far, we can safely say that both professions are excellent career choices. They demand a lot from you, but also offer outstanding salaries and job outlook, among other things. The answer to which would suit you, in particular, can only be answered by you, of course, after considering all that the professions can offer and what they will require from you. So, we have done our part — defining both fields and presenting you with a comparison of the two. **Conclusion:** COVID-19 rehabilitation requires a multidisciplinary approach, integrating nursing, physical therapy, psychological support, and lifestyle management. The high prevalence of long-term symptoms, particularly mental health issues like depression, anxiety, cognitive impairment, and chronic fatigue,

underscores the importance of effective rehabilitation programs. The Adaptive Nursing Skills (ANS) Model provides a framework for optimizing nursing activities in COVID-19 patient care, ensuring efficient rehabilitation strategies for long-term recovery. Future research should focus on enhancing nursing education, improving patient monitoring systems, and developing evidence-based rehabilitation programs to improve post-COVID outcomes.

Nursing observation

:№	Practical Exercise Steps (Steps) Completed all steps	Practical Exercise Steps (Steps) Completed all steps
11	Pay attention to the tone of voice.	10
22	. Stop speaking at the appropriate time.	20
33	Observe and analyze the patient's behavior.	10
44	Use leading questions.	20
55	Important references in your memory (What does he ask you?).	10
66	Changes in your behavior, your state.	10
77	How did you feel? What was your impression of the conversation?	10
88	Record words, actions, feelings, and the nurse's conclusion in the observation notebook.	10
	Total:	100

Review questions

1. Tell me the stages of creating a rehabilitation program?

2. Exercise-induced outcomes in physical rehabilitation.

3. What tests do you know that evaluate the functional state of the cardiovascular system?

4. State the main tasks of physical rehabilitation in pneumonia.

5. State the use of rehabilitation at the inpatient stage in respiratory diseases.

Test Questions

1. The coronavirus is:

A. _ RNA-storage virus

B. _ DNA-storage virus

C. _ RNA and DNA-storing virus

D. _ protein storage virus

E. _ genome storage virus

2. Coronaviruses divide

A. _ 4 generations (Alpha , Beta , Gamma and Delta)

B. 3 generations (Alpha, Beta and Gamma)

C. To 2 generations (Alpha, Beta)

D. 5 generations (Alpha, Beta, Gamma, Delta and Epsilon)

E. to 1 generation (Alpha)

3. Latent period in infection caused by SARS-CoV-2:

A. _ 2-14 days

B. _ 5-6 days

C. _ 40 days

D. _ 6-9 days

E. _ 35 days

4. Ways of transmission of SARS - CoV -2:

A. _ hemocontact and vertical

B. _ transmissible, vertical and fecal-oral

C. _ air-droplet, air-dust and communication

D. _ fecal-oral and blood contact

E. transmissive and air-drop

5. The main clinical signs in an infection caused by SARS - CoV -2:

A. _ high temperature, cough, shortness of breath

B. _ cough, vomiting, skin itching

C. _ diarrhea, high temperature, hemorrhage

D. _ skin redness and itching

E. _ high temperature, hemorrhage

6. Patients infected with SARS - CoV -2 often develop:

A. _ otitis

B. _ neuralgia

C. _ pneumonia

D. _ arthrosis

E. _ allergy

7. Which method is used in the diagnosis of SARS - CoV -2 infection

A. _ IFA

B. _ RPGA

C. _ PCR

D. _ RIF

E. _ RN

8. Prevention of HIV -19 infection:

A. flu shot

B. _ administration of immunoglobulin

C. _ Isolation for 30 days

D. _ personal hygiene and wearing a mask E . use of antibiotics

The most effective prevention for 2019- nCoV coronavirus:

A. _ washing slaves

B. _ live vaccine

C. _ inactivated vaccine

D. _ immunoglobulin

E. _ interferon

10.SO VID -19 infection complications

A. _ obvious intoxication, pulmonary edema

B. _ escalating acute respiratory failure

C. _ increased blood pressure, pain in the joints

D. _ hyperglycemic state, kidney failure

E. _ drop in blood pressure

11. SO VID -19 infection testing method

A. _ Bronchography

B. _ Laryngoscopy

C. _ Radiography

D. _ Angiography

E. _ Colonoscopy

12. What is the purpose of the PCR method in HIV -19 infection?

A. _ detection of virus antigens in epithelial cells in the blood

B. _ determination of the titer of specific antibodies

C. _ finding provirus DNA in blood cells

D. _ determination of the amount of hemoglobin in the blood

E. _ detection of HIV-infected cells in the blood

13.SO is checked by PCR method in VID -19 infection

A. _ mucus, sputum, blood, urine

B. _ feces, blood, urine

C. _ mucus, cerebrospinal fluid, feces

D. _ sputum, eye drops, hair strands

E. _ Liquor, eyesores, excrement

LIST OF ABBREVIATIONS

NOCh - respiratory frequency

Heart rate - heart rate

SBP - systolic blood pressure

CT - computer tomography

MRS - medical research council scale

HADS – Hospital Anxiety and Depression Scale

EQ–5 – European questionnaire on quality of life

DJT - therapeutic physical education

MO – maximum weight

NE - shortness of breath

WHO - World Health Organization

O'NE - acute respiratory failure

ARDS - acute respiratory distress syndrome

O'BMQAB - acute cerebral blood circulation disorder

OMI - acute myocardial infarction

BDI is the baseline index of wheezing

TDI is dynamic index of panting

Yuop is a high-protein diet

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1. **Eraliev Umidjan Ergashovich** – Doctor of Medical Sciences, Associate Professor, Department of Infectious and Childhood Infectious Diseases, Tashkent Medical Academy, Tashkent, Uzbekistan.
   Email: umidjan.eraliev@gmail.com *ORCID:* 0000-0002-7835-4517
2. **Nilufar Kurvankulovna Djuraeva** Department of "Public Health and Management".Tashkent Medical Academy, *Tashkent, Uzbekistan*
   *Email*nilufar.djurayeva@gmail.com |*ORCID:* 0045-0068-06789636-8367