

**Physical education and health**

**(elective course)**

***Methodical instructions for practical classes of II year students majoring in  
221 "Dentistry"***

**MINISTRY OF HEALTH OF UKRAINE**

**Kharkiv National Medical University**

**Department of Physical Education and Health**

**Physical education and health**

***Methodical instructions for practical classes of II year students majoring in  
221 "Dentistry"***

Approved by  
the Academic Council of KhNMU  
Protocol No.

**Kharkiv  
KhNMU  
2021**

Physical education and health: a method. decree. to practical classes of II year students in the specialty 221 «Dentistry»/ order Shuteev Vyacheslav, Lapko Svitlana, Lenska Olha and others - 17 p.

Authors	Shuteev Vyacheslav Lapko Svitlana Lenska Olha Starodubtsev Dmytro
---------	--

## **Topic 1. Physical quality of strength. Physical exercises to improve strength**

**Duration of training topic: 2 lessons, 4 hours**

**The relevance of the topic.** Physical exercises aimed at improving strength help to improve the movements necessary in the further professional and applied training of medical students.

**The purpose of the lesson.** Mastering the basic means of strength development and improvement. The use of various sets of exercises aimed at improving strength.

### **Graphological structure of the topic**

#### **A lesson plan**

1. Introduction	10 min
2. Test of knowledge	20 min
3. Physical quality “strength”	20 min
3. Teaching the technique of performing basic strength exercises	30 min
4. Summing up	10 min

### **Educational and material support of the lesson:**

Textbooks and workbooks, new data from periodicals

### **Technological map of practical training**

	<b>Training material</b>	<b>Methodical instructions</b>
1	Introduction	
2	Knowledge of the review material	Student survey
3	Technique of performing basic strength exercises	Teaching the technique of performing basic strength exercises
4	Summing up	

### **Content**

Strength as a motor quality is a person's ability to overcome resistance or counteract it due to muscle tension. The forces of gravity can act as resistance; support reaction when interacting with it, environmental resistance; body weight; weight of sports equipment; forces of inertia of one's own body or its parts and other bodies; partner resistance, etc. The more resistance a person is able to overcome, the stronger he/she is.

Absolute strength. Relative strength. Fast power. Explosive power.

### **Control questions**

1. Give a definition to the concept of “strength”.
2. Give a definition of the ability “absolute strength”.
3. Methods and tools used to improve agility.

### **Recommended Reading**

#### **Basic Literature**

1. “Теория и методика физического воспитания”/ Под. ред. Ашмарина Б.А. - М., 1990.
2. Вайцеховский С.М. Книга тренера М., "Физкультура и спорт", 1971.
3. Ведмеденко Б.Ф. Теоретичні основи і практика виховання молоді засобами фізичної культури. —Київ, 1993.
4. Гогін О.В. Легка атлетика: Курс лекцій / Харківський державний пед.агогічний університет ім. Г.С. Сковороди . - Харків: “ОВС”, 2001. - 112 с.
5. Закон України "Про фізичну культуру і спорт".
6. Зациорский В.М., Физические качества, М: Физкультура и спорт, 1965 г
7. Зимкин И.В. Физиологическая характеристика силы, быстроты и выносливости. Ф. И С., 1956 г.
8. Матвеев Л.П. Теория и методика физической культуры. - М.: Физкультура и спорт, 1991. - 181с.
9. Теория и методика физического воспитания. Учебник для высших учебных заведений физического воспитания и спорта. Под ред. Круцевич Т.Ю. Олимпийская литература, Том 1- К.: 2003. - 423с.

#### **Supplementary literature**

1. Худолій О.М. Загальні основи теорії та методики фізичного виховання: Навч.посібник.-Харків: «ОВС», 2007.- 406с.:іл.
2. Худолій О.М. Основи науково-дослідної роботи у фізичному вихованні. Харків"ОВС",2005р.

#### **Information resources**

- 1.[https://students.lnu.edu.ua/sport/wpcontent/uploads/2015/04/lections\\_kurs.pdf](https://students.lnu.edu.ua/sport/wpcontent/uploads/2015/04/lections_kurs.pdf)
- 2.<https://vseosvita.ua/library/instrukcia-tehniki-bezpeki-pid-cas-zanat-z-fizicnoi-kulturi-30763.html>
3. <https://studfile.net/preview/5461978/page:49/>

## **Topic 2. Physical quality speed. Exercises to improve speed**

**Duration of training topic: 2 lessons, 4 hours**

**The relevance of the topic.** Physical exercises aimed at the development of speed of movements and "explosive strength" are of great importance for human life, since they allow performing motor actions at a certain time, maintaining efficiency, and strengthening health.

**The purpose of the lesson.** Consider the physical quality of the speed. Physical exercises to improve speed.

### **Graphological structure of the topic**

#### **A lesson plan**

1. Introduction	10 min
2. Test of knowledge	20 min
3. Physical quality "speed"	20 min
3. Teaching of the technique of performing basic speed exercises	30 min
4. Summing up	10 min

### **Educational and material support of the lesson:**

Textbooks and workbooks, new data from periodicals

### **Technological map of practical training**

	<b>Training material</b>	<b>Methodical instructions</b>
1	Introduction	
2	Knowledge of the review material	Student survey
3	Teaching the technique for performing basic speed exercises	Consider teaching the technique for performing basic speed exercises
4	Summing up	

### **Content**

Speed as physical quality. Numerous studies have shown that speed is a complex motor quality, which is manifested through:

- speed of motor reactions;
- speed of execution of encumbered individual movements;
- frequency (pace) of burdened movements.

The rapid onset of movements, in sports practice, is called sharpness. Motor reaction. A simple motor reaction of a person. The speed of individual movements. Factors determining the manifestation of the speed of motor actions. Means and methods of improving of speed of movements and “explosive power”. The method of improving the speed of acyclic movements. Tools and exercises to improve the speed of movements and “explosive strength”.

### **Control questions**

1. Give a definition to the concepts of “speed of movement” and “explosive force”.
2. Factors that determine the speed of movement and “explosive force”.
3. Methods and means used for the improving of “speed of movement” and “explosive strength”.

### **Recommended Reading Basic Literature**

1. Гимнастика : учеб. для ин-тов физ. культуры / под ред. А. М. Шлемина, А. Т. Брыкина - [2-е изд.]. – М.: Физкультура и спорт, 1979. – 215 с.
2. Гогін О.В. Легка атлетика: Навчальний посібник. – Харків: «ОВС», 2010.- 395с.
3. Деркач А.А., Исаев А.А. Педагогическое мастерство тренера. — М.:ФиС,1998.
4. Теория и методики физического воспитания / Под ред. Ашмарина Б.А. —М., 1990.
5. Теория и методики физического воспитания. Учебник для высших учебных заведений физического воспитания и спорта. Том 2. / Под ред. Круцевич Т.Ю. К.: Олимпийская литература. - 2003 - 391с.
6. Теория и методики физического воспитания. Учебник для высших учебных заведений физического воспитания и спорта. Под ред. Круцевич Т.Ю. Олимпийская литература, Том 1- К.: 2003. - 423с.
7. Ткачев Ф.Т. В поисках мышечной радости. Киев «Здоровья» ,1988.
8. Худолій О.М. Основи методики викладання гімнастики: Навч. Посібник. В 2-х частинах. – 3-є вид., випр. і доп. – Харків: «ОВС», 2004. – Ч. 1. – 414с.:іл..

### **Supplemantary literature**

- 1.Худолій О.М. Загальні основи теорії та методики фізичного виховання: Навч.посібник.-Харків: «ОВС», 2007.- 406с.:іл.
- 2.Худолій О.М. Основи науково-дослідної роботи у фізичному вихованні. Харків"ОВС",2005р.

## Information resources

1. [https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections\\_kurs.pdf](https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections_kurs.pdf)
2. <https://vseosvita.ua/library/instrukcia-tehniki-bezpeki-pid-cas-zanat-z-fizicnoi-kulturi-30763.html>

### **Topic 3. Physical quality endurance. Types of endurance. Physical exercises to develop various types of endurance Duration of training topic: 2 lessons, 4 hours**

**The relevance of the topic.** Physical endurance is of great importance for human life, because it allows: a long time to maintain a high level of intensity of physical activity; perform a significant amount of work; quickly regain strength after exercise.

**The purpose of the lesson.** Consider physical quality endurance. Exercises to develop endurance.

#### **Graphological structure of the topic A lesson plan**

1. Introduction	10 min
2. Test of knowledge	20 min
3. Physical quality “endurance”	20 min
3. Learning the technique of performing basic endurance exercises	30 min
4. Summing up	10 min

#### **Educational and material support of the lesson:**

Textbooks and workbooks, new data from periodicals

#### **Technological map of practical training**

	<b>Training material</b>	<b>Methodical instructions</b>
1	Introduction	
2	Knowledge of the review material	Student survey
3	Teaching the technique of performing basic exercises with endurance	Consideration of teaching the technique of performing basic exercises with endurance
4	Summing up	



## **Content**

Physical endurance as a human motor quality is the ability to overcome fatigue in the process of motor activity.

Physical endurance of the masses is of great importance for human life, since it allows for a long time to maintain a high level of intensity of motor activity; perform a significant amount of work; quickly recover strength after exertion.

Depending on the volume of the muscles involved in the work, there are three types of physical fatigue, and therefore endurance:

- \* Local, if less than a third of the total muscle mass is involved in the work;

- \* Regional, when from a third to two thirds of muscle mass is involved in the work;

- \* Total, if more than two-thirds of the skeletal muscles work at the same time.

General endurance as a human motor quality. Human speed endurance. Focal endurance. Improving techniques.

## **Control questions**

1. Give a definition of physical quality “overall endurance”.
2. Give a definition of physical quality “special endurance”.
3. What factors determine the overall endurance?
4. What factors determine the special endurance?
5. Methods and tools used to develop general and special endurance.

## **Recommended Reading Basic Literature**

- 1.Амосов Н.М., Бендет Я.М. Физическая активность и сердце. К.Здоров'я, 1989. – 213с.
- 2.Амосов М.М. Моя система здоров'я / М.М. Амосов – К.: Здоровя, 1997. – 56с.
- 3.Буторін Є.І., Маглований А.В. професійно-прикладна фізична підготовка студентів медичного університету. – Львів, 2000.- 20с.
- 4.. Ведмеденко Б.Ф. Теоретичні основи і практика виховання молоді засобами фізичної культури. —Київ, 1993.
5. Гук Е.П. Физкультура для медиков- М: Советский спорт, 1990.- 43 с.
6. Деркач А.А., Исаев А.А. Педагогическое мастерство тренера. — М: ФиС,1998.
7. Завацький В.І., Маковецький В.І. До питання гуманізації навчання спеціалістів фізичної культури в умовах вищого навчального закладу //

Конференція: підготовка спеціалістів фізичної культури та спорту в Україні // Упорядники: В.І.Завацький та ін. — Луцьк, 1994. \_ С. 447 - 449.  
 8. Закон України "Про фізичну культуру і спорт".  
 9. Козлова К.А., З.С.Скібенко, Н.В.Лезнік. Фізичне вдосконалення. -К., 1994.-С. 105.

### **Supplementary literature**

1. Виру А.А, Юримяз Т.А., Смирнова Т.А. Аэробные упражнения. – М.:ФиС, 1988. – 142с.
2. Каплан И.М. Основы физического самосовершенствования студентов. – Ташкент: Фан, 1991. – 139с

### **Information resources**

1. [https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections\\_kurs.pdf](https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections_kurs.pdf)
2. <https://vseosvita.ua/library/instrukcia-tehniki-bezpeki-pid-cas-zanat-z-fizicnoi-kulturi-30763.html>

## **Topic 4. The essence and meaning of flexibility. The factors on which the manifestation of flexibility depends. Stages of development of flexibility. Sex differences. Duration of training topic: 1 lesson, 2 hours**

**The relevance of the topic.** The effect of exercise on flexibility is multifaceted and effective. It has a very good effect on the body. Exercises for the development of flexibility allow not only to increase the range of motion, but also in a certain way affect the formation of muscle fibers.

**The purpose of the lesson.** Consider the physical quality of flexibility. Physical exercises to develop flexibility.

### **Graphological structure of the topic**

#### **A lesson plan**

1. Introduction	10 min
2. Test of knowledge	20 min
3. Physical quality “flexibility”	20 min
3. Teaching the technique of performing basic exercises with flexibility	30 min
4. Summing up	10 min

### **Educational and material support of the lesson:**

Textbooks and workbooks, new data from periodicals

### **Technological map of practical training**

	<b>Training material</b>	<b>Methodical instructions</b>
1	Introduction	
2	Knowledge of the review material	Student survey
3	Technique for following basic rules with flexibility	Navigation technique to fulfill basic rules with flexibility
4	Summing up	

### **Content**

Joint mobility is referred to as flexibility. Flexibility as a motor quality of a person is his/her ability to perform movements in joints with a large amplitude. Distinguish between active and passive flexibility. Factors on which the manifestation of flexibility depends. Joint mobility. Flexibility development tools. Stretching exercises. Dosage and duration of exercise.

### **Control questions**

1. Give a definition of the physical quality of flexibility.
2. What factors determine flexibility (active and passive).
3. Methods and tools used to develop flexibility.

### **Recommended Reading**

#### **Basic Literature**

1. Гимнастика: учеб. для ин-тов физ. культуры / под ред. А. М. Шлемина, А. Т. Брыкина - [2-е изд.]. – М. : Физкультура и спорт, 1979. – 215 с.
2. Гимнастика: учебник для техникумов физической культуры. / под ред. М. Л. Украна, А. М. Шлемина. – М. : Физкультура и спорт, 1977. – 422 с.
3. Соколов В. А. Методика тренировки в легкой атлетике: уч. пособие / ред. В. А. Соколов, Т. П. Юшкевич, Э. П. Позюбанов. – Минск : Полымя, 1994. – 256с.
4. Матвеев Л. П. Теория и методика физического воспитания: учеб. для ин-тов физ. культуры / Л. П. Матвеев [и др.]; под ред. Л. П. Матвеева, А. Д. Новикова. – М. : Физкультура и спорт, 1976. – Т.1. - 304 с. – Т.2. – 256 с.

5. Сермеев Б. В. Спортсменам о воспитании гибкости: Учебное пособие / Б. В. Сермеев. – М.: Просвещение, 1970. – 24 с.

### **Supplementary literature**

1. Платонов В. Н. Гибкость спортсмена и методика ее совершенствования: учебн. метод. пособие. / В. Н. Платонов, М. М. Булатова. – Киев: Б.И., 1992. – 14 с.
2. Боген М. М. Обучение двигательным действиям / М. М. Боген. – М. : Физкультура и спорт, 1985. – 192 с.

### **Information resources**

1. [https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections\\_kurs.pdf](https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections_kurs.pdf)
2. <https://vseosvita.ua/library/instrukcia-tehniki-bezpeki-pid-cas-zanat-z-fizicnoi-kulturi-30763.html>

## **Topic 5. Physical quality - coordination. Physical exercises to develop coordination abilities**

**Duration of training topic: 1 lesson, 2 hours**

**The relevance of the topic.** Exercises for mastering coordination abilities enable a person to rationally coordinate the movements of body links when solving specific motor tasks, which are necessary for the further use of skills in the professionally applied activity of a future doctor.

**The purpose of the lesson.** Develop coordination skills through various means.

### **Graphological structure of the topic**

#### **A lesson plan**

1. Introduction	10 min
2. Test of knowledge	20 min
3. Physical quality “coordination”	20 min
3. Teaching the technique of performing coordination exercises with flexibility	30 min
4. Summing up	10 min

### **Educational and material support of the lesson:**

Textbooks and workbooks, new data from periodicals

## **Technological map of practical training**

	<b>Training material</b>	<b>Methodical instructions</b>
1	Introduction	
2	Knowledge of the review material	Student survey
3	Technique for performing basic coordination exercises	Teaching the technique for basic coordination exercises
4	Summing up	

### **Content**

The word “coordination” is of Latin origin. It means consistency, unification, ordering. With regard to human motor activity, it is used to determine the degree of coordination of its actions with the real requirements of the environment. Human coordination abilities. Sense of rhythm. The ability to orientate in space. Ability to voluntary muscle relaxation. Means for the development of coordination abilities. Tests that determine coordination abilities.

### **Control questions**

1. Know the criteria for assessing the ability to coordinate movements.
2. Be able to explain how coordination abilities are characterized in accordance with the assessment criteria.
3. Be able to reveal one of the criteria for assessing coordination “the ability to rationally organize movements and efforts in space and time from the point of view of target orientation”.
4. Be able to explain which coordination abilities are associated with motor memory.

### **Recommended Reading Basic Literature**

1. Верхошанский Ю.В. Основы специальной физической подготовки спортсменов.-М.:Физкультура и спорт, 1988.-С.111-123.
2. Ильин П.Е. Психомоторная организация человека: Учебник для вузов.-СПб:Питер,2003.-384 с.
- 3.Платонов В.М.,Булатова М.М. Фізична підготовка спортсмена.-К.:Олімпійська література, 1995.-С.237-274.
- 4.Сергієнко Л.П. Практикум з теорії і методики фізичного виховання-Харків:ОВС,2007.-С.74-81.

5. Теория и методика физического воспитания. Общие основы теории и методики физического воспитания: Учебник в 2-х томах / под. редакцией Т.Ю.Круцевич.-Том 1.-К.:Олимпийская литература,2003.-С.222-245.

6. Теория и методика физического воспитания: Учеб. для студентов фак. физ. культуры /Под ред..Б.А.Ашмарина.-М.:Просвещение,1990.-С.154-157.

### **Supplementary literature**

1.Худолій О.М. Основи методики викладання гімнастики: Навч.посібник.-Харків:ОБС,2004.-С.234-244.

### **Information resources**

1.[https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections\\_kurs.pdf](https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections_kurs.pdf)

2. <https://vseosvita.ua/library/instrukcia-tehniki-bezpeki-pid-cas-zanat-z-fizicnoi-kulturi-30763.html>

## **Topic 6. Physical quality - agility. Physical exercises to develop agility.**

**Duration of training topic: 2 lessons, 4 hours**

**The relevance of the topic.** Physical exercises aimed at developing agility help to improve the accuracy of movements in complex coordination actions, which are necessary in the further professional and applied training of medical students.

**The purpose of the lesson.** Mastering the basic means of developing agility and improvement. The use of various sets of exercises aimed at developing agility.

### **Graphological structure of the topic**

#### **A lesson plan**

1. Introduction	10 min
2. Test of knowledge	20 min
3. Physical quality “agility”	20 min
3. Teaching the technique of performing basic exercises with agility	30 min
4. Summing up	10 min

### **Educational and material support of the lesson:**

Textbooks and workbooks, new data from periodicals

### **Technological map of practical training**

#	Training material	Methodical instructions
1	Introduction	
2	Knowledge of the review material	Student survey
3	Technique for performing basic exercises with agility	Teaching the technique of performing basic exercises with agility
4	Summing up	

### **Content**

Agility is a complex complex physical quality that does not have a single assessment criterion and can be defined as a person's ability to quickly master complex coordination, precise motor actions and rebuild his/her activities depending on the current situation.

Agility factors. agility development. General foundations of methods for improving agility. The main methods for assessing agility.

### **Control questions**

1. Give a definition to the concept of “agility”.
2. Give a definition to the structure of the motor ability “agility”.
3. Methods and tools used to improve agility.

### **Recommended Reading**

#### **Basic Literature**

1. “Теория и методика физического воспитания”/ Под. ред. Ашмарина Б.А. - М., 1990.
2. Вайцеховский С.М. Книга тренера М., "Физкультура и спорт", 1971.
- 3.Ведмеденко Б.Ф. Теоретичні основи і практика виховання молоді засобами фізичної культури. —Київ, 1993.
- 4.Гогін О.В. Легка атлетика: Курс лекцій / Харківський державний педагогічний університет ім. Г.С. Сковороди . - Харків: “ОВС”, 2001. - 112 с.
- 5.Закон України "Про фізичну культуру і спорт".
- 6.Зимкин И.В. Физиологическая характеристика силы, быстроты и выносливости. Ф. И С., 1956 г.
- 7.Матвеев Л.П. Теория и методика физической культуры. - М.: Физкультура и спорт, 1991. - 181с.
- 8.Теория и методика физического воспитания. Учебник для высших учебных заведений физического воспитания и спорта. Под ред. Круцевич Т.Ю. Олимпийская литература, Том 1- К.: 2003. - 423с.

### **Supplementary literature**

1. Худолій О.М. Загальні основи теорії та методики фізичного виховання: Навч.посібник.-Харків: «ОВС», 2007.- 406с.:іл.
2. Худолій О.М. Основи науково-дослідної роботи у фізичному вихованні. Харків"ОВС",2005р.

### **Information resources**

- 1.[https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections\\_kurs.pdf](https://students.lnu.edu.ua/sport/wp-content/uploads/2015/04/lections_kurs.pdf)
2. <https://vseosvita.ua/library/instrukcia-tehniki-bezpeki-pid-cas-zanat-z-fizicnoi-kulturi-30763.html>



**Educational publication**

**Physical education and health**  
*(elective course)*

***Methodical instructions for practical classes for students II course in  
specialty 221 "Dentistry"***

Compilers: Shuteev Vyacheslav  
Lapko Svitlana  
Lenska Olha  
Starodubtsev Dmytro

Responsible for the issue of: D.S. Starodubtsev

Editor E.Ye. Deprinda  
Proofreader EV Rubtsova  
Computer typesetting O.Yu. Lavrinenko

**A5 format. Mind. printing. arch. 1.8. Deputy № 21-34102.**

---

**Editorial and Publishing Department of KhNMU, 4 Nauki Ave., Kharkiv,  
61022  
izdatknmurio@gmail.com**

Certificate of inclusion of the subject of publishing in the State Register of  
Publishers, Manufacturers and Distributors of Publishing Products Series DK  
№ 3242 dated 18.07.2008