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MECHANISM OF METHODICAL STUDY OF THE PHYSICAL BASIS OF HEMODYNAMICS AND BLOOD PRESSURE MEASUREMENT IN THE CLINIC IN BIOPHYSICS CLASSES

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Abstract
Nowadays, biophysics is an important component of the modern professional activity of the whole society, but also of every doctor, especially it is related to science and innovative technology within the framework of medical education. In the development of science and technology, which is achieving effective results in the world, the science of biophysics is not similar to any processes in non-living nature and takes place in unique conditions.

Keywords: competencies, national qualification, molecular biophysics, cell biophysics, integration, trend, declaration

Organizing the learning process through independent education (Simulations), distance learning (Moodle, •Ilias, Dokeos, etc.) in widespread introduction of forms, continuity and practical direction of medical education in the context of information and education environment (e-learning) and media technologies, development of creative skills of medical students, development of the preparation process based on critical approaches to professional activities, innovation improving the methodology of using technology is of great importance. alignment of education adopted by UNESCO with international standard classification (TXST) levels; full implementation of the National Qualification System in the educational process; innovative design of the content of medical education for preparing medical professionals to take a proper place in the labor market; dividing professional competencies into components; there is a special emphasis on creating new methodological models of medical education and applying them in certain medical education practices.

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(Matthew 24:14; 28:19, 20) The world's most effective scientific and technological advances demonstrate the importance of biophysics in the development of modern innovative technologies in medical education. Biophysical knowledge is an important component of not only the modern professional work of society as a whole but also of each doctor, especially in the field of medical education, in the field of science and innovative technology. The skills and skills acquired by students will be an important factor in their development as individuals.

With issues related to the use of innovative technologies in teaching physics and natural sciences in the higher education system, U.Sh.Begimkulov, R.X.Djurayev, M.Djorayev, B.M.Mirzaahmedov, Y.G. Studied by Mahmoudov, G.E.Karlibayeva, G.S.Scandinavia, K.A.Tursunmetov, J.E.O'sarov, N.Sh.Turdiyev, M.Mamadazimov, S.Q.Qahhorov, M.Qurbonov, D.Sh.Shodiyev, and others. The problems of implementing interdisciplinary integration in the teaching of physics were studied in the scientific work of U.E.Abdiyev, H.O.Joorayev, E.O.Turdikulov, Q.Sh.Tursunov, M.I.Bazarbayev S.J.Bazarova, and others. On such issues as the use of hypermatic systems in the learning process, the creation of electronic manuals and textbooks, the characteristics of the use of practical software, and the use of imitation models, N.I.Tayloqov, R.R.Boqiyev, U.Y.Habakkukshev, F.M.Zokirova, V.V.Anisimov, M.Mamarajabov and M.H.Lutfillayev, O.B. Bogomolov conducted research work. On issues of improving the methodology of teaching physics in the countries of commonwealth of independent states, V.A.Orlov, N.M.Shaxmayev, N.A.Rodina, U.V.Usova, A.A.Pinsky, V.G.Razumovsky, Y.I.Dik, Y.K.Babansky, A.V.Perishkin, S.L.Rubinstein conducted research work. Research on methodological issues of teaching physics in developed foreign countries has been studied by M. Dougiamas, J. Piaget, A. Gartung, J.Kidd A.Bates, J.Daniel, and others.

While the above research has studied various aspects of teaching, the methodology for using innovative teaching technologies to teach biophysics in medical institutions has not been studied, as well as the creation and use of interactive methods for conducting practical and laboratory workshops.

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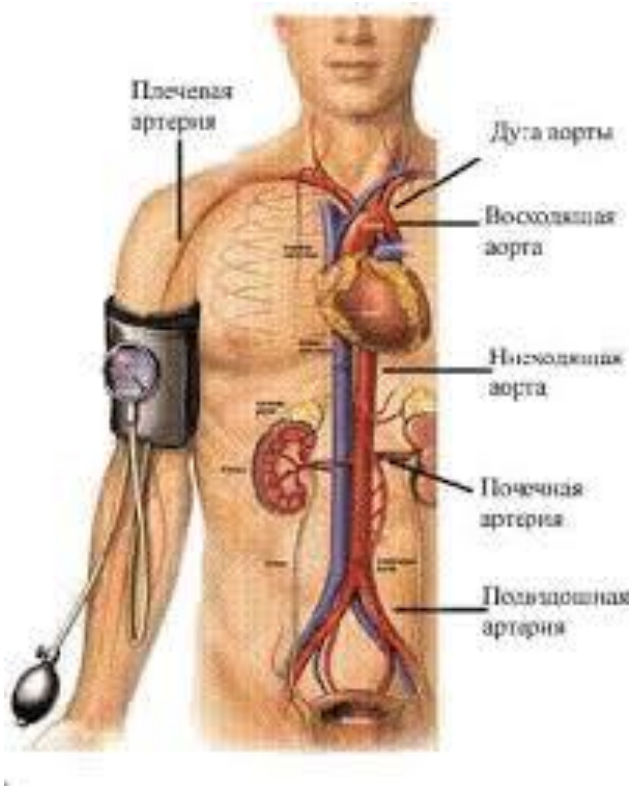

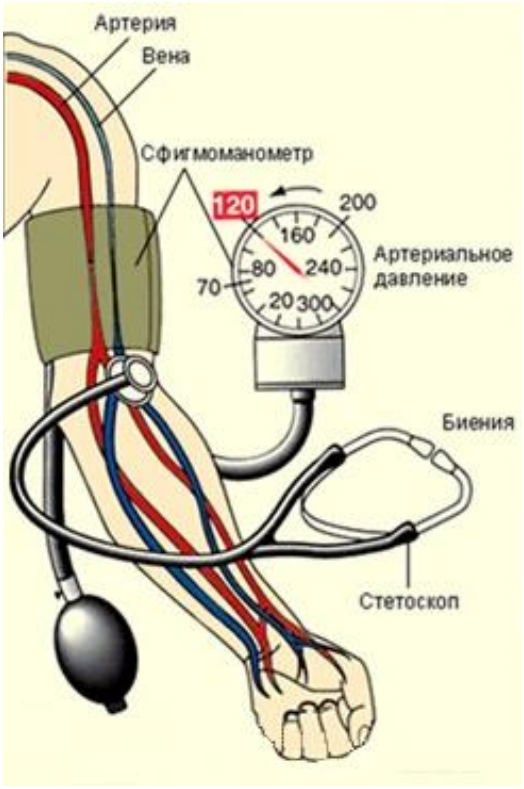

Purpose:
To study the physical basis for determining blood pressure. Studying the measurement of arterial pressure in N.Korotkov's method.

Required tools: (1) sfigmotonometer (2) phonendoscope.

1)

2)

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Theoretical Part

There are several ways to measure blood pressure in the vein. For example:

1. Directly into the blood vessel, the needle is measured by connecting the other side to the manometer with a rubber tube.
2. Enter a small catheter (thin polyethylene tube) into the major blood vessel and connect it to a manometer on the second end and measure the pressure.
3. Korotkov's method of measuring blood pressure is used in the clinic. Below are examples of electronic devices measuring blood pressure.

In this practical exercise, we learn to measure blood pressure by the N.Korotkov method. The blood pressure measured by this method is close to the blood pressure in the artery. Measurements are carried out at the top of the elbow of the shoulder artery. Manjeta (a rubber camera placed on the ghost is wrapped in that part. The intermolecular force from all these filaments is enough to support more than the gec weight—even when it is skittering upside down across a globe! The magnitude of this pressure is observed in the manometer. N. Korotkov's method is based on hearing the sounds produced when blood flows from an artery compressed with manjeta. When the artery is fully covered, no sounds can be heard. And when the air in the manjet is slowly reduced, the tones are heard. These tones are caused by a vibration of the artery and the walls of the artery. The first tone in the artery is called systolic pressure keladi.va correspond to the maximum value of pressure. Later, as the pressure in the manjet decreases, the noises multiply first, then decrease, and tones are heard again.

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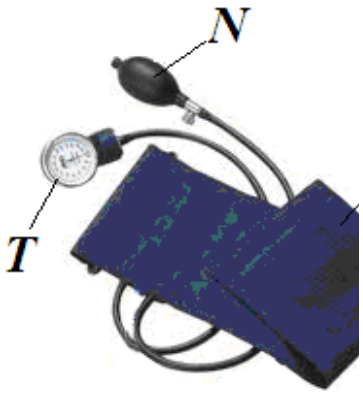
The hardness of the tones decreases and finally disappears. The pressure at that time is called diastolic pressure. The device measuring arerial pressure consists of 3 parts (Fig. 1).

sfigmomanometr



Sfigmotonometr

It consists of a T-simob manometer, i.e. a sfigmomanometer or a membrane manometer sfigmotonometer

M – manjeta
N - havo haydagich

Technical safety guidelines.

1. When working with a sfigmomanometer , it is forbidden to increase the pressure in the system by more than 260mm.sim.ust. This situation can push the mercury in the tool out through the filter (this does not happen in a sfigmotonometer).
2. Independent repair of the tool is prohibited.

VAZIFALAR

1. From the elbow to the upper part of the hand, the manjet is rotated and wrapped. and fastened with a hook.
2. Send air to the manjet using a circular air sender and 160 symbols in the tool. Top. create pressure that is equal. 180 mm
3. Fonendoscope membranasini tirsak o'ymasidagi arteriyaga qo'ying.

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4. Open the circular air-conditioning screw and slowly reduce the pressure (enough speed will be taken for size). At the same time, a sound is heard from a phonendoscope.
5. With the formation of the first tone (which passes through the blood compressed artery), this point of the manometer is determined, which is systolic pressure – P_s .
6. The last sound (tone) is set in the tool at the next pressure drop. This diastolic pressure is P_d . Enter the resulting P_s and P_{Dis} pressures into the table.
7. Separate the muffin to quickly release the remaining air from the manjet.
8. Tajribani uch marta takrorlang.

№	P_{Six}	ΔP_{Six}	P_{Dis}	ΔP_{Say}
1				
2				
3				
4				
5				

9. Write down the final result in the following view:

$$P_{S\_haq} = (\overline{P_s} \pm \overline{\Delta P_s}) mm.sim.ust$$

$$P_{D\_haq} = (\overline{P_d} \pm \overline{\Delta P_d}) mm.sim.ust$$

10. Nisbiy xatoliklarni hisoblang:

$$D_{pc} = \frac{\overline{\Delta P_s}}{P_s} \bullet 100\% \text{ vain } Dp_d = \frac{\overline{\Delta P_d}}{\overline{P_d}} \bullet 100\%.$$

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