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# **Improvement of Life Quality of the Patients with Rheumatoid Arthritis with Help of Physical Activity**

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**Key words: rheumatoid arthritis, physical rehabilitation, quality of life, medical physical culture, exercises.**

## **Abstract**

In the article was carried research of prevalence of rheumatoid diseases among the world population and in Ukraine. According to the analysis of the literature, were highlighted the main elements of the pathogenesis of rheumatoid arthritis, are described levels of activity of rheumatoid process and criteria of determination the functional capacity of patients with rheumatoid arthritis. It was found that a sedentary lifestyle, low level of physical preparedness – two factors, that are typical for many patients, who suffer from rheumatoid arthritis. It was determinate, that difficulty status of patient with rheumatoid arthritis is accompanied by pain syndrome, deterioration of physical function, declining index of physical health, significantly affecting on quality of life. The article summarized and presented modern views and tendencies as for physical rehabilitation of patients with rheumatoid arthritis. It was considered the main approaches to the appointment of means of medical physical culture in system of physical rehabilitation of patients with rheumatoid arthritis on a stationary phase of treatment. There was determinate, that physical rehabilitation is an essential component of successful treatment of rheumatoid arthritis. Particularly, systematic physical exercises improve general health, reduce pain, increase

mobility, contributing to the saving of functional activity of the joints, have positive effect on the heart's work and on the general circulation of the blood and thus, improve the quality of patients' life. It was proved the necessity in development and theoretical substantiation of the concept of physical rehabilitation of patients with rheumatoid arthritis.

**Statement of the problem.** Recently, arthritis called “the disease of the century”, and Ukraine also didn't avoid it. The health of the people of mature age, who are creative and intellectual potential of the nation, calls forth particular concernment. According to research data, in this age very few people are healthy.

Abusing of motor activity and, accordingly, mobility of the patient with rheumatoid arthritis, apply to the main factors that are limiting normal vital activity of organism and reduce quality of life. Arthritis forces many patients to change usual way of life, worry about the future, including the costs on hospital care, etc.

The etiology of rheumatoid arthritis is not fully studied to this day, that's why on the same level is problematic, and treatment. The disease leads to temporary and permanent disability and an increase in the initial release on disability from this pathology, patients are not able to live a full life.

According to modern concepts, beside with medicamental therapy, in the system of health restoring of patients with rheumatoid arthritis, an important role has physical rehabilitation. Thus, the modernization of the famous and the searching of new means of physical rehabilitation for improving the

effectiveness and quality of rehabilitation process of patients with rheumatoid arthritis are relevant.

Work performed according to the Consolidated Plan research in the field of physical culture and sports in 2011–2015 on 4.4 «Improvement of organizational and methodological foundations programming of process of physical rehabilitation with dysfunctional disorders in different systems of the human organism» (№ state registration 0111U001737).

#### **Analysis of recent research and publications.**

Analysis of methodological and professional literature affirms that physical rehabilitation is an essential component of successful treatment of patients with any pathology. Biological base of exercises is muscle activity – movement, which is a strong stimulator of vital functions [5].

Scientists have proved that the sedentary lifestyle, low level of physical preparedness – two factors that are typical for many patients suffering from rheumatoid arthritis. It was determined that neuro-reflex connections, that are laid by nature and fixed during hard physical labor, are abusing in a result of lack of motor activity in human organism, and it leads to frustration of the regulation of systems, metabolic disorders and the development of degenerative diseases.

The difficulty status of the patient with rheumatoid arthritis is caused by progressive polyarthritis that accompanied by pain syndrome and deteriorating of physical function, that fundamentally affecting on the quality of patient's life.

Researchers have proved that with rheumatoid arthritis the quality of patient's life is falling, especially indicators of physical health [1].

According to the researchers, carefully chosen exercises, physiotherapy and other rehabilitation facilities help to stop further disease progression, restoring of function of the affected joints, improving of physical and mental state of the patient [2].

Therapeutic physical culture has significant place in the treatment of rheumatoid arthritis. Restoration of movement function and prevention of its disorders in the affected joint and surrounding tissues, usually abnormal (in muscles, tendons, etc.) are impossible without using therapeutic physical training.

Despite the fact that currently, there are many different tools and methods for treating rheumatoid arthritis, this problem still is not enough solved, and question of using of physical rehabilitation in the process of rehabilitation in a hospital is on low level. It shows the necessity of new approaches for improving the process of physical rehabilitation and improving the quality of life of patients with rheumatoid arthritis.

**Purpose** – the main approaches to the appointment of therapeutic physical culture in the physical rehabilitation of patients with rheumatoid arthritis and its impact on quality of patient's life in a hospital were observed and it based on the analysis of modern scientific and technical literature review.

**Purpose determinates to the following tasks:**

– to study and analyze the current literature sources on the issue of physical rehabilitation in rheumatoid arthritis.

– to describe tasks, means and methods of therapeutic physical culture in rheumatoid arthritis and reveal the mechanisms of its therapeutic action.

**Methods of research:** theoretical analysis of methodological and professional literature, methods of analysis, synthesis, generalization.

**The main material.** According to the World Health Organization (WHO), the prevalence of rheumatic diseases among the world population is up 1.0%. In Ukraine there are about 123 thousand patients with rheumatoid arthritis, from which about 57 000 – people of working age who are under clinic supervision [9].

Rheumatoid arthritis – is a chronic systemic disease of connective tissue autoimmune nature, which mainly affects small joints – develop arthritis, which are leading to durable deformation of joints and breaking of its functions.

There are three degrees of active rheumatoid process: I degree – minimal, II degree – middle and III degree – high.

The functional capacity of the patient is determined by the following criteria:

I degree – Professional performance is preserved;

II degree – professional performance decreased;

III degree – the ability to self-service has lost [4].

Treatment of these patients requires a multidisciplinary approach, because we have to deal with a variety of problems of patients – from their participation in working life to psychosocial issues.

Physical rehabilitation is an integral part of successful treatment of rheumatoid arthritis. One of the most important components of patient's rehabilitation with rheumatoid arthritis is therapeutic physical culture [10].

For patients with rheumatoid arthritis, therapeutic physical culture is indicated at all stages of the disease after the relief of acute process. The main mean of therapeutic physical culture is physical exercises that can be used in three ways: individual, group and independent.

The obligatory conditions for therapeutic physical culture are – the regularity, systematicness and succession of engagement (hospital, clinic, sanatorium, tasks at home). The value of physical load in therapeutic physical culture depends on many different factors, but it should always be agreed with the physical capabilities of the patient, his age, and health status and disease process.

Therapeutic physical culture has three main objectives:

1. preventing of joint's deformation;
2. maintaining of muscle strength;

### 3. improving of motion's range in joints.

Starting position for patients with rheumatoid arthritis may include: lying, sitting, lying on his side, lying on his stomach.

Contraindications for prescription of therapeutic physical culture in patients with rheumatoid arthritis:

- high III degree activity of the process, with expressed pain syndrome and large exudative phenomena in the joints.
- with expressed lesions of the internal organs of the adequacy of their functions (pleurisy, pneumonia, nephritis, vasculitis), and others.
- infection, fever, acute and subacute diseases of internal organs, cardiovascular failure II-III degree, and others [2, 3].

In the literature sources thoroughly was described using of exercises with rheumatoid arthritis of following types: static, passive, active with the help of active resistance.

Static exercises are using in the acute phase of arthritis, when the patient is lying in bed, and its purpose is to prevent the development of inactive of muscle atrophy. They are often indicated for strengthening the sciatic muscles and extensor knee. These exercises must be executed 6–12 times per day.

Passive exercise is prescribed in the acute stage of the disease and their aim is saving of volume motion in the affected joint. These exercises are executed with help of instructor of therapeutic physical culture or relatives of the patient. Passive exercises must be executed until maximum amplitude of motion on all axes of motion of joints won't be achieved – several times per day.

Active exercises with help are needed in cases, when the patient can't do it by self. They are the transition to the implementation of active exercise without help.

Active exercises without help are prescribed, when the range of motion in joints and muscle strength is sufficient. Active exercises for resistance are prescribed, when improved the range of motion [8].

Conducting of therapeutic physical culture for patients with rheumatoid arthritis is recommended after taking analgesics and muscle relaxants to reduce the morning stiffness and pain [10].

Physical exercises are usually executed without subjects and with subjects: brooms, skipping ropes, pins, balls, cones. Besides it, are used gymnastic benches and walls.

Recently, are using special settings, where exercises are executed with help of drops, blocks and cargos (UHUL – versatile gym room and RUP – rehabilitation bedside unit). In our country they were imported from Poland [4, 6].

Some scientists say that exercises in rheumatoid arthritis improve overall health, reduce pain, increase mobility, are contributing to the maintenance of functional activity of the joints, positive effect on the heart and the general circulation and thus improve the quality of life of patients [7, 8].

Thus, therapeutic physical culture remains one of the most important methods of physical rehabilitation, which is widely used in rheumatoid arthritis with many distinct clinical syndromes.

## **Conclusions**

Abusing of motor activity and, accordingly, mobility of the patient with rheumatoid arthritis, apply to the main factors that are limiting normal vital activity of organism and reduce quality of life.

The disease leads to temporary and permanent disability and an increase in the initial release on disability from this pathology, in consequence of wound of musculoskeletal system accompanied by deformities and contractures.

Today in Ukraine there are no comprehensive researches and related programs on theme of physical rehabilitation of patients with rheumatoid arthritis, there are no clear methodical directions about rehabilitation investigation and selection of appropriate tools and techniques that will able to

standardize the amount of prescribed treatment and rehabilitation measures with making long-term individual programs of health recovering in conditions of a hospital.

*Perspectives for further researches* we see in the development and theoretical study of the concept of physical rehabilitation of patients with rheumatoid arthritis for improving of effectiveness rehabilitation and improvement of life quality in patient treatment.

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