ODESSA NATIONAL MEDICAL UNIVERSITY
FACULTY OF PHARMACY Department of Organization and Economics of Pharmacy

Commodity analysis of devices for diagnosis and treatment a person

Prepared by the senior teacher Stepanova O.A

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Medical products - any tools, apparatus, devices, devices, equipment, implants, materials or other products, including invasive ones and those intended not to achieve the main therapeutic goal in the human body, but to promote the functions of pharmacological, immunobiological or metabolic means in achieving this goal, as well as products used both individually and in combination with each other, including software tools necessary for their proper use, provided by the manufacturer, in order to ensure: prevention, diagnosis, treatment, monitoring or alleviation of the patient's condition in case of illness, injury, mutilation or as compensation for the lack of an organ or physical defect;

research, replacement or modification of the structure (anatomy) of organs, tissues or physiological processes;

control over the fertilization process.

Any equipment supplied in a set with medical products and intended to be combined with other external (additional) equipment should be considered as an integral part of such medical products;

DIAGNOSTIC DEVICES AND TOOLSplay an important role to determine the state of human health. Today, this is the largest group of devices and means that are used to perceive information (detection, measurement, registration, memorization) and process bioelectric, biomagnetic, thermal, optical, luminescent, biochemical, radiation signals.

Today, medical equipment is an indispensable attribute of the treatment process. Medical equipment is a set of technical devices that are used in medicine for the treatment, diagnosis, prevention of various diseases, for the manufacture of medicines and for carrying out sanitary and hygienic measures. Today, all medical equipment can be divided into several categories depending on its functional purpose. It:

- medical appliances;
- tools;
- devices;
- equipment;
- expendable substances

МЕДИЧНА ТЕХНІКА

- МЕДИЧНІ ІНСТРУМЕНТИ
- МЕДИЧНІ ПРИЛАДИ ТА АПАРАТИ
  - ЕЛЕКТРИЧНА (ЕЛЕКТРОНА) МЕДИЧНА АПАРАТУРА
    - АПАРАТИ ЩО ВИЯВЛЯЮТЬ ВПЛИВ
      - ТЕРАПЕВТИЧНІ АПАРАТИ
    - СПРИЙМАЮЧІ ПРИЛАДИ
      - ДІАГНОСТИЧНІ ПРИЛАДИ
  - МЕХАНІЧНА МЕДИЧНА АПАРАТУРА
- МЕДИЧНЕ УСТАТКУВАННЯ

Medical electronic equipment can be divided into two classes: medical devices and medical devices.

1. Medical device - technical device intended for diagnostic or therapeutic measurements (medical thermometer, electrocardiograph, etc.).

2.**A medical device is a technical device that allows to create an energetic effect (often dosed) of therapeutic, surgical or bactericidal properties (UHF therapy device, artificial bud device, etc.), as well as to ensure the preservation of a certain composition of some substances.**

Equipment - medical technical devices, with the help of which optimal conditions are created for the patient and medical workers for the implementation of medical and diagnostic measures.

Consumables - which are used to guarantee the operation of equipment and conduct procedures in medicine.

The requirements for medical devices, their marking, the conditions for their introduction into circulation and/or operation, as well as the conduct of the conformity assessment procedure are established in the technical regulations regarding: medical devices, medical devices for in vitro diagnostics and active medical devices that are implanted, approved by Cabinet resolutions of Ministers of Ukraine dated 02.10.2013 Nos. 753, 754, 755, respectively.

Law of Ukraine "About technical regulations and conformity assessment" dated 15.01.2015 No. 124-VIII

Technical regulations regarding medical products, approved by the resolution of the CMU from 02.10.2013 No. 753;

Technical regulations regarding medical products for in vitro diagnostics, approved by the resolution of the CMU from 02.10.2013 No. 754;

Technical regulations in relation to the active ones medical products which implanted approved by the resolution of the CMU from 02.10.2013 No. 755.

Medical devices for diagnostics

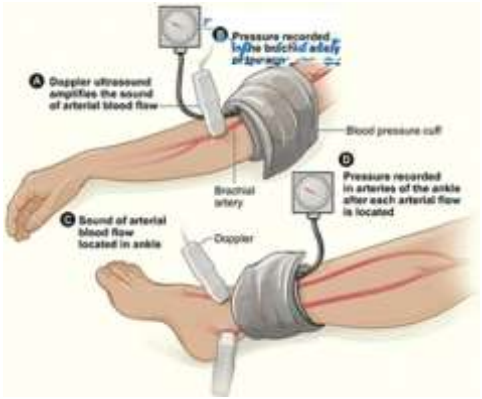
- glucometers;
- tonometers;
- thermometers;
- stethoscopes, phonendoscopes, stethophonendoscopes;
- electrocardiographs (stationary and portable);
- heart rate monitors

Devices for measuring pressure

Sphygmomanometers (tonometers) are medical diagnostic devices for measuring blood pressure

Traditionally, blood pressure is measured using two methods: invasive and non-invasive**. The invasive method is used only in hospital conditions during surgical intervention.**A catheter with a sensor is inserted into the patient's artery JSC control. However, this method has a number of disadvantages related to complications location of the sensor inside the human vessel.

Non-invasive blood pressure measurement is based on auscultatory and oscillometric technique.



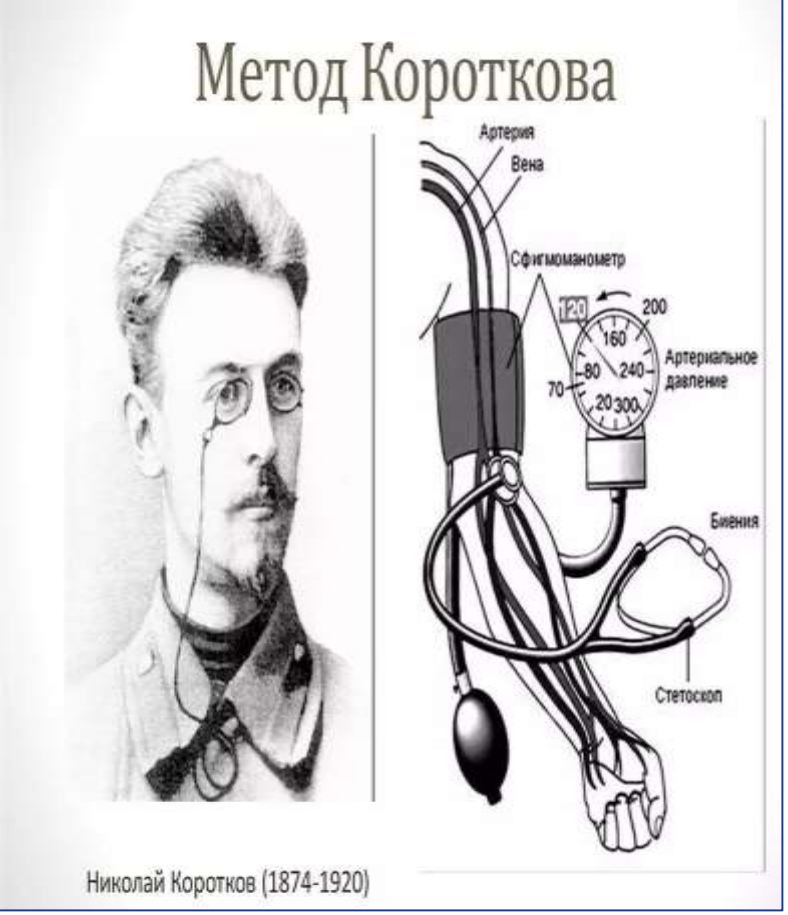
Classification of tonometers

According to the principle of operation

- manometric
  - mercury
  - membrane
- oscillometric.
  - automatic
  - semi-automatic

From the cuff attachment point

- shoulder
- wrist
- fingers



Method **Korotkova** - sound (auscultative) blood pressure measurement method proposed by the Russian surgeon M. S. Korotkov in 1905.

Currently, Korotkov's method is the only official one method non-invasive measurement arterial pressure, approved by the WHO in 1935. Pressure measurement is carried out using a tonometer (sphygmomanometer), and Korotkoff sounds from a pulsating compressed artery are listened to using a stethoscope.

Using this method requires practical skills, good hearing and vision. Therefore, the auscultatory method of BP measurement is gradually being replaced by the use of oscillometric devices both in clinical practice and in research settings.

Historically first kind sphygmomanometer–itmercury sphygmomanometer

The most accurate readings due to their simplicity: the pressure is measured by a column of mercury moving in a vertically positioned glass tube.

That's why, for tradition JSC is measured in millimeters of mercury, as it was originally, and not in modern pressure units of kilopascals (kPa).

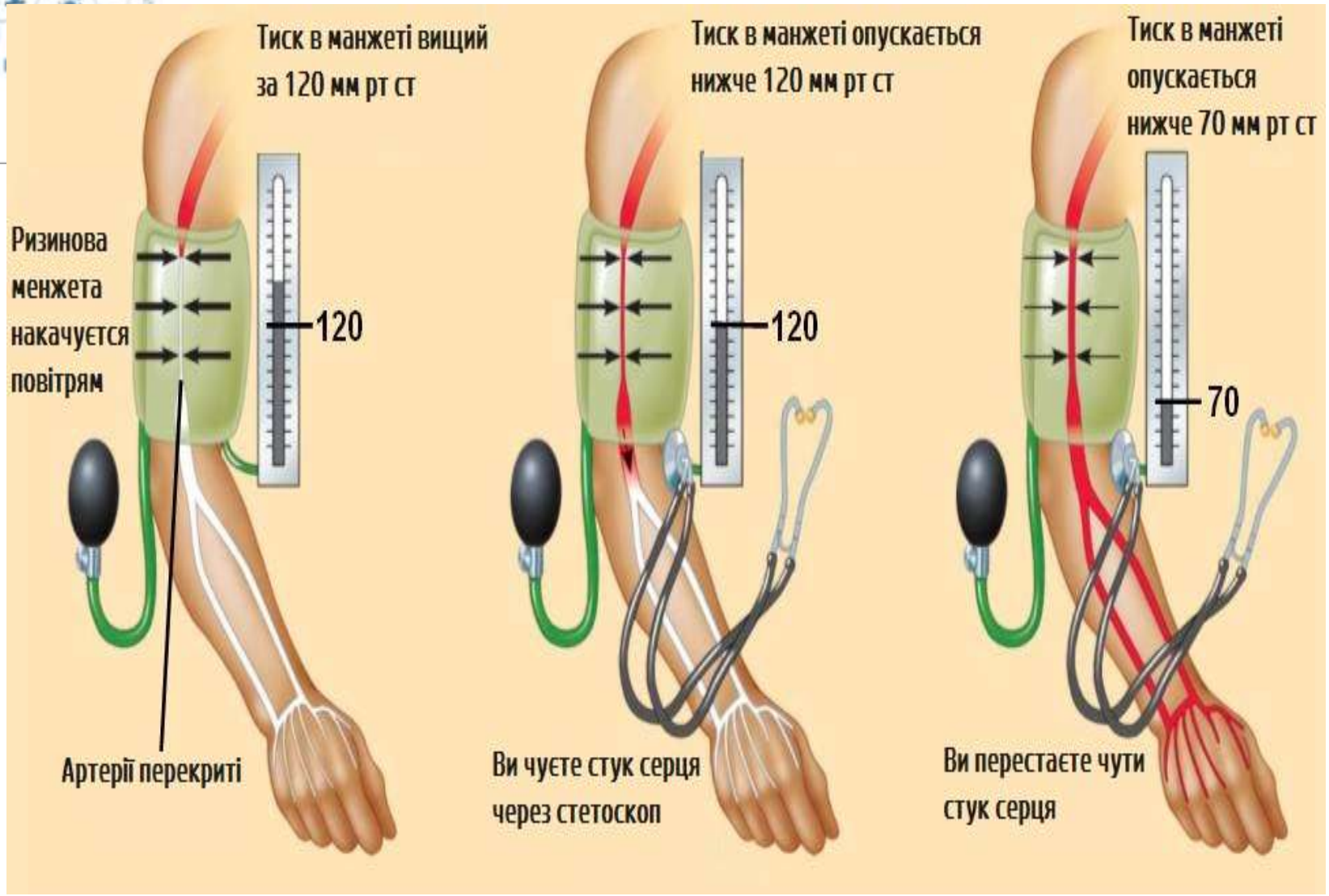
Currently, mercury tonometers are practically not used.

Mechanical - the next type in the history of development sphygmomanometer, which also called aneroid, that is not has liquids (as opposed to mercury).

Mercury and mechanical tonometers not themselves determine the level of blood pressure, they only show the level of air pressure in the cuff.
Blood pressure is determined by a person using Korotkov's sound method **stethoscope**.

During ***smooth descent**** air from the cuff on pulsation sounds appear and then disappear in a pinched artery, **called Korotkov tones.** Indications for **manometers** at the time of appearance at niv means level ***systolic blood pressure***, readings at the time of disappearance of at niv - level ***diastolic arterial pressure***.

Traditional (normal) technology injection and discharge of air



The technique of measuring blood pressure using a mechanical tonometer

Вимірювання артеріального тиску

- Накласти манжет на плече (2-3 см вище кубітальної ямки)
- За допомогою груші нагнітати повітря в манжет
- Фонендоскоп утримуємо на артерії
- Випустити рівномірно повітр'я з клапана
- Фіксуємо показники виникнення та зникнення звуків

Types of mechanical tonometers

1. With two auscultatory tubes. The air compressor (cylinder) is connected to the manometer through a cuff

With two auscultatory tubes. The air compressor (cylinder) is connected to the manometer directly

Tonometer with one auscultatory tube

Types of oscillometric tonometers

The oscillometric method is one of the successfully used non-invasive methods of measuring blood pressure. It is mainly used in semi-automatic and automatic devices for measuring pressure - tonometers, as well as devices for long-term registration of indicators - blood pressure monitors. It was first proposed by the French physiologist Marais in 1876, but for a long time the method was not in demand due to the complexity of the research.

Now this technique is very well studied, the obtained indicators are analyzed with the help of special programs and converted into the numbers that we see on the monitor. These programs are kept secret by the manufacturing companies and are constantly improved, trying to get rid of the main drawback of the oscillometric method - the dependence of the accuracy of the readings on the movement of the patient during the measurement.

Electronic tonometers by the method of pumping and emptying air from the cuff is classified on following types:

automatic and semi-automatic.

Automatic tonometers consist of a cuff, a digital display and a compressor that is inside the case.

Semi-automatic tonometers do not have a compressor, so air is inflated using a manual air blower. The tonometer display simultaneously calculates two or three indicators. In the first option, the diastolic and systolic pressure data are displayed on the screen first, and the pulse is displayed later (after a few seconds). On a monitor with three lines, a person can see all the data at the same time - pulse and pressure.

Semi-automatic tonometers. Such devices differ from mechanics in that the air is released automatically. The result is shown on the display, you don't need to listen to the tones yourself. In addition to blood pressure, such tonometers can read the pulse. Advantages: convenient and easy to use. Disadvantages: usually more expensive than mechanics, not suitable for weak people (if it is difficult to use a pear).

Automatic tonometers. Fully automatic tonometers practically do not require your participation in the measurement. It is enough to put on the cuff and press one button. Descent and inflation occur automatically. The display shows pulse and blood pressure. Pros: extremely easy to use, many models have additional functions (arrhythmia sensor, clock, memory, etc.). Cons: They are more expensive.

Arterial oscillography registers the change in tissue volume under the conditions of dosed compression and decompression of a blood vessel. Such a change in volume is associated with an increase in arterial blood filling of the tissue during a pulse impulse. Compression and decompression of the limb in which the artery passes is carried out with the help of a cuff.

The inner surface of the cuff becomes the sensor that registers the change in the volume of the limb, imperceptible to the eye. The change in pressure in the cuff is the main indicator analyzed by this method. Through the cable, the information is transmitted to the device, which processes it with the help of an analog-to-digital converter and a microprocessor with a program for calculating indicators and converts it into an image

– pressure numbers on the display.

Advantages and disadvantages of the oscillometric method

The main disadvantage of the oscillometric method is the need for immobility of the limb during measurement.

- the accuracy of the results depends on the person conducting the research;

+

- the ability to correctly measure weak tones, "endless" tone or "auscultative failure", when the usual sound characteristics are changed with the help of a phonendoscope;
- the ability to put the cuff on a thin layer of clothing;
- no need for special training.

Types of tonometers according to the type of cuff attachment

shoulder → wrist → fingers

The shoulder cuff type is considered standard and the most common. The size of the cuff is produced by each brand individually, but there are generally accepted standard sizes produced by most manufacturers, namely:

- standard the cuff has size 22-32 cm,
- universal - 22-42 cm,
- wrist -13.5-21.5,
- children's cuff 17-22 cm.

For example, the Microlife company has in its range cuffs of sizes 32-42 cm, 32-45 cm. The OMRON Intelli Wrap cuff has a 360 measurement zone around the arm, which makes it almost impossible to place the cuff incorrectly. A regular cuff has a small sensitive area where accurate measurements are possible, so it must be placed in a special position over the artery, if such a cuff is not positioned correctly, you will get inaccurate or incorrect results.

Correctly selected cuff size is a prerequisite for accurate blood pressure measurement!

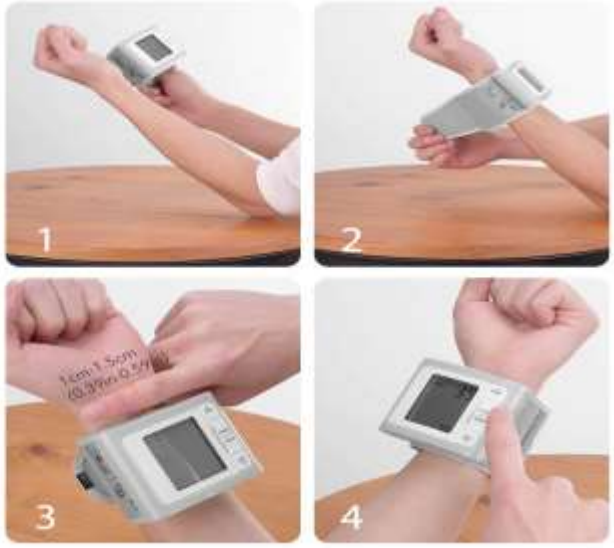
There are 8 sizes:

- for newborn babies (7-12 cm),
- for babies (11-19 cm)
- children's cuff (18-26 cm)
- for adults (25-40, 34-51)
- on the wrist (from 12.5 to 22.5 cm)
- on the thigh of an adult (40-66 cm).

Wrist devices are usually bought by young and active people (especially for use during training, as well as convenient for people with very full or swollen hands.
Wrist monitors have become popular due to their ease of use and ability to measure people with obesity and very large shoulders. Although they are more convenient, there are two important limitations of wrist devices, even those capable of accurately measuring BP.

First, BP can only be measured if the monitor sensor is directly above the radial artery, and there is a tendency for the device not to maintain a proper position on the wrist. Bending the wrist can increase the problem of obtaining the optimal position. Secondly, accurate readings can be obtained only if the wrist is at the level of the heart; readings will be too high or too low if the wrist is below or above heart level, respectively.

Thus, although wrist sphygmomanometers are convenient for the consumer, they present many problems with accuracy, and serious reservations have been raised against them.
use in routine clinical practice unless measurement on the shoulder is not possible.



Wrist devices can be used to measure blood pressure ason the LEFT and on the RIGHT hands.

When measuring, the wrist MUST be present LOCATED AT THE LEVEL OF THE HEART.

The blood pressure in the arm falls when it is raised, and increases when it is lowered.

Holding the hand at different levels relative to the heart gives different pressure readings.

So that the hand is at the same level, lean it against the chest, touching the index finger with the finger of one point on the shoulder.

Then the device is located at the same level with respect to the heart.

Finger tonometers

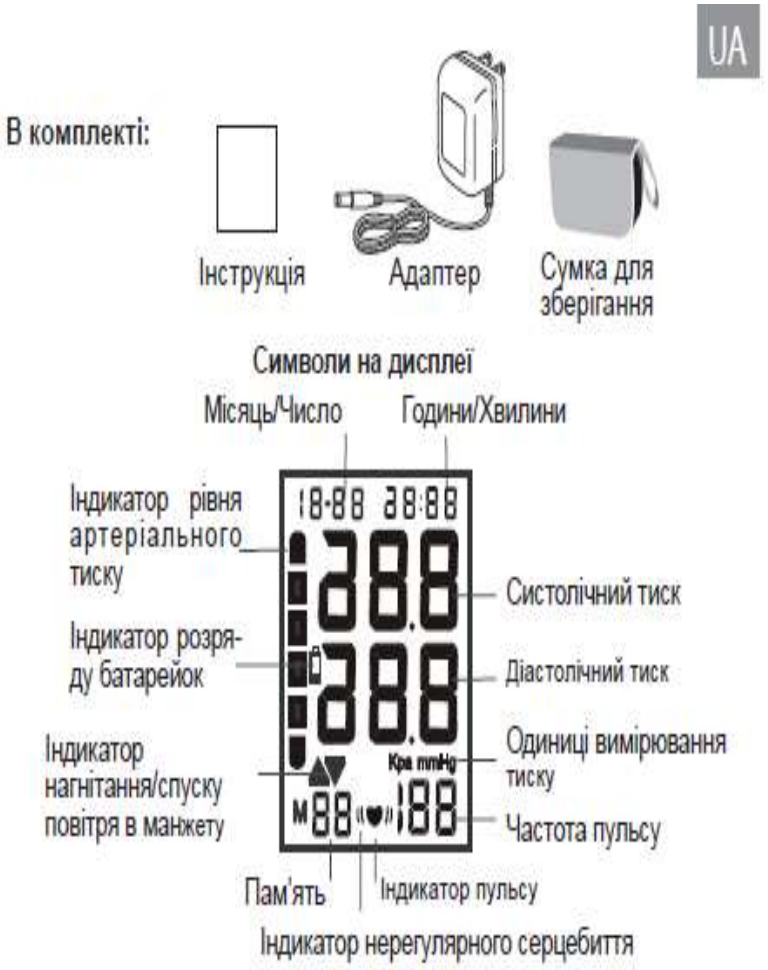
Arterial blood pressure on the finger is measured using the volume-clamp method. A cuff is placed around the finger and inflated to a pressure equal to the pressure in the artery until the artery contracts and the transmural pressure is nearly zero. The pressure in the cuff is dynamically regulated by a servomechanism system that monitors the size of the finger arteries using photoplethysmography. Several systems have been validated in clinical trials. However, the reproducibility of the cuff method depends on several factors, including the application of the cuff, the position of the finger relative to the heart, and background noise. Finger BP monitors often give readings that are lower than those obtained in health care providers' offices.

Therefore, BP values obtained by fingertip monitoring should not be used to diagnose hypertension or to treat patients

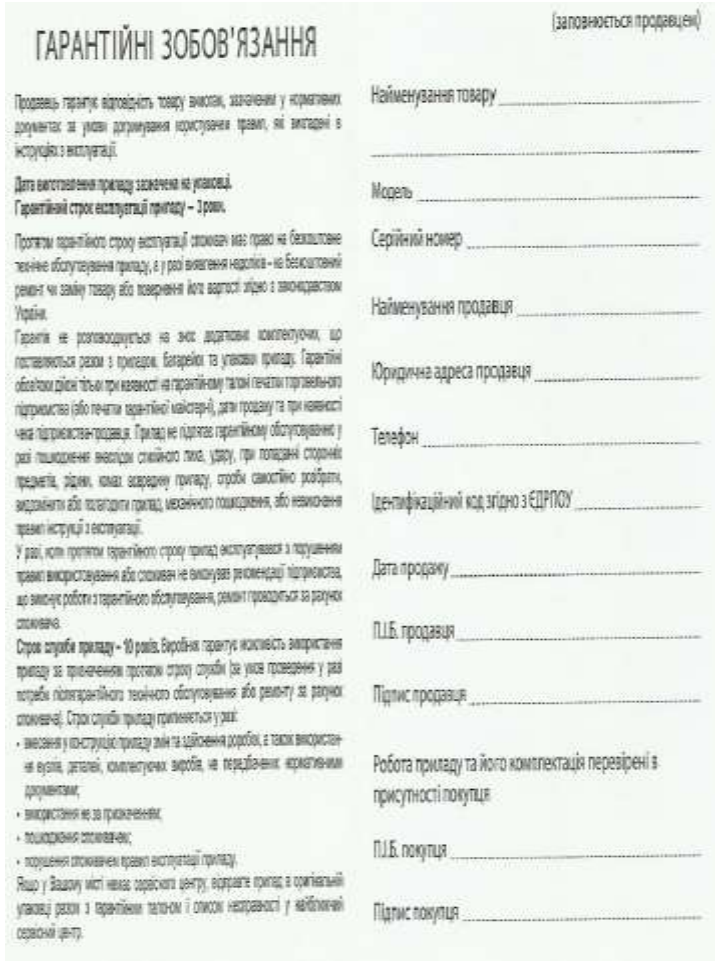
Technical characteristics and completeness of the tonometer

Метод вимірювання	Осциллометричний
Індикація	Цифровий РК-дисплей
Діапазон вимірювань:	Тиск: 30 - 280 мм рт. ст. Пульс: 40 - 199 уд /хв.
Точність вимірювання:	Тиск: ± 3 мм рт.ст. Пульс: ± 5%
Пам'ять:	90 вимірювань
Джерело живлення:	Батарейки 4x1.5V (LR6 or AA)
Діапазон робочих температур	+5 - +40°C, відносна вологість: 30% - 80%
Умови зберігання:	-20 - +55°C, відносна вологість: 10% - 93%
Розміри приладу:	130мм (довжина) x 96мм (ширина) x 60мм (висота) мм
Вага:	380 г без батарейок
Класифікація	Тип BF
Розмір манжети	22 - 32 см

UA



At buyers tonometer in pharmacies issue a warranty card (in which addresses of service centers and telephone numbers of hotlines are indicated).



ГАРАНТІЙНІ ЗОБОВ'ЯЗАННЯ

(заповнюється продавцем)

Продавець гарантує відповідність товару вимогам, зазначеним у нормативних документах за умови дотримання користувачем правил, які викладені в інструкції з експлуатації.

Дата виготовлення приладу зазначена на упаковці.
Гарантійний строк експлуатації приладу – 3 роки.

Протягом гарантійного строку експлуатації споживач має право на безкоштовне технічне обслуговування приладу, а у разі виявлення недоліків – на безкоштовний ремонт чи заміну товару або повернення його вартості згідно з законодавством України.

Гарантія не розповсюджується на інші додаткові комплектуючі, що поставляються разом з приладом, батарейки та упаковку приладу. Гарантійні обов'язки дійсні тільки при наявності на гарантійному талоні печатки торговельного підприємства (або печатки гарантійної майстерні), дати продажу та при наявності чека підприємства-продавця. Прилад не підлягає гарантійному обслуговуванню у разі пошкодження внаслідок стійкого пилу, удару, при попаданні сторонніх предметів, рідини, комах, аварійному приладу, спроби самостійно розібрати, видозмінити або полагодити прилад, механічного пошкодження, або невиконання правил інструкції з експлуатації.

У разі, коли протягом гарантійного строку прилад експлуатувався з порушенням правил використовування або споживач не виконував рекомендації підприємства, що виконує роботи з гарантійного обслуговування, ремонт проводиться за рахунок споживача.

Строк служби приладу - 10 років. Виробник гарантує можливість використання приладу за призначенням протягом строку служби (за умов проведення у разі потреби післягарантійного технічного обслуговування або ремонту за рахунок споживача). Строк служби приладу припиняється у разі:

- внесення у конструкцію приладу змін та здійснення доробок, а також використання вузлів, деталей, комплектуючих виробів, не передбачених нормативними документами;
- використання не за призначенням;
- пошкодження споживачем;
- порушення споживачем правил експлуатації приладу.

Якщо у Вашому місті немає сервісного центру, відправте прилад в оригінальній упаковці разом з гарантійним талоном і описом несправності у найближчий сервісний цен-тр.

Найменування товару _____

_____

Модель _____

Серійний номер _____

Найменування продавця _____

Юридична адреса продавця _____

Телефон _____

Ідентифікаційний код згідно з ЄДРПОУ _____

Дата продажу _____

П.І.Б. продавця _____

Підпис продавця _____

Робота приладу та його комплектація перевірені в присутності покупця

П.І.Б. покупця _____

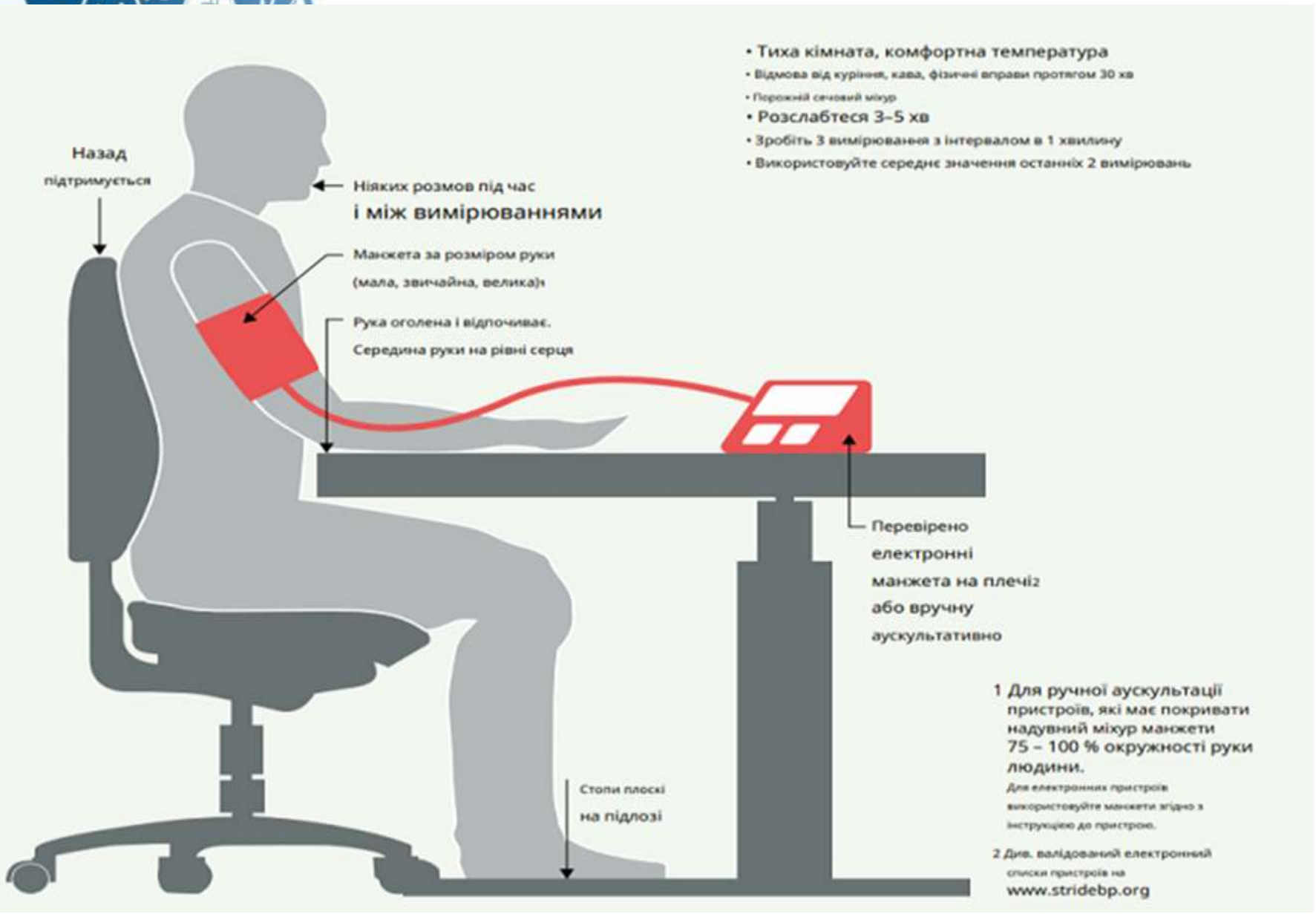
Підпис покупця _____

Товаросупроводжувальна документація:

No documents for the device:

manufacturer's passport
(in the national language);
quality certificate;
certificate of Compliance; act of metrological examination;
methodological recommendations for blood pressure measurement (instructions for the user).

Рекомендації щодо офісного вимірювання АТ



Recommendations for homework

blood pressure measurement

руку пацієнта слід підтримувати, наприклад, спираючись на стіл,

манжету слід розташувати безпосередньо над ліктьовою ямкою,

центр манжетного міхура повинен бути розміщений над артерією плеча.

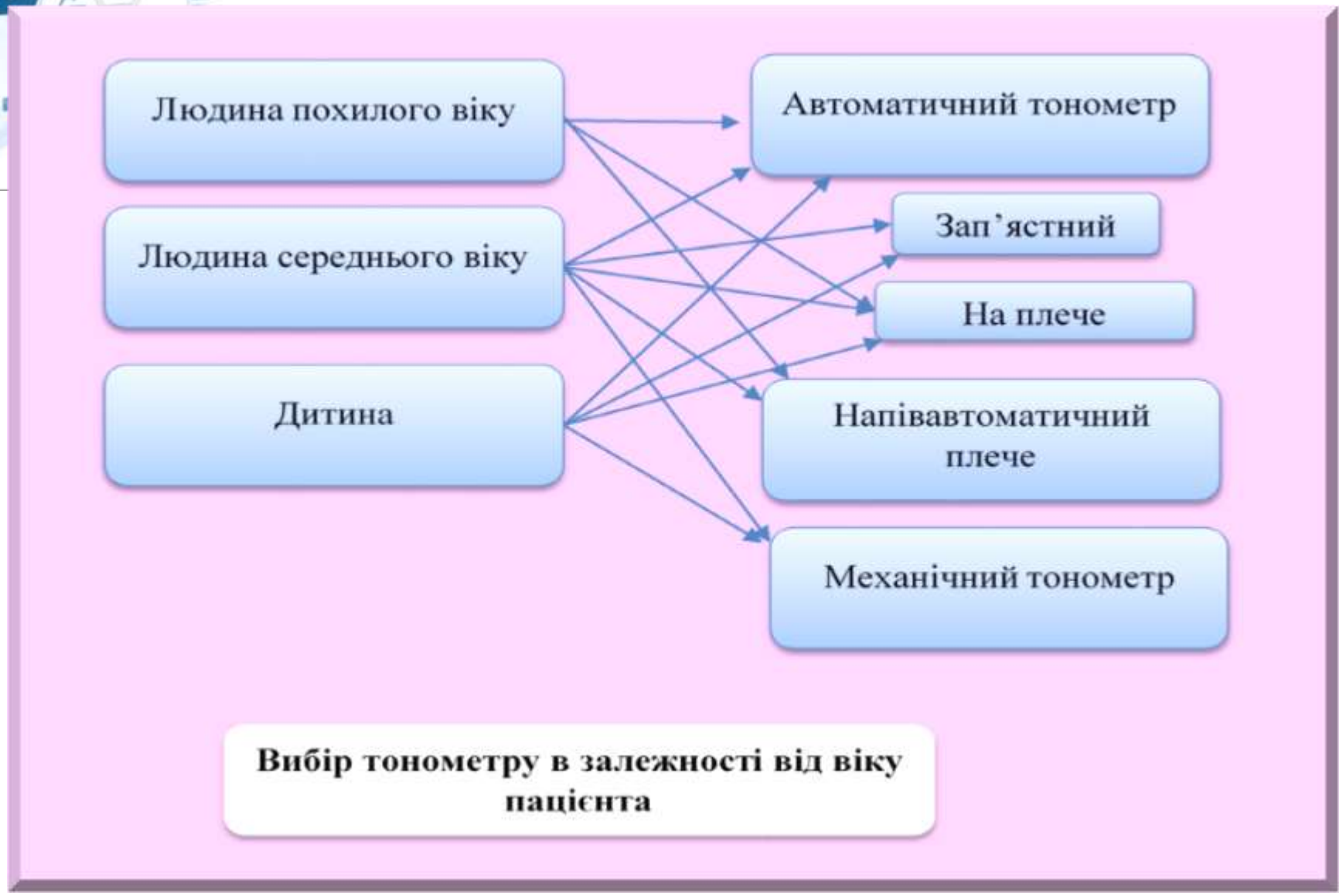
Проводити два вимірювання з інтервалом 1-2 хв

Бажаний період ДМАТ становить 7 днів із вимірюванням о 2:00 і 14:00 щодня

Мінімальний період у 3 дні з показаннями о 2:00 і 14:00 також достатньо .

Після того, як АТ буде під контролем, доцільно вимірювати від 1 до 3+ днів

Pharmaceutical assistance to the consumer of AZ when releasing tonometers.



Вибір тонометру в залежності від віку пацієнта

Pharmaceutical assistance to the consumer of AZ at release of tonometers.

Recommendations for a pharmacy specialist

Provide information about diagnosis and treatment hypertensive disease

Familiarize with threatening symptoms of hypertension

Provide information about the right choice device

Provide instructions on how patients can self-measure BP (do a test blood pressure measurement)

Report that individual BP indicators may differ (high and low) during monitoring period

Provide information about prevention disease

Stethophone endoscope

intended for listening to Korotkov's tones
when measuring blood pressure by the auscultatory method.

Stethoscope - the first version of the device for listening to body sounds. A bell-shaped funnel was used to produce sound.

Obstetric *(Pinard's stethoscope, fetoscope)*— for listening to the heartbeat of the fetus in a pregnant woman. It is a short rigid tube in the form of a two-ended bell (like the first stethoscopes).

- Single-sided stethoscopes: obstetric, pediatric, adult.
- Double-sided stethoscopes: cardiac, neonatal, pediatric,

Phonendoscope

Phonendoscope (from the Greek. phone – sound, endon – inside, skopeo - I look, examine) - a medical device used for listening to heart sounds, breathing noises and other sounds that occur in the body (that is, for the same purposes as a stethoscope).

The phonendoscope appeared later (the term was proposed by M. S. Korotkov). In the phonendoscope, the sound-receiving funnel is covered with a membrane - a resonator, to amplify a certain frequency spectrum.

The phonendoscope is only binaural (consists of two auscultatory tubes, the ends of which are inserted into the ears) and differs from the stethoscope in that the sound-receiving funnel is covered with a hard membrane to amplify the sounds heard.

What is the difference between a stethoscope and a stethoscope?

Mainly, high-frequency sounds (lungs, blood vessels) pass through the phonendoscope membrane, and low-frequency sounds (heart, intestines) pass through the funnel: the bottoms are, as it were, muffled
high frequency oscillations. The membrane of the stethoscope significantly reduces the volume of all sound and the bass becomes very quiet. At the same time, high frequencies become clearly audible. As we can see the difference between a stethoscope and a stethoscope in terms of application: Membrane
with a phonendoscope we listen to the high tones of the lungs and blood vessels, and with the bell of a stethoscope – low frequencies of the heart or intestines.

Often, the device combines a funnel and a membrane - a resonator-this is a stethoscope.

In most stethophone endoscopes, switching between the funnel and the membrane is carried out by axial rotation of the head.

Second system: KaWe Planet- longitudinal rotation of the head

Trilateral stethophone endoscopes allow highlight important for diagnostics sounds and to listen cardiac, pulmonary and vesicular noises.

In general, phonendoscopes and stethophone endoscopes are called the term "stethoscope".

The main components of a stethoscope:

The stethophone endoscope consists of a head: on one side a "bell" (5), and on the other - a membrane (6), a sound-conducting tube (4), a tee (3), a headband spring (a metal plate connecting the headband tubes i.), headband tubes (2) with oils (1).

The acoustic data of the stethoscope depend on the internal shape and design of the head used by manufacturers.

The head of the stethoscope

The most common type is ***stethophone endoscope***: "funnel" on one side, membrane on the other.

The acoustic data of the stethoscope depend on the internal shape and design of the head, which are used by manufacturers using their own know-how. Often, manufacturers voice the characteristics in numbers or provide an acoustic graph. The smoother the graph and the higher the number in db (decibels), the more noise you will hear and be able to differentiate without straining your hearing.

There is a membrane on the head of the phonendoscope.

In addition to sensitivity, membranes are: ***flat, convex,***

convex in the center (type "circle by water").

Types of stethoscope heads

Flat phonendoscope- thanks to the form "flounder", the head is easy to slip under the cuff of the tonometer. Or during assistance fasten strip adhesive plaster on the patient's body.

A stethoscope with a "floating" membrane- by the edges of the head have small grooves, thanks to which the membrane does not have a rigid attachment, but "floats", which made it possible to obtain high volume in almost all frequency ranges.

A special fixation system allows the membrane not only to bend under the influence of sound waves, but also to resonate, resulting in a significant increase in volume. The membrane is composite, if you look at the lumen, you can see its "fabric" structure.

Rappaport's stethoscope is a universal device for auscultation of children and adults. It has a massive double-sided head with the possibility of installing different nozzles: two convex membranes and three watering cans of different diameters. Also, a distinctive feature is the presence of two independent sound channels, which contributes to good sound transmission. This is one of the heaviest stethoscopes.

Thermometer- a medical device used to measure body temperature

Types of thermometers:

- liquid (mercury, alcohol, etc.);
- electronic;
- nipple thermometer (a subspecies of electronic T.);
- infrared;
- ear (subspecies of infrared T.);
- frontal, high (subspecies of infrared T.);
- thermosensitive strips.

Classification of medical devices for measurement body temperature

Thermometers maximum medical

- Oval
- Rectangular

Thermometers are digital (electronic, digital)

- Waterproof no (with flexible tip)
- Not waterproof (with solid tip)
- Thermo-meter-nipple

- Thermal indicators (temperature tests)
- Infra-red thermometer

- **Thermometry** — method measurement human body temperature using a mercury, alcohol or electronic thermometer.
- The maximum medical thermometer, which is most often used to measure body temperature, is a glass device into which a scale and a capillary are soldered, which has a reservoir at the end filled with mercury or tinted alcohol. Mercury, heating up and increasing in volume, rises through the capillary to a certain mark on the scale. The maximum height of the rise of the mercury column determines the name of the thermometer - maximum. Mercury cannot descend into the tank on its own - this is prevented by the sharp narrowing of the capillary in the lower part. Return the mercury to the tank by shaking the thermometer. The scale is designed to determine body temperature from 34 to 42 °C with an accuracy of 0.1 °C

The main advantages of this type of thermometers:

high measurement accuracy: up to 0.05 - 0.1 °C,

long service life (with proper handling and storage - more than 15-20 years),

low cost.

With the help of a mercury thermometer, you can determine the temperature under the armpit (axillary), orally, rectally.

Disadvantages of mercury thermometers

fragile body material;

toxicity of the filler (mercury), capable of damage to the thermometer cause damage to the patient's health and pollute for a long time premises are toxic vapors;

low measurement speed (5–10 minutes);

difficulty reading readings in insufficient lighting or poor eyesight;

Difficulty measuring temperature in young children who do not want to be quiet sit for as long as necessary time

Electronic thermometeris a plastic tank, at the narrow end of which there is a sensor. On the tank there is a display and a button to turn on / off the thermometer.

At the wide end of the thermometer is the cover of the battery compartment.

You can measure the temperature with such a thermometer in the armpit, orally, rectally. After pressing the power button, a beep will sound. Symbols appear on the display - the device is being calibrated.

After the Lo symbol appears, the thermometer is ready to work. After a minute or a second (depending on the brand of the device), the result of the measurement appears, which is recorded and turned off. The thermometer has an electronic memory, which is convenient for monitoring temperature dynamics.

Ear thermometer

The temperature of the tympanic membrane

membrane is measured infrared sensor. The tip of the thermometer is simply inserted into the ear

the channel, and the result

measurement is provided in just one second!

Carefully designed ear thermometers measure with a very high degree of accuracy

Advantages of infrared non-contact thermometers:

- high degree of hygiene, since if the device did not touch the patient, then there is practically no need to wash and disinfect it;
- measurement of body temperature without contact with the skin, even in newborn babies, due to a sensitive element that reacts to infrared radiation of the body and reads information, displaying the results of measurements on an LCD display.
- measurement speed (up to 30 seconds);
- the set includes removable tips that are easy to wash and disinfect, and additional accessories are also sold;
- maximum safety: absence of toxic elements (mercury), as well as fragile glass;
- the non-contact measurement method allows you to determine also the temperature of water, air, parameters of the nutritional mixture for babies, etc.;
- high functionality.