

**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**

Small forms physical culture

Educational-methodical manual
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
program of higher education – specialty program in the specialty
31.05.03 Dentistry (partially implemented in English)

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Effective training of specialists at a university requires the creation of conditions for intensive and intense creative educational work without overload and fatigue, in combination with active rest and physical improvement. This requirement should be met by such use of means of physical culture and sports, which contributes to the maintenance of a sufficiently high and stable educational and labor activity and work capacity of students. Providing this function of physical education is one of the leading in social terms.

Small forms of physical activity – one of the methods to reduce the negative impact of prolonged static and psycho–emotional stress on the body. Their use provides a pronounced health–improving effect, increases the effectiveness of training.

This work presents the means and methods of increasing and regulating students' working capacity by means of physical culture. The manual for students "Small forms of physical culture" is recommended for students studying in the specialty "General Medicine", "Dentistry", "Pediatrics", "Pharmacy", "Medical and Preventive Business".

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PURPOSE OF THE LESSON: to familiarize and teach the method of conducting small forms physical culture

A STUDENT SHOULD KNOW:

- the goal and objectives of small forms of physical culture;
- basic rules for organizing small forms of physical culture;
- basic rules for conducting and compiling exercise complexes for small forms of physical culture;
- the influence of small forms of physical culture on the increase of the basic processes of life.

A STUDENT SHOULD BE ABLE TO:

- regulate breaks in the form of small forms of physical culture to prevent mental, mental and physical fatigue

QUESTIONS TO BE SURRENDED:

- characteristics of small forms of physical culture;
- physiological significance of small forms;
- the use of "small forms" of physical culture in the mode of educational work of students;
- the principle of making up complexes of exercises used in small forms of physical culture.

RECOMMENDED LITERATURE:

1. Burlakova JI. D. Recreational gymnastics in the daily routine of students / JI. G. Burlakova // Collection of scientific works of SevKavGTU. Series "Humanities". 2008.– No. 6.– P. 43.
2. Dudina A.N. Scientific basis of active rest (the phenomenon of I. M. Sechenov) / A. N. Dudin // Collection of scientific works of SevKavGTU. Series "Humanities". 2008.– No. 6.– P. 51.
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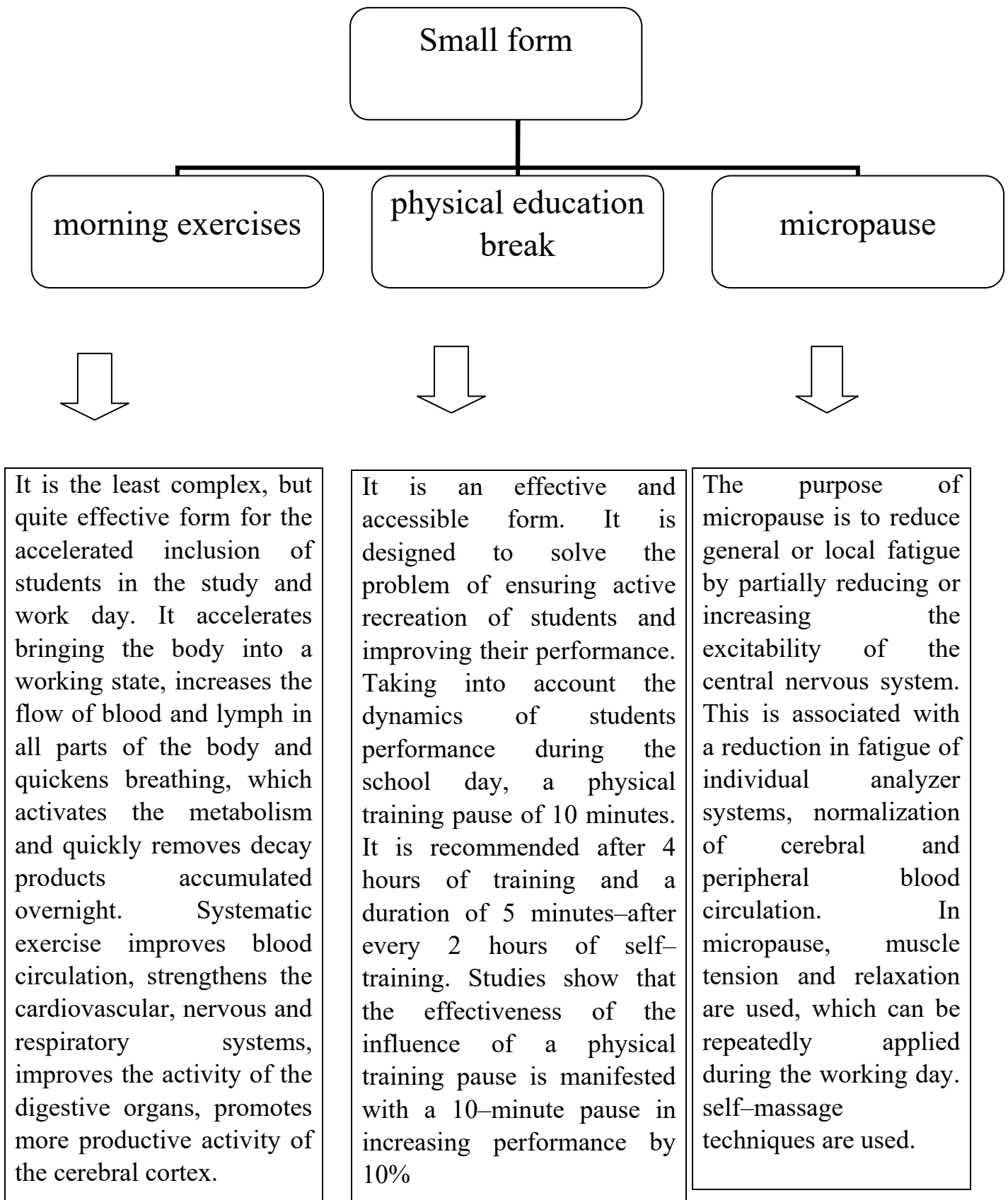
1. Characteristics of small forms of physical culture

Typical signs that distinguish the so-called small forms of physical exercise from large ones are mainly the following: a relatively narrow focus of activity. Within the framework of small forms, as a rule, particular tasks are solved, the implementation of which objectively does not guarantee a far-reaching cardinal shift in the state of those involved, although it can to some extent contribute to it; typically, in particular, the tasks of moderate toning and acceleration of the body's working out during the transition from a state of rest to daily activities (as provided for in sessions of morning hygienic exercises or introductory industrial gymnastics), some optimization of the dynamics of operational performance in the process of production or other work and the prevention of its adverse effects on the state body (as when using the positive effect of active recreation in the framework of physical culture, physical culture minutes and micro-sessions of industrial gymnastics), maintaining certain aspects of the acquired fitness and creating some prerequisites that contribute to the effectiveness of the main classes, etc.; relatively small length in time.; *insignificant differentiation of the structure.*

In small forms like structure deposited: preparatory, main and final parts of lessons are not only short-term, but limited in content, and in certain situations it is practically not expressed (especially when exercise is closely embedded in the dominant regime of activities, employment, service, study, directly subordinate, as in the case of introductory gymnastics, fizkul'tparad, fiskelement); *the relatively low level of functional loads.*

From all this follows, in essence, the additional role of small forms of classes in the general system of physical education. It does not follow, of course, that their value is generally small and they do not deserve to be treated seriously enough. The inadmissibility of underestimating their significance is clearly indicated by many special studies carried out in recent decades. systematically practiced such physical exercises, without any doubt, are important factors in optimizing the current functional state they contribute to the preservation of their health and ensure normal life activity, serve as public forms of introducing physical culture into everyday life. Their importance increases especially, of course, when for some reason physical activity of an individual in specific conditions of life is limited mainly by them. at the same time, it is unrealistic to rely only on them as the main factors of full-fledged physical education and development—such functions are not inherent in small forms, only an integral system of comprehensive physical education can provide this, where small forms are one of the necessary components.

*To illustrate what has been said,
examples of small forms of employment are given here*



2. Physiological significance of small forms

Indicators that reflect the daily rhythm of physiological functions largely depend on both the duration of training sessions and their organization.

High efficiency in any kind of activity, as a rule, is provided only if the life rhythm is correctly consistent with the biological rhythms of the body's psychophysiological functions. Thus, the beginning of the day, increasing the activity of the cardiovascular system, respiratory system, tone the muscular system, nervous system, etc. And rather than match the beginning of the academic activity with the rise of the tone of the vital functions of the organism, the more productive running training and labour, increased endurance, reduced fatigue, improved well-being.

The efficiency of students during classes is not constant. At first, it is not high, then it rises and remains at a high level for some time, after which it begins, decreases, thus undergoing three qualitatively different periods: training, a steady state of mental performance and fatigue. The phase change in working capacity is repeated at each training session. This circumstance is important for the development of measures to optimize the conditions of educational and labor activity and rest of students, in particular by means of physical culture and sports.

The alternation of training sessions and active rest, including physical exercises in different forms, helps to reduce fatigue caused by educational activities and increase students' working capacity. When carrying out physical exercises during the school day, two directions can be distinguished: a health-improving orientation, which, along with health exercises, provides active rest, recovery and maintenance at an optimal level of mental performance; increasing motor readiness that meets the requirements of the curriculum.

The complex application of all types of physical culture and health-improving work ensures the effectiveness of the motor regime, provided that a rational methodology for carrying out its components is used. The use of all forms of physical culture and health improvement work during the school day has a beneficial effect on the dynamics of mental performance throughout the year, quarter, week and school day. At the same time, students' physical activity significantly increases, physical performance and physical fitness improve.

3. The use of "small forms" of physical culture in the mode of educational work of students

Morning hygienic exercises, as you know, are one of the most widespread, popular forms of physical education in the mode of everyday life (note that as a small form of exercise, it is not identical either to morning training sessions, which have become widespread in sports practice, or to similar cases of using physical exercises with quite a large amount of load). Its main purpose is to optimize the transition from prolonged rest (sleep) to everyday life.

The basis of the morning hygienic exercise is a kind of warm-up, with the peculiarity that it is focused not on operational preparation for any one type of activity, but on the gradual general activation of body functions, overcoming the inertia of rest, inclusion in everyday affairs in a state of normal tone and in a good mood. In parallel, within the framework of this form of training, it is possible to partially solve such problems as the formation and maintenance of normal posture, maintaining the achieved level of development of individual motor qualities and general fitness and some others, but only insofar as this does not lead to unjustified forcing of the load here, does not contradict the regularities of the gradual deployment of the body's functional capabilities after many hours of deep rest.

An effective and accessible form of studying at a university is a physical culture break. It solves the problem of providing students with active rest and increasing their efficiency. Taking into account the peculiarities of the dynamics of students' working capacity in the school day, a physical culture pause of 10 minutes is introduced after 4 hours of classes and 5 minutes after every two hours of self-training, i.e. during periods when the first signs of fatigue appear. Physical training breaks are carried out in a well-ventilated area. Exercises are chosen so as to intensify work. Studies show that the effectiveness of the influence of a 10-minute physical culture pause is manifested in an increase in individual performance indicators by 5-9%.

When studying the effectiveness of using physical micropauses exercises of a dynamic and pozn tonic nature, it was found that one-minute dynamic exercise in its effect is equivalent to performing postural exercises for two minutes. However, with regular repetition of running, its effectiveness decreases in comparison with the use of postural exercises. The essence of these exercises is to perform 5 cycles of vigorous contraction and tension alternately of the extensors and flexors of the limbs and trunk (with simultaneous strong stretching of the antagonist muscles).

Since the working posture of students is characterized by monotonous tension of mainly flexor muscles (sitting leaning forward), it is advisable to start and end the exercise cycle by vigorous stretching of the flexor muscles.

With prolonged intense mental work, if it is accompanied by emotional stress, arbitrary general relaxation of skeletal muscles, combined with rhythmic contraction of small muscle groups (for example, flexors and extensors of the fingers of the hand, facial muscles, etc.).

Against the background of muscle relaxation, in order to increase the tone of the brain, improve the breathing and blood circulation regime, it is advisable to regularly perform short-term muscle exercises.

When performing monotonous mental work, it is recommended use voluntary additional muscle tension, as in the period of activation, but until the necessary tone and performance are restored.

4. The principle of drawing up complexes of exercises used in small forms of physical culture

The complex of simple exercises of morning hygienic gymnastics ("exercise".) Makes it easy and pleasant to move from morning lethargy to an active state, to quickly eliminate stagnation that occurs in the body after a night of inactivity.

The set of exercises for morning hygienic gymnastics includes exercises of both corrective and preventive nature. When drawing up an individual complex, care should be taken that it meets the following requirements:

- ✓ exercises should correspond to the functional capabilities of the organism, the specifics of labor activity;
- ✓ to be performed in a certain sequence;
- ✓ be predominantly dynamic in nature, performed without significant effort and breath holding;
- ✓ the load should gradually increase with some decrease towards the end of charging;
- ✓ the complex should be periodically updated, since familiarity exercise reduces the effectiveness of the exercise.

The following approximate diagram of the sequence of morning exercises is recommended (for knowledge workers):

- ✓ exercises contributing to the gradual transition of the body from inhibited to working (walking, slow running, stretching);
- ✓ exercises that activate the activity of the cardiovascular systems (swinging hands in different directions, shallow lunges, etc.);

- ✓ exercises that strengthen the muscles of the body, train breathing, improve cerebral circulation (rotation and tilt of the head, trunk, turns to the right and left, bends to the side, bending back);
- ✓ exercises to develop strength capabilities;
- ✓ exercises to promote joint mobility;
- ✓ exercises for the abdominal muscles;
- ✓ exercises for the legs, including squatting on one leg, jumping;
- ✓ the morning hygienic exercises are completed with exercises for relaxation and breathing restoration (walking with hand movements).

Duration of morning exercises from 8-10 to 20-30 minutes. In practice, healthy people under the age of 40 can carry out such exercises at a rate at which the pulse rises to 150 beats / min (after 50 years - the pulse is up to 140 beats / min, for 60-year-olds –120 beats / min).

However, not all people easily and painlessly endure increased loads in the early morning hours. For some, it is advisable to limit yourself to a minimum of exercises aimed at relieving morning lethargy, and move more active exercises to the after-work evening hours.

Attention should be paid to the place of physical culture breaks during study time. The physical culture pause either precedes the first signs of fatigue or coincides with them. People who are engaged in heavy physical labor can be offered a physical training break after one and a half hours of work, and those engaged in mental labor - not earlier than after 2.5–3 hours.

The method of drawing up and carrying out a physical culture minute and micro-pause of active rest. In physical minutes of general exposure, the first exercise is most often associated with straightening the back and taking the shoulders back. The second is tilting or turning of the body in combination with the movements of the arms and legs, the third is swinging movements. Some exercises occur involuntarily or out of habit. This rotation of the head, shoulders, straightening the legs in a sitting position, change of posture.

Physical education minutes of local impact allow those muscle groups to rest in which fatigue is most felt. In this case, relaxation exercises are used, since it is they that contribute to a better blood supply to the muscles, a quick and complete restoration of their working capacity. Some elements of massage can be applied at the same time to enhance the regenerative effect.

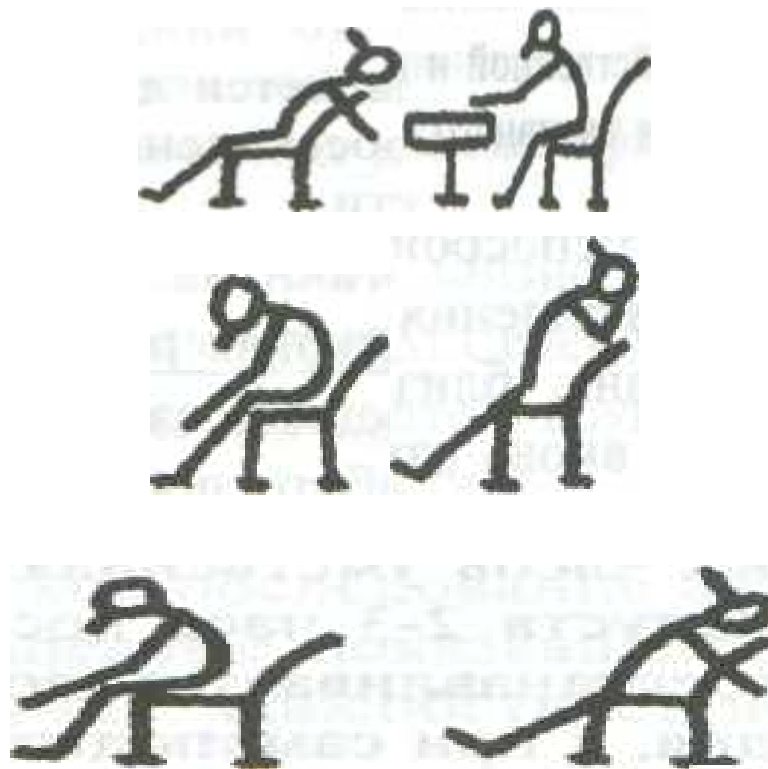
Complex of physical culture pauses

- Exercise 1.** Walking on a place, highly lifting knees. 20 steps.
- Exercise 2.** Starting position—standing, hands to the sides, palms up. Bend your arms tensely to your shoulders, clench your hands into fists, and press your elbows to your torso. 12 times.
- Exercise 3.** Starting position—standing, hands at the bottom. Hands up, right foot back on the toe, bend, return to the starting position. The same with the other leg. Only 10 times.
- Exercise 4.** Starting position—stand legs apart, hands in front of the chest. 1–2—jerks with bent arms back, elbows not lower than the level of the shoulders, 3–4—turn the torso to the right, hands to the sides with palms up, return to the starting position. It's the same with turning left. 4 times in each direction.
- Exercise 5.** Starting position – squat on your toes, hands on your knees. Three jumps in place in a squat, then straighten up. Repeat 5 times.
- Exercise 6.** Starting position—stand legs apart. 1–2—springy leans forward until the fingers touch the floor, 3—hands up, bending forward, 4—legs apart. Repeat 6 times.
- Exercise 7.** Standing, arms crossed in front of the chest. Hands down—to the sides, swing your right foot to the right until you touch the palm of your right hand. The same with the other leg. 6 times in each direction.
- Exercise 8.** Starting position—stand, hands to the shoulders. 1–2—tilt to the right, hands up, 3–4—starting position. the same goes the other way. A total of 8 times.

Micropause in the educational work of students using exercise (Fizkultury) is useful due to the fact that in the mental work of students in the impact various factors are having a state of distraction from their work that are relatively short 1–3 min. Most often, this is due to fatigue in conditions of limited activity of skeletal muscles, the monotonous nature of the work performed, etc. Most often, such phenomena are observed during self-training of students, performed against the background of six, and sometimes eight-hour classroom sessions.

In these circumstances, there are useful micropause filled dynamic (running in place, squats, bending and straightening the arms in emphasis, etc.) or postnichestve exercises, which consist of 5 cycles of vigorous contraction and tension of muscles— antagonists—muscles flexors and extensors of the limbs and trunk (Fig. 1).

Prolonged intense mental work is recommended every 30–60 min. use posotonic exercises, perform dynamic exercises every 2 hours, for example, running in place with deep rhythmic breathing.



Complex pastanesi exercises.

TESTS:

1) "Small forms" of physical culture in the mode of educational work of students include

- a) athletic training;
- b) morning exercises;
- c) sectional session;
- d) physical education break;
- e) physical education minute;
- g) running training

2) The means of restoring the body after mental fatigue includes:

- a) intense physical activity;
- b) combining work with active recreation;
- c) training sessions with games, martial arts

3) It is not included in the main forms of independent physical exercises:

- a) morning hygienic gymnastics;
- b) daytime physical education;
- c) training sessions in the second half of the school day;
- d) evening hygienic gymnastics

4) Morning gymnastics refers to ...

- a) educational and developmental gymnastics;
- b) health-improving gymnastics;
- c) gymnastics;
- d) production

5) What phase follows after performing physical activity after the onset of fatigue?

- a) recovery phase;
- b) the phase of "second breath";
- c) the phase of temporary decrease in performance;
- d) all answers are correct

6) Name three stages in the development of stress:

- a) alarm response, stabilization, exhaustion;
- b) information, mobilization, overload;
- c) threat, danger, disease;
- d) information, alarm response, disease

- 7) During health training in order to increase functional capabilities of the cardiovascular system the heart rate should not be lower than:**
- a) 120 beats / min;
 - b) 160 beats / min;
 - c) 180 beats/min
- 8) In the process of mental work, the main load is:**
- a) on the autonomic nervous system;
 - b) on the respiratory system;
 - c) on the central nervous system, its highest department– the brain;
 - d) on the subcortex of the brain.
- 9) Dynamics of mental performance of students in the weekly the training cycle has periods:**
- a) working out, stable working capacity and the period of its decrease;
 - b) "final rush", nervous and emotional tension;
 - c) emotional experience;
 - d) nervous disorder.
- 10) The basis of the organization of rest during mental activity is the principle of:**
- a) active recreation;
 - b) passive rest;
 - c) psycho–emotional relief;
 - d) auto–training
- 11) The effect of physical exercise can be increased if there will be:**
- a) an arbitrary mode of life, where there is no element physical activity;
 - b) normalized motor activity;
 - c) clear organization of sleep, nutrition, and outdoor activities, educational work and motor activity;
 - d) all of the above
- 12) The main factor of fatigue of students is:**
- a) the educational activity itself;
 - b) complete lack of interest, apathy;
 - c) lack of response to new stimuli;
 - d) decrease in heart rate.