№ СТОМ-21 ИН

Federal state budgetary educational institution of higher education
"North Ossetian State Medical Academy"
Ministry of Health of the Russian Federation

DEPARTMENT OF GENERAL HYGIENE
AND PHYSICAL CULTURE

Drawing up a program of professionally applied physical culture of a doctor

Methodological recommendations
on the organization of independent work and study of the disciplines "Physical culture and sports" and "Elective course in physical culture and sports" of the main professional educational of higher education – specialty program in the specialty 31.05.03 Dentistry (partially implemented in English)

Vladikavkaz, 2016

UDC 613.7

Rostiashvili E.Yu., Andiev O.Kh.

"Drawing up a program of professionally applied physical culture of a doctor", guidelines for students; North Ossetian State Medical Academy: Vladikavkaz, 2016. – 19 p.

These guidelines consider the methods and ways of fostering social activity, interest in the chosen profession, the development of maximum physical and mental readiness for operational thinking and response, as well as general health promotion through complexes of carefully selected exercises.

Methodical recommendations for students "Drawing up a program of professionally applied physical culture of a doctor" are recommended for students studying in the specialties "General Medicine", "Dentistry", "Pediatrics", "Medical and preventive work", "Pharmacy". The guidelines have been prepared in accordance with the Federal State Educational Standard for Higher Education.

UDC 613.7

Reviewers:

Tsogoev A.S. – Doctor of Medical Sciences, Professor of the Department of Internal Medicine No.5 FSBEI HE NOSU Health of Russia

Tuaeva I.Sh. – Candidate of Medical Sciences, Associate Professor of the Department of Medical and Preventive Faculty of Epidemiology FSBEI HE NOSU Health of Russia

Approved and recommended for publication by the Central Coordination the educational and methodological council of the FSBEI HE NOSU Health of Russia (Protocol No.1 of September 2, 2016)

PURPOSE OF THE LESSON: teach medical students the methodology drawing up a doctors PPFP program.

A STUDENT SHOULD KNOW:

- definition of professionally applied physical training (PPFP);
- PPFP factors;
- goals and objectives of the PPFP;
- features of students work and related professional diseases;
- types professionally–applied gymnastics (introductory gymnastics, physical culture break and physical education minutes).

A STUDENT SHOULD BE ABLE TO:

- apply introductory gymnastics exercises in practice;
- papply a set of physical training pause exercises in practice;
- apply a set of physical exercises in practice.

QUESTIONS TO BE SURRENDED:

- definition of "Applied physical training" (PPFP);
- purpose, objectives and means professionally–applied physical preparation of students;
- factors that determine the content of PPPF;
- features of the health status of medical workers of various profile;
- orientation of the means of PPFP in classes with students of various faculties;
- types professionally–applied gymnastics (introductory gymnastics, physical culture breaks, physical education minutes).

LITERATURE USED:

1. Baranov V.V. Physical culture: textbook, Orenburg 2009.
2. Kainova E.B. General pedagogy of physical culture and sports / E.B. Kainova.– M: Forum. – 2009.
3. A.K. Kuznetsov Physical culture in the life of society. M.: 2006.
4. Physical culture and health: Textbook / Ed. V.V. Ponomareva FGOU "VUNMTs Roszdrav", 2006.
5. Nesterov V.A. and others. Optimization of the psychophysical state of a person engaged in various types of professional activity.– Khabarovsk: DV GAFK, 2003.

1. Definition of PPFP

Professionally applied physical training (PPFP) is understood as a subsystem of physical education, which best ensures the formation and improvement of the properties and qualities of a person, which are essential for a specific professional activity.

With the help of the means of PPFP, mental and volitional qualities are brought up and improved, knowledge and skills in the field of industrial and physical culture are acquired, various professionally important sensory, mental, motor, organizational and pedagogical skills are developed; a high level of functioning and reliability of all major organs, systems, mental processes of the human body is ensured.

PPFP effectively promotes health promotion, increased resistance to diseases, and reduced injuries. The labor of those who are systematically involved in PPFP is more qualified, productive, and economical. Those involved in PPFP and less fatigue during work.

2. Purpose, objectives and means of professionally applied physical preparing students

The focus (goal, objectives, criteria) of doctors PPFP is determined the way the requirements for their psychophysical readiness, health status and the possibilities for the implementation of these requirements in the process of physical education.

Various sensory, mental, motor, volitional, organizational skills and abilities are among the necessary components of professional readiness, realized in the process of PPFP. Each doctor needs the ability to quickly understand a difficult work situation, relieve excessive emotional stress. The development of these qualities is largely facilitated by physical education. Good condition, first of all, of his cardiovascular system and central system, which most often "fail", which leads to a number of diseases, is important for the successful activity of a doctor.

Goal PPFP for medical students – promoting the development of a specific profession of a doctor, their achievement of the required level of professional competence and psychophysical readiness for highly productive work.

The main task PPFP of medical students is formation, with the help of various means of physical culture, professionally important properties and qualities of the doctors personality.

In the process of physical education, future doctors should decide the following professional and applied tasks:

1. Education of social activity of the individual, deep interest profession, physical education, upbringing of high moral qualities, dedication to work, conscientiousness in work, comradely mutual assistance, honesty, justice, humane attitude and respect for people, hard work.
2. Development of skills and abilities of various perceptions, fast memorization, operational thinking, organizational skills and abilities, the formation of knowledge, skills, habits of using physical culture and sports for applied purposes.
3. Ensuring a high level of professional performance, functioning of the central nervous system, cardiovascular, respiratoryspruce, muscular systems. Improvement of visual, auditory, tactile, vestibular analyzers.
4. Health promotion, prevention of possible diseases and, before in total, diseases of the cardiovascular and nervous systems.
5. Formation of elementary professionally important psychophysical qualities:
   - ✓ ability to dose small power voltages;
   - ✓ general and static endurance of the muscles of the trunk, back, arms;
   - ✓ speed and accuracy of movements, all types of sensorimotor reactions, agility, endurance, resistance to physical inactivity;
   - ✓ concentration and stability of attention, memory, operational thinking, emotional stability;
   - ✓ development of volitional qualities.

The task of forming knowledge, skills, abilities, habits in the use of physical culture in production is realized in practical and theoretical lessons – the preparation of complexes for morning, introductory, industrial gymnastics; physical training break; hygienic gymnastics for a medical institution; complexes for exercise therapy.

For the formation of professionally important motor skills, technical teaching aids in the form of various simulators are widely used. All learned actions are recommended to be performed in situations close to production ones – in conditions of internal stress, the impact of various adverse factors. For this purpose, it is necessary to widely use outdoor and sports games, relay races, obstacle courses, simulating the neuro–physical overload characteristic of a given production activity.

Prevention of occupational and occupationally caused diseases of medical workers in the PPFP process is reduced, mainly to increase the adaptive reliability of the organism, which is achieved by increasing its nonspecific and specific resistance. Practically, disease prevention in progress physical education is carried out mainly through muscle training in various modes, general and local active hardening, as well as the use of non–traditional means of physical education. Resistance to penetrating radiation, intoxication, hypoxia is provided by long–term

moderate intensity endurance training in combination with hardening by natural factors of nature and hypoxic training. Effective means are hiking and skiing, slow jogging in the open air, swimming in natural waters, rowing, hiking in mountainous and wooded areas, mountain climbing, staying in the mountains.

Great opportunities for the development of attention (volume and distribution, switching, stability, concentration) represent gymnastic and game exercises. An effective universal means of developing attention are outdoor and sports ball games.

Effective ways of operational thinking are using elements of tactical training, widespread use in the classroom of sports games, single combats.

In the process of PPFP, emotional stability is ensured by:

- ✓ gaining experience of volitional behavior in conditions of emotional tension, adaptation to stress factors;
- ✓ development of skills, abilities, habits of self–regulation of emotional tension.

Exercises are used that simulate various stressful situations that require the mobilization of all the forces involved. Effective means are also exercises in control and regulation of the tone of facial muscles, skeletal muscles, special breathing exercises; ways to distract from emotions.

3. The main factors determining the content of PPFP

The motor activity of a person, his labor activity is determined by such components as muscle strength, endurance, speed, coordination of movements, the ability to concentrated and sustained attention, the reaction of choice and other psychophysical qualities. It is generally accepted that all these components, as well as professional personality traits, are trainable under certain conditions and limits. The psychophysiological concept of "labor activity" in terms of psychophysical components is similar to the concept of "sport". The fundamental requirements and conditions for their improvement are also similar.

So, the specific content of PPFP is based on the psychophysiological interaction of the labor process and physical culture and sports. Thanks to this very interaction in physical culture and sports, it is possible to simulate individual elements of labor processes.

The main factors that determine the specific content of PPFP:

- ✓ forms (types) of labor of specialists of this profile;
- ✓ conditions and nature of work;
- ✓ work and rest regime;
- ✓ features of the dynamics of the working capacity of specialists in the process labor and the specificity of their professional fatigue and morbidity.

Working conditions (working hours, the comfort of the production sphere) affect the selection of physical culture and sports means to achieve high working capacity and labor activity of a person, and, therefore, determine the specific content of PPFP of specialists in a particular profession. The nature of work also determines the content of the PPFP, in order to correctly select and apply the means of physical culture and sports, it is important to know with what physical and emotional stress a specialist works, how large his area of movement is, etc.The mode of work and rest influences the choice of physical culture means in order to maintain and increase the required level of vital activity and efficiency. A rational mode of work and rest in any enterprise is considered to be such a mode that optimally combines labor efficiency, individual productivity, working capacity and health of workers.

The dynamics of the efficiency of specialists in the labor process – an integral factor that determines the specific content of students PPFP. In order to simulate individual elements of the labor process by selecting physical exercises, it is necessary to know the peculiarities of the dynamics of the work capacity of specialists when performing various types of professional work.

Additional factors that determine the content of PPFP

These include the individual characteristics of future specialists, as well as the geographic and climatic conditions of the region where the graduate will work and live.

Differences in physical and special fitness of different people play a role in vocational training and retraining. The success of education and training of each person for professional activity depends on his physiological and psychological suitability for this type of work, i.e. from ability. Abilities are stable personality traits, but they change in the process of education. Therefore, it is necessary to improve them through targeted training, taking into account individual characteristics, therefore, students' efforts and time for mastering individual sections of the PPFP to the chosen specialty are different for everyone.

So, the study of the factors influencing the life of a specialist in the world of work, psychophysical processes accompanying various types of professional activity, allows us to identify the appropriate section of the professional program of a specialist, i.e. the volume and list of necessary applied knowledge, skills and abilities, physical and special qualities that ensure the reliability and success of professional activities.

4. Features of the health status of medical workers different profile

Physical culture classes held in higher educational institutions greatly contribute to the preparation of students for future professional activities. Numerous examples confirm that university graduates who were actively involved in physical culture and sports during their studies successfully work in the most difficult industrial conditions. At the same time, the facts indicate that all the possibilities of physical education are not yet fully used in solving the problem of preparing students for highly productive work. Many graduates, for example, of higher medical educational institutions, who have completed a course of physical education, do not possess strong skills in the use of physical culture and sports in the labor process, the simplest motor skills necessary in production activities.

A significant part of graduates of medical universities are characterized by low efficiency, often get sick, have an insufficient level of development of professionally important qualities. It is necessary to dwell separately on the problem of the health status of doctors. A number of works have been devoted to assessing the health status of medical workers. The first of them dates back to the beginning of the 20th century and contains an analysis of the causes of death of doctors. V. I. Grebenshchikov (1898), K. V. Pivovarov (1903), S. A. Novoselsky (1926) showed that the mortality rate of doctors during this period was almost 30% higher than the mortality rate of the entire population of Russia. In the period from 1889 to 1892, among the causes of death, 42.3% of cases were infectious diseases, 14.6% – diseases of the nervous system, 7.6% – diseases of the digestive system and 6.5% – diseases of the heart and blood vessels. The analysis of the incidence of physicians with temporary disability showed that female doctors have significantly higher rates than male doctors in the number of cases and days of disability.

The study of the structure and level of morbidity of doctors, taking into account nosological forms, revealed:

1st place (55%) – acute diseases of the upper respiratory tract (influenza, acute respiratory infections, laryngitis, tracheitis, pharyngitis, etc.).
In 2nd place (25.1%) – diseases of the circulatory system.
3rd place (9.6%) – diseases of the nervous system and sense organs.
4th place (7.4%) – diseases of the digestive system.

The rest of the classes of diseases have a small proportion.

Among the data on the incidence of a specific medical specialty identified certain patterns. So, diseases of the circulatory system are most common among ophthalmologists and otolaryngologists. Diseases of the nervous system are in the first place among therapists, ophthalmologists and otolaryngologists. VSD, neuroses and vegetative neuroses – at ophthalmologists. Diseases of the digestive system – in obstetricians–gynecologists. Essential hypertension is in the first place among therapists. Ischemic disease – in obstetricians–gynecologists and ophthalmologists. The spread of viral hepatitis most often occurs in laboratory doctors, surgeons, and dentists. Various drugs and chemicals contribute to the development of various dermatitis in healthcare workers. Moreover, contact dermatitis from aminosine and aminosine–like substances is typical for workers in psychiatric hospitals, radiation – for medical workers,

Among dentists, the largest share in the morbidity structure is occupied by diseases of the respiratory system, diseases of the musculoskeletal system and connective tissue, which is directly related to an uncomfortable working position. For them, chronic mercury poisoning is fraught. High prevalence rates of cardiovascular pathology among surgical doctors are associated with their significant nervous and physical stress during the preparation and conduct of operations, with night shifts, great responsibility and workload requiring significant energy and emotional stress. Doctors – surgeons operate mainly while standing, using all forms of action (mental, motor, speech). The working posture of the surgeon is fixed, characterized by an inclined position of the trunk forward with prolonged static tension of the muscles of the back and legs. Among ambulance doctors, colds prevail, which is due to the unfavorable microclimatic conditions of their work.

5. The orientation of the means of PPFP in the classroom with students different faculties

Table 1.

Faculty	*PPAF practice*	*Features of work and occupational diseases*
Curative	1. Development of general endurance (moderate, medium pace with long–term work of large muscle groups). 2. Development of static endurance (leg muscles, back). 3. Formation of skills for long–term maintenance of an upright posture (walking, running). 4. Education of volitional qualities and emotional stability – exercises that contain elements of risk and danger. 5. Education of the accuracy of the motor analyzer and muscle efforts – the performance of exercises for accuracy. 6. Education of the function of attention. 7. Education of the acuity and mobility of the visual analyzer and the nervous system (sports and outdoor games). 8. Ability to relax muscles.	1. Great mental stress. 2. Large operating loads. 3. Round–the–clock duty. 4. External environment (constant high temperature up to 28–29 ° C, humidity 75–80%). The heat output by the surgeon exceeds the heat transfer during the operation. 5. Working posture is provided by tonic and tetanic muscle tension. 6. Due to the forced position, there is a limitation of mobility chest, which leads to impaired respiratory function. 7. Exposure to anesthetics. **Diseases:** 1. Violation of the heart rhythm. 2. Change in the mental sphere and vegetative – the provision of vital functions. 3. Varicose veins.
Pediatric	1. Development of general endurance (moderate, medium pace with prolonged work of large muscle groups). 2. Development of static endurance (leg muscles, back). 3. Formation of skills for long–term maintenance of an upright posture (walking, running). 4. Education of strong–willed qualities and emotional stability – exercises that contain elements of risk and danger. 5. Education of the accuracy of the motor analyzer and muscle efforts – the performance of exercises for accuracy. 6. Education of the function of attention. 7. Education of the acuity and mobility of the visual analyzer and the nervous system (sports and outdoor games). 8. Improving the ability to relax muscles.	1. Daily contact with sick children and their parents. 2. Constant responsibility for the health and life of sick children. 3. The presence of attention and professional memory. In clinics: prolonged uncomfortable sitting posture. Divisional: large motor load. **Diseases:** 1. Cardiovascular diseases. 2. Functional disorders of the central nervous system. 3. Chronic gastritis, cholecystitis. 4. General diseases of pediatricians: acute respiratory infections, chronic bronchitis.

Dental	1. Development of general endurance (moderate, medium pace with long–term work of large muscle groups). 2. Development of muscle endurance hands and abdominals. 3. Development of coordination of movements (dexterity). 4. Strengthening the muscles of the neck and spinal column. 5. Strengthening the muscles of the hands. 6. Development of the accuracy of muscular efforts.	1. Elevated air temperature containing vapors of various chemicals. 2. Low physical activity. 3. Noise effects of boron machines, vibration. 4. Main working posture: sitting, standing. 5. Fine manipulation of hands and fingers. 6. Large static load on the muscles of the neck and back. **Diseases:** 1. Flat feet, varicose veins. 2. Various kinds of respiratory diseases. 3. Dysfunction of the periscal ligaments in the lower part of the cervical and upper part of the thoracic spine. 4. Curvature of the back, the chest is sunken, flat, pushed forward.
Pharmaceutical	1. Development of endurance to static muscle tension neck, spine, shoulders, abdominal press. 2. Strengthening the strength of the finger muscles hands. 3. Development of speed of reaction (switching from one type of activity to another). 4. Education of functions of attention and memory. 5. Immunity to the effects of various chemicals drugs. 6. Balance of the nervous processes.	1. Increased air temperature, where vapors of various chemicals are contained. 2. Low physical activity. 3. Main working posture: sitting, standing. 4. Fine manipulation of hands and fingers. 5. Large static load on the muscles of the neck and back. **Diseases:** 1. Flat feet, varicose veins. 2. Various kinds of respiratory diseases. 3. Dysfunction of the sidewalls ligaments in the lower part of the cervical and the upper part of the thoracic spine. 4. Curvature of the back, chest sunken, flat, extended forward.

6. Types of professionally applied gymnastics (introductory gymnastics, exercise breaks, exercise minutes)

Each profession has its own motor specificity, differing in working conditions, psychophysiological characteristics and making different requirements for the level of development of physical qualities, psychophysiological functions and mental properties and personality traits.

In this regard, an important role is played by ensuring the required level of professional readiness of future specialists. A rational, scientifically grounded shift work and rest regime is such an alternation of work periods and rest breaks, which maintains high labor productivity and a high level of human performance and there is no excessive fatigue during the entire work shift.

A special place in the optimization of the work and rest regime belongs to industrial gymnastics. It helps to accelerate the entry into work at the beginning of the working day (introductory gymnastics) and prevents a decrease in working capacity at the end of the first half of the working day and in the last hours of work (physical culture pause and physical education minutes).

The purpose of the introductory gymnastics is that within 4–5 minutes. accelerate the course of physiological processes and thereby create a state of greater readiness for work.

Introductory gymnastics is aimed at improving the functioning of the corresponding stereotype of the activity of the nerve centers. In the complex of exercises of introductory gymnastics, it is advisable to use such exercises that would be close to the actions performed during work. In introductory gymnastics, it is advisable to use exercises with an increasing pace of movements – from slow to moderate and from moderate to high.

A set of exercises for introductory gymnastics

No	Exercise content	The nature and method of execution	Qty repetitions	Pace
1.	Walking in place.	Dynamic. Maintain correct posture, breathe evenly.	25–30 p.	Average
2.	Stretching	Simple in coordination. Maximum deflection of the spinal column.	8–12 times	Slow
3.	Initial position: 1– hands behind the head, bend over; 2–3 – squats on toes, arms forward; 4– ip, relax your shoulders.	Free breathing.	8–10 times	Average
4.	Mahi	Combined. They are performed freely, with a wide amplitude. Breathing is arbitrary.	6–8 times	Average
5.	Turns of the body to the sides. Initial position: stand feet apart.	Dynamic, easy to coordinate. Breathing is even.	6–8 times	Average
6.	Forward bends. Initial position: stand feet apart, arms up, hands are intertwined, palms up. Alternately slopes to the right and left.	At the moment of tilting, a deep exhalation is performed. Do not hold your breath.	6–8 times	Average
7.	Exercise for attention. Initial position: 1 – left foot to toe, left arm to shoulder; 2 – right hand forward; 3 – put your leg, hands to your shoulders; 4 – starting position. The same with the right leg.	Breathing is arbitrary. An exercise that requires considerable concentration.	8–10 times	Gradually accelerate to fast. Finish at a medium pace.

Another form of industrial gymnastics, carried out in the first and second half of the working day for 5–6 minutes. The physiological significance of physical culture pauses consists in accelerating and deepening rest during regulated breaks, in restoring disturbed dynamic stereotypes and in preventing their possible violation.

A set of exercises for a physical pause

No.	Exercise content	The nature and method of execution	Number of repetitions	Pace
1.	Initial position: 1 – with an arc inward, right arm up; 2 – with an arc inward, left arm up; 3– stand on your toes, stretch, inhale; 4 – starting position, hands down, relax, exhale.	Simple in coordination, with elements of static tension at the time of stretching	4–6 times	Slow
2.	Initial position:m arms bent in front of the chest. 1–2 – two springy movements with bent arms back; 3–4 – two springy movements with straight arms back;	Dynamic, simple in coordination, with a wide amplitude. Breathing is arbitrary	4–6 times	Slow
3.	Initial position: 1 – arms to the sides, hands to fists, left leg to the side on the toe, inhale; 2 – tilt to the left, right arm up, left behind the back; 3 – springy tilt to the left; 4 – starting position, exhale. The same in the other direction.	Combined, with springy elements. Exhale while bending in portions. Performed with a wide amplitude	3–4 times	Average
4.	Running in place with the transition to walking in place	Simple in coordination. End with slowing walking with deep breathing	Running 20–30 sec., walking 15–20 sec.	Average
5.	Starting position: Stand feet apart 1– tilt, arms down, exhale; 2 – straighten up, arms to the sides, inhale; 3 – turn the body to the right, clap hands over the head; 4 – starting position, exhale, relax your shoulders. The same in the other direction.	Dynamic, easy to coordinate. At the moment of tilting, exhale	3–4 times	Average
6.	Starting position: Running in place with the transition to walking with deceleration.	Do not hold your breath.	Running – 30–40 sec., walking 15–20 sec.	Slow
7.	Starting position: Standing, holding the support. 1–4 – circle the head to the right. The same to the left.	They are performed with a wide amplitude. Breathing is arbitrary, uniform	3–4 times	Slow
8.	Starting position: sitting on a chair, hands on hips. Simultaneously lift the right heel and left toe, holding the tension for 5 s. Rest 5 sec. The same with the other leg.	Isometric exercise. Simple in coordination with elements of static muscle tension. Breathing is arbitrary	8–10 times	Average
9.	Starting position: sitting on a chair, hands down. Draw in and protrude the stomach, holding the tension for 3–5 s. Rest 3 sec.	Simple in coordination, with elements of static tension. Breathing is arbitrary	10–12 times	Slow
10.	Stretching	Simple in coordination. Finish by relaxing the muscles of the upper limbs and trunk. Breathing deep	6–8 times	Slow

The third form of industrial gymnastics is physical education, used to solve the same problems as the physical culture break, as a rule, with intense mental and hard physical labor. Exercises of a physical education minute are performed independently and much more often than a physical education pause (approximately at the end of each hour of work).

A complex of physical education for eye fatigue

No.	Exercise content	The nature and method of execution	Number of repetitions	Pace
1.	Starting position: sitting on a chair. Close your eyes for 10–15 seconds, relax completely.	Relaxation exercise. Pay attention. Breathing evenly	10–15 p.	Slow
2.	Starting position: sitting on a chair. Closing your eyes, make a circle with your eyeballs in one direction and the other	Breathing deep, calm	2–3 times	Slow
3.	Starting position: sitting on a chair, tilt your head to the right and left.	Relax your neck muscles. Breathing is even, arbitrary	3–4 slopes	Slow
4.	Starting position: sitting on a chair, eyes closed. Self–massage of the eyes: lightly press the eyeballs with the back of the bent index fingers for 3–5 seconds; release for 3–5 seconds. Then blink your eyes quickly. Close your eyes for 5–10 sec.	Difficult to coordinate, requiring considerable concentration of attention. Breathing calm	3–4 times	Average

Physical culture minute, normalizing cerebral circulation

No.	Exercise content	The nature and method of execution	Number of repetitions	Pace
1.	Starting position: 1–3 – hands behind the head, elbows apart, bend, inhale, hold the tension for 3–5 seconds; 4 – bring your elbows together, tilt your head forward and lower your arms, relaxing your shoulders, exhale.	Combined, with static voltage elements.	4–6 times	Slow
2.	Starting position: stand feet apart, hands – right at the top, left behind, hands in a fist. 1–10 – quickly change the position of the hands.	Dynamic. Perform with a wide amplitude. Breathing is arbitrary.	2 times	Quick
3.	Starting position: standing, holding the support or sitting, head straight. 1– take your head back; 2 – tilt it back; 3 – straighten your head; 4 – stretch the chin forward.	Simple in coordination. Breathing is even.	4–6 times	Slow

Physical education that regulates the muscle tone of the arms

No.	Exercise content	The nature and method of execution	Number of repetitions	Pace
1.	Sitting, braid your fingers, turn your palms forward. Make springy forward movements. Put your hands on your hips.	Dynamic, simple in coordination, with elements of tension in the muscles of the back and shoulder girdle.	3–4 times	Average

Physical education that enhances blood circulation in the lower body

No.	Exercise content	The nature and method of execution	Number of repetitions	Pace
1.	Sitting, straighten your back, strain your gluteal muscles for 5–6 seconds, then relax for 10 seconds.	Static, with elements of gluteal muscle tension	4–6 times	Average

Physical education that activates blood circulation in the legs

No.	Exercise content	The nature and method of execution	Number of repetitions	Pace
1.	Standing at the support, rise 8–10 times high on your toes, ankles together. Then shake each leg, bending at the knee, relaxed.	Simple in coordination. Breathe rhythmically.	3–4 times	Average

CONTROL AND TRAINING TESTS

1. **Professionally applied physical training is:**
   a) a subsystem of physical education, which ensures the formation and improvement of the properties and qualities of a person, which is essential for a specific professional activity;
   b) a set of exercises that ensure effective human activity in a specific professional area

2. **Factors determining the content of professionally applied physical fitness:**
   a) psychophysiological characteristics, content and working conditions
   b) the financial and economic condition of a specific field of activity;
   c) ecological living conditions

3. **What group of professions does the work of a doctor belong to?**
   a) mental and mainly mental work;
   b) light physical labor, sedentary, monotonous;
   c) work of average physical severity, varied, dynamic

4. **The goal of professionally applied physical training medical students is:**
   a) ensuring the formation and improvement of the properties and qualities of an individual that are essential for a specific professional activity;
   b) the formation of professionally important properties and qualities of the doctors personality with the help of various means of physical culture and sports;
   c) facilitating the development of a specific profession of a doctor, achieving the required level of professional competence and psychophysical readiness for highly productive work

5. **For which of the profession of a doctor is professionally significant qualities are speed of reaction, self–control, a large amount of operative and long–term memory?**
   a) dentist;
   b) pharmacist;
   c) surgeon

6. **What kind of medical profession are mentioned in the following sentences: "… at the same time, they have a strong thoracic kyphosis, which covers the cervical and lumbar spine. The back is severely bent, the chest is flat, sunken or pushed forward?**
   a) dentist;
   b) surgeon;
   c) pediatrician

7. **The professional activity of a pharmacist is characterized by:**
   a) monotony, hypokinesia and hypodynamia, performing a large number of hand manipulations (coordination movements), the predominance of mental activity (processing of incoming information, a large number of possible calculations);
   b) significant mental stress, requires a great effort and endurance from the doctor, attention and high working capacity in extreme conditions;
   c) high coordination of movements, their automatism, physical strength and high neuropsychic tone, as well as stability of attention

8. **Vocationally applied physical training should spend:**
   a) all year round;
   b) outside the classroom;
   c) during the period of training industrial practices

9. **The highest prevalence rates of cardiovascular pathology at doctors:**
   a) ophthalmologists;
   b) surgeons;
   c) obstetricians–gynecologists

10. **What diseases are in 1st place in terms of quantity cases and days disability?**
   a) acute diseases of the upper respiratory tract (influenza, acute respiratory infections, laryngitis, tracheitis, pharyngitis, etc.);
   b) diseases of the circulatory system;
   in) diseases of the nervous system and sense organs