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Federal State Budgetary Educational Institution of Higher Education “North Ossetian State Medical Academy” of the Ministry of Health of the Russian Federation

(FSBEI HE SOGMA, Ministry of Health of Russia)

Department of Internal Medicine No. 1

METHODOLOGICAL MATERIALS

practice Practice in obtaining professional skills and professional experience in the positions of nursing staff (ward nurse assistant) of the main professional educational program of higher education - specialty programs in the specialty 31.05.01 General Medicine, approved 24.05.2023.

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Methodological materials are intended for training 2nd year students (4th semester) of the medical faculty of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia in clinical (industrial) practice "Practice in obtaining professional skills and professional experience in positions of nursing staff (ward nurse assistant)"

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Contents:pages

Subje No. 1
ct
Organization of work of medical institutions. **4 - 21**

Topic No. 2.
Therapeutic department of the hospital. **21 – 45**

Topic No. 3.
Transportation of patients. **45 - 53**

Topic No. 4.
Personal hygiene of the patient. **53 - 81**

Topic No. 5.
Nutrition of the sick. **81- 108**

Topic No. 6.
The simplest physical procedures. **108- 123**

Topic No. 7.
The simplest manipulations. **123 - 137**

Topic No. 8.
Research methods. **137- 149**

Topic No. 9.
Methods of drug administration. **149 – 175**

Topic No. 10.
Resuscitation measures. **175 - 195**

Test tasks. Situational tasks. Answers to test tasks **195 - 209**

Topic No. 1

Organization of work of medical institutions.

A. Issues of medical ethics and deontology.
B. Reception and registration of patients in the emergency room.
B. Sanitary and epidemiologicalfoster care mode
D. Sanitary and hygienic treatment of incoming patients.

The student must have an understanding of:

1. Medical ethics and deontology.
2. The structure of the reception department
3. Rules for the admission and hospitalization of patients in a medical institution
4. Arrangement and equipment of the reception department
5. Sanitary and epidemiological regime of the admission department
6. Practical skills in performing a hygienic bath.

The student must have:

1. Techniques for communicating with patients, observing the principles of medical ethics and deontology.
2. Rules for filling out the basic documentation of the admissions department.
3. Technique for filling out emergency notifications for patients with infectious diseases, food poisoning, and head lice.
4. Technique for sanitizing the reception area.
5. Rules for hygienic treatment of an incoming patient.
6. Technique for treating a patient with pediculosis.

Medical ethics(Latin ethika - the study of morality, morality) - a set of ethical standards and principles of behavior of a medical worker in the performance of his professional duties. The term “deontology” (Greek deon, deontos – duty, due, proper; logos – teaching) was widely used in Russian literature of the last century. Medical deontology was often identified with medical ethics, and this concept was also interpreted as the practical implementation of the theoretical content of medical ethics. Typically, medical deontology was understood as the doctrine of the principles of behavior of medical workers, ensuring increased effectiveness of treatment and elimination of the harmful consequences of incomplete medical knowledge and incorrect actions. Currently,

Speaking about medical deontology, we mean one of the areas of biomedical ethics that studies and determines the solution to various problems of interpersonal relationships, such as:

1) Medical worker – patient;
2) Medical worker - relatives of the patient;
3) Medical worker – medical worker.

The main issues of medical deontology are: the relationship between the doctor and the patient, iatrogeny (or diseases associated with healing), the ethics of treating seriously and hopelessly ill patients, including issues of euthanasia, healing in the age of scientific and technological revolution, medical confidentiality, self-improvement. education and collegiality of doctors. Professional medical ethics is a specific manifestation of a person's general ethics in the special conditions of medical activity, sensitivity of character, attention, knowledge, education, culture, collegiality. Any medical worker should have such qualities as compassion, kindness, sensitivity and responsiveness, caring and attentive attitude towards the patient. Of particular importance in the medical profession are such universal norms of communication as respect and attention to the words of the interlocutor, demonstration of interest in the content of the conversation and the patient's opinion, correct and accessible construction of speech when communicating with patients. The neat appearance of the medical staff is also important: a clean gown and cap, neat replacement shoes, well-groomed hands with short-cut nails. It is always necessary to remember that it is unacceptable for a physician to use perfumes and cosmetics without measure. Strong and pungent odors can cause undesirable reactions: from nervous irritation of the patient and various manifestations of allergies to an acute attack of bronchial asthma.

Appearance of a nurse.

Deontological issues of patient care also include the need to maintain medical confidentiality. Medical workers do not have the right to disclose information about a patient of a deeply personal, intimate nature. But this requirement does not apply to situations that pose a danger to other people (infectious, sexually transmitted diseases, poisoning, etc.). In these cases, health workers are required to immediately inform the relevant organizations about the information received.

Compliance by a medical worker with moral and ethical standards involves not only fulfilling his duties, but also bearing responsibility for evasion or unprofessional performance of his duties.

The admissions department is a part of the hospital intended for registration, reception, examination, sanitary and hygienic processing of patients arriving for treatment and provision of emergency care.

Приёмный покой больница Белинсон Израиль

Приёмный покой ЦРБ. г. Мытищи.

The reception department consists of a waiting room, a registration desk, examination rooms (one or more), a sanitary inspection room, a treatment room, a dressing room, and toilets. Large hospitals have a small operating room, a trauma room, an X-ray room, and a laboratory. At the reception department

There should also be an isolation ward to accommodate patients suspected of having an infectious disease.

The functions of the reception department include:

1. renderingemergency assistance and anti-shock therapy;
2. patient registration;
3. primarydiagnostics;
4. sorting and screening of infectious and non-core patients;
5. taking tests;
6. sanitary treatment (full or partial);
7. organizationtransporting the patient to the department.

The work of the reception department proceeds in strict sequence:

1. patient registration;
2. medical examination;
3. sanitary and hygienic treatment.

The premises must be placed in the same sequence.

Waiting hallintended for patients who do not need bed rest, for accompanying persons and relatives. There should be a table and a sufficient number of chairs. On the walls are posted information about the operating hours of medical departments, hours of conversation with the attending physician, and a list of products allowed to be given to patients.

Nearby there is a registry office (here incoming patients are registered and the necessary documentation is completed) and an information desk (Fig. 1).

Rice. 1.Tomsk Regional Clinical Hospital. Emergency room.

In the examination room, the doctor examines patients, makes a preliminary diagnosis, and determines the type of sanitation. Thermometry and sometimes other studies (for example, electrocardiography) are also carried out here. In those cases when the patient is delivered in a serious or unconscious condition, they begin to provide assistance to him without wasting time on registration and only after that they collect the necessary information from the patient himself, relatives or persons accompanying him.

Treatment room, dressing room, small operating roomdesigned to provide emergency assistance.

For the sanitary treatment of patients who are admitted to the hospital, the admission department has a sanitary inspection room ((bath, shower, changing room).

The reception department should be provided with the following equipment: stretchers, gurneys, linen, clothes for patients.

All medical documentation is drawn up by the nurse of the admission department after the patient has been examined by a doctor and the doctor has decided on the issue of hospitalization of the patient in this medical institution.

1. The nurse registers patients in the “Logbook for registering the admission of patients and refusals of hospitalization” (form 001/u), checking the passport data and the data on the referral for hospitalization:

- last name, first name, patronymic of the patient
- year of birth
- home address
- where and by whom the patient was delivered (type of hospitalization)
- diagnosis of the referring institution

In case of refusal of hospitalization, the reason for the refusal and the measures taken (outpatient care provided, referred to another hospital) are indicated.

2. Fills out the passport part “Medical record of an inpatient” (form 003/and refusals), repeating the entries made in the “Logbook of admission of patients and refusals of hospitalization.” Information about the place of work and profession, telephone number: home or relatives (friends), if the patient is a lonely person, are also entered. Information about existing disability and indications for hospitalization are noted (emergency, planned, transfer from another hospital, “gravity”). In case of emergency hospitalization, the time after which

the patient was transported by ambulance.

3. The nurse fills out the passport part and the left side of the “Statistical card of a person leaving the hospital” (form 066/y)
4. Draws up an act for money, valuables, clothing and personal belongings of patients accepted for storage, filling out a receipt - a statement of the established procedure. Accepted documents and valuables of the patient are transferred to the hospital administration and stored there in a safe.
5. After examining the doctor on duty and his notes, the nurse completes the registration in the “Register of admissions of patients and refusals of hospitalization” (form 003/y).

   Enters into the journal:

- diagnosis by the emergency department doctor upon admission
- name of the department where the patient was sent.

6. Provides first aid to patients, carries out the orders of the doctor on duty, and, if necessary, calls specialist doctors and laboratory assistants, facilitating their work.

7. Carefully examines the patient’s hairy parts and head to identify head lice, and the skin and mucous membranes to identify elements of the rash; carries out thermometry, measures blood pressure, noting the results in the medical history.
8. Upon admission of the patient:

- ✓ under the age of 16 unaccompanied by adult relatives;
- ✓ patient in an unconscious state, which directly threatens the patient’s life, as well as in the event of his death in the emergency department: The nurse is obliged to give a telephone message to his relatives (if the telephone number is known), making an entry in "Telephonogram Journal". In addition to these cases, a telephone message is sent to relatives if the patient is transferred from the emergency department to another hospital.

In case of a criminal nature of the injury, in case of damage received as a result of an accident, and when teenagers under 16 years of age are admitted due to accidents, a telephone message is given to the internal affairs bodies (the duty officer at the Internal Affairs Directorate). the nurse gives a telephone message upon admission of an unknown patient, indicating his characteristics: gender, approximate age, hair color, height, physique; special features - birthmarks, scars and scars; his clothes are described. Writes down the contents of the message, the date, time of its transmission and by whom the telephone message was received at the police station in the “Telephone Message Log”.

9. Organizes and controlscarrying out sanitary treatment of patients.
10. Organizes and controls the transportation of patients to departments.
11. Maintains the sanitary and epidemiological regime of the reception department.

Cleaning of corridors and utility rooms is carried out daily at certain hours. In the waiting room, reception area, and examination room, doors, panels, furniture, and handles are wiped with a damp cloth, finishing the cleaning by washing the floor with a clarified bleach solution. Toilets are cleaned as needed and well ventilated to prevent odors. Washbasins, urinals and toilets are washed every day with a 2% soda solution, and brown stains are wiped with acetic acid. When cleaning toilet rooms, nurses should wear rubber gloves; after cleaning, wash their hands with soap and a disinfectant 2% chloramine solution, which should be in every toilet room.

Sanitary and hygienic treatment of a patient in the emergency departmentcarried out in the sanitary inspection room of the admission department and includes:

1. disinfestation – destruction of harmful insects (lice)
2. hygienic bath, shower or wiping of the patient
3. dressing the patient in clean hospital linen and clothes.

The sanitary inspection room of the emergency department usually consists of an examination room, a changing room, a bath-shower room and a room where patients dress. It is possible to combine some of these rooms (for example, an examination room and a dressing room). In the examination room, the patient is undressed and prepared for a bath.

There is a couch, a table, chairs, a thermometer on the wall (the air temperature is not lower than 25o C). Fig 2.

Fig.2.Examination of the patient in the emergency room.

Before starting sanitary and hygienic treatment, the junior nurse in the admission department should carefully examine the patient's hairy parts to identify pediculosis (lice) (Fig. 3).

Fig.3.Head treatment for pediculosis

If there is lice infestation, the linen is pre-treated with a disinfectant solution and sent to a special disinfection room. processing. Bags containing such clothing should have the appropriate inscription "Pediculosis", and the patient must undergo special treatment.

Practical skills.

Carrying out treatment of a patient with pediculosis.

Goal: carry out destructionarthropod insects.

Equipment:protective clothing for medical personnel-medical gown,headband, mask,oilcloth apron, rubber gloves. Disinsecticidal solution or shampoo, vinegar (6% solution, heated to 30 °C), alcohol (70%), polyethylene scarf and diaper,oilcloth,towel, white paper,
fine comb,scissors. Hair burning basin and matches.Oilcloth bag.

Note:There are several types of pest controlAndcide solutions:20% benzine emulsion solutionlbenzoate; Withspecial shampoos (for example,"Elko-insect"), special lotions (for example,"Nittifor").

Order of conductprocedures:

1. Prepare for sanitary-hygienic treatment: decompose necessaryXOdAndmequipment and put on protective clothingdI'm waiting.
2. Place an oilcloth on a stool (couch), sit the patient on it and cover it withatshoulders with a plastic wrap,
3. PRand the need to cut hair over the prepared basin.
4. Treat hair with a disinfectant solutionm, tie your headPpolyethylene scarf and a towel on top, leaving onOlimited time (the time of wetting the hair depends on the typedand the solution used - see specific instructions).
5. Untie your head and rinse with warm running water, then with shampoo.
6. Dry your hair with a towel and treat your hair with heated 6% rAstVO-RohTosulfuric acid.
7. Tie your head again with a plastic scarf and topattowel,Osetting for 20 minutes.
8. OnceVirritate the head and rinse with warm running water,dry with a towel.
9. Tilt the patient's head over the white paperAndcomb thoroughlyProw hair with a fine comb,then againOlook at the patient's hair.
10. Burn cut hair and paper in a basin.

11. WITHlrevive the patient's clothing and protective clothingditsinsky sister in an oilcloth bag and sent to disinfectionatyu camera. Treat the comb and scissors with 70% alcohol, room-disinfectioneanticidal solution.

Note: PRthemeapplication of disinfectant solutions against firesAdiagnosed during pregnancy,in women giving birth and breastfeeding,children under 5 years of age, as well as in case of diseases related toOliveGtin.

POrowVsBydesi opinionsnsections, if available, are contraindicatedAndthTousedbvocationhAndnseToantimicrobial solutionroV.

1. POdthToviTbXiato conductnIyu sleighTArno-hygienicbworks:lay out the necessary equipment and put on protective clothing.deanddat.
2. Lay it on thebatReTku (couch) oilcloth,sit on itOlinen and coatedscover his shoulders with a plastic diaper, witheObXOdimOSTand aboutWithTshoutVo-lOsy ond pone thingThatoweNNsmTaz.
3. AboutrabOthief oxOsy (not bare skinVs!) underOheated 6% dissolvedorom yksmustache,mehanicheskim withPOSOknock out the bombRand destroying lice.
4. OvaryTcover your head with a plastic scarf and a towel on top,leaving for 20 minutes.
5. RahelmAthlovy andaboutmsTbwarmOthaboutTin personthindOuch,hand thosemshampoo,dry with a towel.
6. TiltTb headsatpatientAnhellwhite paper and comb thoroughlytstraightdIminlOSshAshamem gchildm,behindTemre-inspectionTb inOpatient's hair.
7. Burn the edgeanddamaged hair and boomahatVTazat.
8. ComplicatedAndthat's aboutdeI am waitingbolnogoAndhAschitnatyu clothesdumehdicinsToOthseWithtrsin an oilcloth bag and send to a disinfection chamberRu.

Comb and scissorsAdrink alcoholm (70%), placedAnde-pest controlAnddaysmsolutionm.

SanitaRnO-hygienic treatment of patients duringObnaratmarriagelhead lice.

1. AboutmsTthoseloh bolbnwow hotshe caresbeforethWithmslohm

2. Shave affected hair.

3. Re-aboutmytbthoseloh bolbnogOhotto herindoh with uslOm.

4. WITHandit's sharpandenns inlwaspsin tAhat.

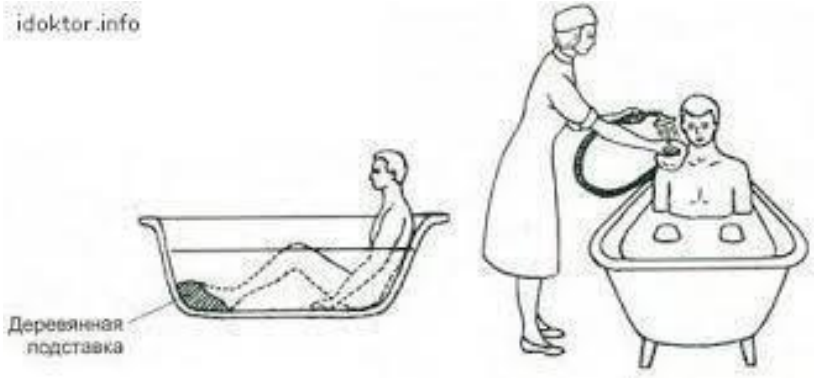
5. Fold the patient's clothes and protective clothingdat the nurse's officele-enchAYouth meshockAndOtpraviTbVdisinfectionatyu camera.

BRAndTwooAndscabbardAndtsy arr.AboTAtjoint ventureAndRvolume(70%).

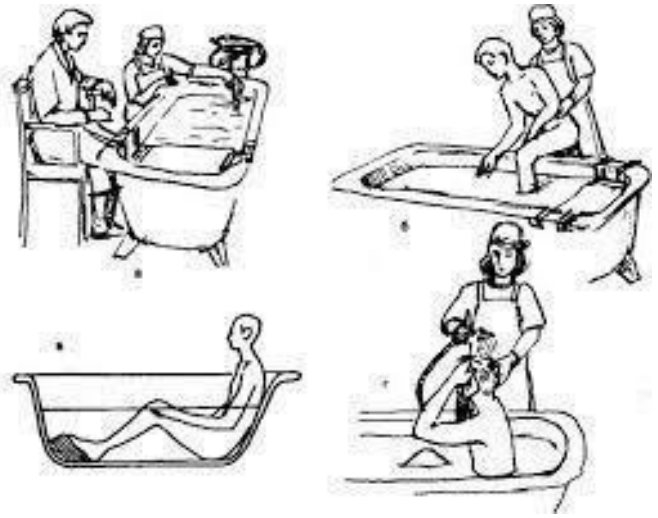
If the patient is diagnosed with an infectious disease, then the linen is placed in a tank with bleach or chloramine for 2 hours and sent to a special laundry.

If the linen is clean, it is put in a bag, and the outer dress is hung on hangers and handed over to the knot. The list of things is compiled in two copies: one of them is put in a bag with clothes, and the other is glued to the medical history and upon discharge, things for the patient are obtained from it.

Then the patient, accompanied by a nurse, goes to the bathroom. Depending on the nature of the disease and the patient's condition, hygienic treatment can be complete (bath, shower) (Fig. 4, 5) or partial (wiping, washing). Patients for whom a bath or shower are contraindicated are rubbed with warm water with the addition of cologne, vinegar or alcohol.



Rice. 4.Hygienic bath.



Rice. 5.A guide to taking a hygienic bath.

The bathroom has wooden flooring next to the bathtub. It is washed with a washcloth and a brush with soap and a disinfectant solution (1% chloramine solution), the stains are washed with a 3% hydrochloric acid solution, rinsed with hot water and filled with water immediately before the patient appears in the bathroom (the water temperature is measured). The bathtub must have an electric urn for heating laundry. There should be sterile bags with clean linen and a washcloth. After washing the patient, the bath is washed with soap and rinsed with a 1% chloramine solution.

The oilcloth pillow and oilcloth on the couch are wiped with a rag moistened with a 2% chloramine solution or a 0.5% bleach solution, and then washed with soap. The sheets on the couch are changed after each patient. Wet cleaning of the premises is carried out several times a day. Inventory must be labeled. The washcloths should be kept in different containers (“Used washcloths”, “Clean washcloths”).

Practical skills.

Carrying out a hygienic bath.

Purpose of bathing: Skin cleansing.

a) Providing comfort and relaxation to the patient. b)

Stimulation of blood circulation.

c) Removal of secretory and excretory secretions.

d) Freeing up time for assessing the patient's condition and teaching him. e) Timely detection of skin lesions.

*Equipment:*bath, water thermometer, wooden stand (bench), washcloth, soap.

Order of conductprocedures:

1. Make sure the shower stall or bathroom is clear. Check for cleanliness and, if necessary, clean the bathtub in accordance with the facility's instructions.
2. Prepare everything you need: 2 towels, 2 cloth washcloths and some personal items of the patient.
3. Place a rubber mat or towel on the bottom of the bathtub or shower to prevent the patient from becoming slippery.
4. Explain to the patient how to hold on to the handrails so as not to fall when entering or exiting the bathtub, and show where the alarm button is located to call for help.
5. To bathe the patient, fill the bathtub halfway with warm water (43-46°C), checking the water temperature with a thermometer. When taking a shower, help the patient reach the shower stall and wash, if necessary; adjust the water temperature and jet strength; help the patient wash his back.
6. Help the patient enter the shower or bathtub.
7. *Do not move away from the door of the room where the patient is washing, in case he needs help.*
8. *Drain the bathtub before the patient leaves to reduce the risk of falling.*
9. Help the patient get out of the shower or bathtub, dry himself, put on clean underwear or clean pajamas (robe).
10. Clean up the room where the patient washed, according to the instructions of the given medical institution.

11. Place dirty laundry in a special bag and wash your hands.

Medical documentation:

a) Indicate in the medical history how the patient was

washed. b) Note the patient's reaction to bathing.

c) Describe the condition of the patient's skin and any pathological changes on it: redness, loss of integrity, rash.

Instructions for the nurse:

A)Before bathing, it is necessary to decide which type of washing is most suitable for a given patient (the decision is made by the doctor!).

b)To make assistance individual, it is necessary to find out how the patient prefers or is used to washing.

V)Before swimming, it is necessary to identify potential risk factors: violation of the integrity of the skin, physical inactivity, sensitivity disorders, cardiovascular failure.

G)*Carefully check the condition of the patient's skin during bathing to identify rashes, redness, increased dryness of the skin, and damage to its integrity.*

d) In obese patients, thoroughly wash the abdomen and mammary glands (in women), paying attention to skin folds.

The results of the examination and treatment of the patient in the emergency room are recorded in the medical history and the log of examination for pediculosis or

"Register of infectious diseases". When pediculosis is detected, the following is performed:

a) registration in the magazine (form No. 60);

b) an emergency notification about an infectious disease is sent (f.058/u) to the Central State Sanitary Epidemiology Center for registration of pediculosis at the patient's place of residence;

c) is being done mark on the front side of the medical history;

d) sanitary treatment of the patient, disinsection and disinfection are carried out premises and objects with which the patient came into contact;

e) if body lice are detected, it is necessary to urgently call a specialist station TsGSEN for processing people; linen must be boiled, clothes that cannot be boiled must be ironed seams and folds with a hot iron;

f) if pubic lice are detected, sanitary treatment is carried out with hot water, soap and a washcloth, followed by a change of underwear. With the patient's consent, hair is shaved if necessary.

Attention!!!Examination and disinsection of a seriously ill patient carried out after emergency medical care has been provided.

Test questions for topic No. 1

1. What do the concepts of medical ethics and deontology include?
2. What rooms does the reception department consist of?
3. In what sequence does the work of the reception department proceed?
4. What logs should the admissions nurse fill out?
5. What does sanitary and hygienic treatment of a patient in the emergency department include?
6. What rooms does the hospital emergency room consist of?
7. Bathroom arrangement?
8. How is a patient treated for pediculosis?
9. What types of sanitation of patients exist?
10. What are the contraindications for taking a bath and shower?
11. How is complete hygienic treatment of patients carried out?

Topic No. 2.

Therapeutic department of the hospital.

A. Sanitary and hygienic regime of the therapeutic department B. Responsibilities of the ward nurse.
B. Organization of the work of the treatment room of the therapeutic department.
G. Anthropometry

The student must have an understanding of:
1. Features of the sanitary and hygienic regime of the therapeutic department.
2. Responsibilities of a ward and procedural nurse in hospital departments.
3. Anthropometry parameters.

The student must have the following skills:
1. Maintaining a sanitary and hygienic regime in the wards of the therapeutic department.
2. Disinfect patient care items.
3. Perform the duties of a ward nurse.
4. Perform the duties of a procedural nurse.
3. Determine body weight, measure height, measure chest circumference.

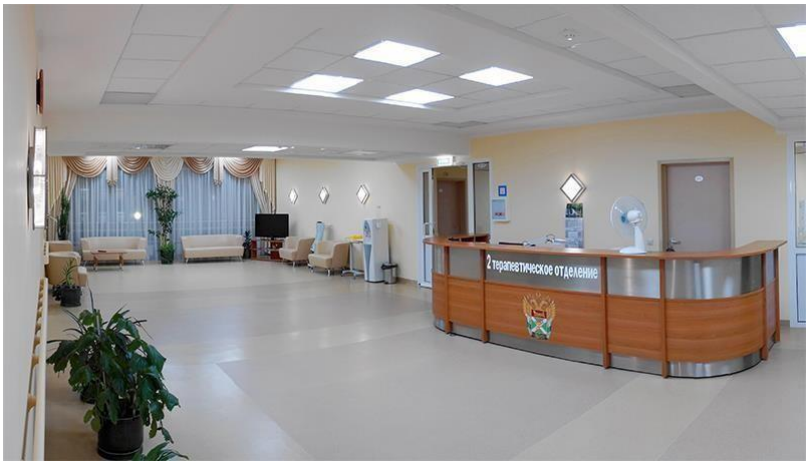


Fig.1. Central Clinical Hospital of the Federal Customs Service of Russia. Therapeutic department.

All premises, equipment, medical and other supplies must be kept clean. Wet cleaning of premises (washing floors,

wiping furniture, equipment, window sills, doors, etc.) is carried out at least twice a day (and more often if necessary). Use detergents (soap and soda, other solutions approved by authorities and sanitary and epidemiological services) in accordance with the instructions approved by the Ministry of Health of the Russian Federation. Containers with disinfectant solutions must be marked indicating the name, concentration and date of preparation. Fig.2

Fig.2.Wet cleaning of wards.

Disinfecting solutions are stored in a specially designated place, inaccessible to patients.

Window glass should be wiped at least once a month from the inside and when dirty, but at least once every four to six months from the outside. For wet cleaning, liquid detergents are used.

All cleaning equipment (buckets, basins, rags, mops, etc.) must be clearly marked indicating the premises and types of cleaning work (for example, for washing floors in wards, etc.), used strictly for their intended purpose and stored separately. Toilet cleaning equipment is stored only in the toilet. After cleaning, the rags are disinfected in a 0.5% solution of bleach or 1% solution of chloramine with an exposure of 1 hour or in another regulated solution. (Fig.3)

Fig.3.Cabinet for storing cleaning equipment.

General cleaning of wards and other functional offices or premises must be carried out according to an approved schedule at least once a month with thorough washing of walls, all equipment, as well as wiping furniture, lamps, protective blinds, etc. from dust. (Fig.4)

Fig.4.Routine cleaning of the wards.

General cleaning (washing and disinfection) of treatment rooms is carried out once a week with the premises emptied of equipment, furniture and other equipment. (Fig.5)

Fig.5.General cleaning of the treatment room.

To collect garbage and waste, trash cans should be installed in corridors, toilets and other auxiliary rooms, and pedal buckets should be installed in treatment rooms.

Rooms that require special sterility conditions (dressing rooms, treatment rooms) should be irradiated after cleaning with ultraviolet stationary or mobile bactericidal lamps at the rate of 1 W of lamp power per 1 m2 of room area for 2 hours in the absence of people and the presence of a lamp passport. (Fig.6, 7).

Fig.6.Bactericidallamps.

Fig.7.Irradiation with bactericidal lamps in the ward.

Every year, all premises are prepared for winter (inspection and repair of heating and ventilation systems, glazing, insulation and covering of windows, insulation of doors, etc.)

The hospital administration organizes constant preventive treatment of hospital premises against insects and rodents under contracts with disinfection. service.

Junior medical personnel include junior nurses, housekeepers, and orderlies.

There are two systems for organizing patient care: two-degree and three-degree. In a two-tier system, doctors and nurses are directly involved in patient care. In this case, junior medical personnel help in creating an appropriate sanitary and hygienic regime in the department (cleaning the premises, etc.). In the three-tier system, auxiliary nurses take part in direct patient care. A person who has completed courses for junior nurses in patient care is appointed to the position of junior nurse for patient care. She reports directly to the ward nurse.

Junior nurse (nursing nurse)helps the ward nurse in caring for the sick, changes linen, ensures that the patients themselves and the hospital premises are kept clean and tidy, participates in the transportation of patients, and monitors patients' compliance with the hospital regime. (Fig.8).

Fig.8.Junior nurse: assistance to the patient on movement in the department.

Sister-hostessdeals with economic issues, receives and issues linen, detergents and cleaning equipment and directly supervises the work of nurses. (Fig.9)

Fig.9.Sister-hostess.

Nursesthe range of responsibilities is determined by their category (ward nurse, barmaid nurse, cleaning lady nurse, etc.) (Fig. 10, 11).

Fig. 10.Nurse - barmaid.

Fig. 11.Nurse-cleaner.

The general responsibilities of junior medical staff are as follows:

1. Regular wet cleaning of premises: wards, corridors, common areas, etc.
2. Assisting a nurse in caring for patients: changing linen, feeding a seriously ill patient, hygienic provision of physiological functions for seriously ill patients - feeding, cleaning, washing vessels, urinals, etc.
3. Sanitary and hygienictreatment of patients.
4. Accompanying patients to diagnostic and therapeutic procedures.
5. Transportation of patients.

The ward nurse (Fig. 12) assists the attending physician anddirectly subordinate to the head nurse of the department; a person with secondary medical education is appointed to the position of ward nurse and performs the following duties:

1. Provides care and monitoring of patients based on the principles of medical deontology.

2. Timely and accurately fulfills the instructions of the attending physician; in case of non-fulfillment of prescriptions, regardless of the reason, immediately reports this to the attending physician.

3. Organizes timely examination of patients in diagnostic rooms, with consultant doctors in the laboratory.

4. Monitors the patient's condition, physiological functions, and sleep. Report any detected changes to the attending physician.

5. Immediately informs the attending physician, and in his absence, the head of the department or the doctor on duty, about a sudden deterioration in the patient’s condition.

6. Participates in rounds of doctors in the wards assigned to her.

7. Reports on the condition of patients, records prescribed treatment and care for patients, and monitors the implementation of assignments.

8. Provides sanitary and hygienic services to the physically weakened and seriously ill (washes, feeds, gives drinks, washes the mouth, eyes, ears, etc. as needed).

9. Receives and places patients in the ward, checks the quality of sanitary treatment of newly admitted patients.

10. Checks packages for patients to prevent them from taking contraindicated foods and drinks.

11. Isolates patients in an agonal state, is present at death, calls a doctor to confirm death, prepares the corpses of the deceased for transfer to the morgue.

12. Assigns duty in the wards at the bedside of patients. While on duty, she inspects the premises assigned to her, the state of electric lighting, the presence of hard and soft equipment, medical equipment and instruments, and medicines. Signs for being on duty in the department diary.

13. Monitors the compliance of patients and their relatives with the daily regimen of the department. The nurse reports cases of violation of the regime to the senior nurse.

14. Supervises the work of junior medical personnel and monitors their compliance with internal labor regulations.

15. Once a week, weighs patients, noting the patient's weight in the medical history. All admitted patients measure body temperature 2 times a day and record the readings on a temperature sheet.

16. When foundIf a patient shows signs of an infectious disease, immediately notify the attending physician, upon his orders, isolate the patient and immediately carry out ongoing disinfection.

17. As prescribed by the doctor, counts pulse and respiration, measures the daily amount of urine, sputum, etc., and records these data in the medical history.

18. Monitors the sanitary maintenance of the wards assigned to her, as well as the personal hygiene of patients (skin care, mouth care, cutting hair and nails), timely taking hygienic baths, changing underwear and bed linen, records the change of linen in the medical history.

19. Takes care of the timely supply of patients with everything necessary for treatment and care.

20. In case of changes in the patient's condition that require urgent measures, he informs the department doctor about this, and in his absence, immediately calls the doctor on duty and provides emergency pre-medical care.

21. Ensures that patients receive food according to the prescribed diet.

22. Ensures that the medicine given to the patient is taken in her presence.

23. Improves her professional qualifications by attending scientific and practical conferences for nursing staff and participating in the competition for the title "Best in the Profession."

24. Maintains necessary accounting documentation.

25. In the absence of the sister-housekeeper, together with the nurse, she is responsible for the safety of the received linen for the patients.

26. In the absence of the senior nurse, accompanies department doctors, the doctor on duty, and administration representatives during rounds. Enters all comments and orders made into the department diary.

27. Carry out sanitary and educational work to promote health and prevent diseases, promote a healthy lifestyle.

Rights of the ward nurse:

1. In the absence of a doctor, provide emergency first aid to patients in the department.

2. Improve your professional qualifications through special coursescourses in the prescribed manner.

3. Give orders to the junior nurse and nurses and monitor their implementation.

4. Receive the information necessary to perform your duties.

Responsible for:

Unclear or untimely fulfillment of duties provided for in these instructions and the internal labor regulations of the hospital.

Rice. 12.Ward medical skaya sister.

Organization of the work of the treatment room. Documentation of the treatment room.

In each medical and preventive institution, taking into account the specifics of its work, there must be a properly equipped treatment room (Fig. 13), the functions of which are to carry out therapeutic and diagnostic manipulations:

- injections: intradermal (i.c.), subcutaneous (s.c.), intramuscular (i.m.), intravenous (i.v.), etc.;
- blood sampling for various diagnostic studies;
- assembly of systems for intravenous drip administration of drugs;
- preparation and performance of punctures;
- preparation for transfusion of blood, its components, blood substitutes;
- carrying out disinfection, all stages of pre-sterilization cleaning, preparation for sterilization and sterilization of medical instruments, medical supplies and dressings.

Requirements for the premises of the treatment room, its structure and equipment are set out in section 1 of SanPiN 2.1.3.2630-10 “Sanitary

epidemiological requirements for organizations engaged in medical activities."

Rice. 13.Typical treatment room.

Treatment room documentation:

- journal of registration of carried outmedical manipulations;
- control log of blood group and Rh factor registration;
- blood and plasma transfusion register;
- register of blood transfusions, blood substitutes and protein preparations;
- a log of blood collection for biochemical studies for the Wasserman reaction (RW);
- log of reception and delivery of duties;
- drug consumption log;
- sterilization regime control log (steam, air, etc.);
- logbook for quality control of pre-sterilization processing of instruments (azopyram and phenolphthalein tests);
- log of disposable syringes (receipt, consumption);
- a log of temperature conditions and defrosting (disinfection) of the refrigerator;

- monthly general cleaning schedule, signed by the manager. department, journal of general cleaning;
- log (form) for recording the operation of bactericidal lamps (UV irradiators);
- a log of cases of injuries and emergency situations when working with blood (one per department);
- a log of complications associated with parenteral manipulations;
- instructions for providing first aid for anaphylactic shock;
- instructions for providing medical care in case of infection with biomaterials (with the Anti-AIDS first aid kit);
- table of antidotes used for acute poisoning;
- instructions for use of disinfectants currently used.

Rice. 14.Procedural nurse.

Treatment room nurse(Fig. 14) has specific job responsibilities. This is the implementation of therapeutic and diagnostic manipulations and the correct organization of the work of the office:

1. Know and comply with orders and instructions on the sanitary and epidemiological regime of the treatment room, maintain affirmative medical records and reports.

2. Ensure infectious safety (comply with the rules of sanitary-hygienic and anti-epidemic regime, asepsis; storage, processing and use of medical products).

3. Strictly follow the technology of procedures and manipulations:

- injections (i.c., subc., i.m., i.v., etc.);
- taking blood for testing;
- preparation for infusion therapy (determination of blood type, testing for individual and biological compatibility of blood, preparation of a system for intravenous drip infusions);
- preparation of workersdisinfectant solutions;
- carrying out disinfection and pre-sterilization cleaning (PSC) of medical supplies.

4. Immediately notify the doctor about complications arising as a result of medical procedures or cases of violation of the internal regulations of the medical institution.

5. Know the methods of first aid and resuscitation, administer medications, anti-shock agents (for anaphylactic shock) to patients for health reasons (if it is impossible for a doctor to arrive to the patient in a timely manner).

6. Prepare a set of instruments and materials and assist the doctor during therapeutic and diagnostic procedures and minor operations (determination of blood type, testing for individual and biological compatibility of blood, puncture, venesection, blood transfusion, etc.).

7. Maintain approvedaccounting and reporting documentation of the treatment room in the prescribed form.

8. Replenish the cabinet with the necessary amount of instruments and medicines.

9. Observe correct storage conditions for medications, solutions and serums.

10. Comply with internal regulations and safety regulations.

11. Organize the work of junior medical staff.

12. Observeethical and deontological standards of a medical worker.

13. Interact with colleagues and employees of other services in the interests of the patient.

A procedural nurse has the right:

1. Get the information you need for your work.

2. Make proposals to improve organizational efficiency and labor productivity.

3. Participate in discussions of issues relevant to the position.

4. Improve your medical knowledge, improve your qualifications.

5. Participate in cross-checks as directed by management. Get acquainted with the acts of checking the work of the office and, in case of disagreement, make your comments and suggestions.

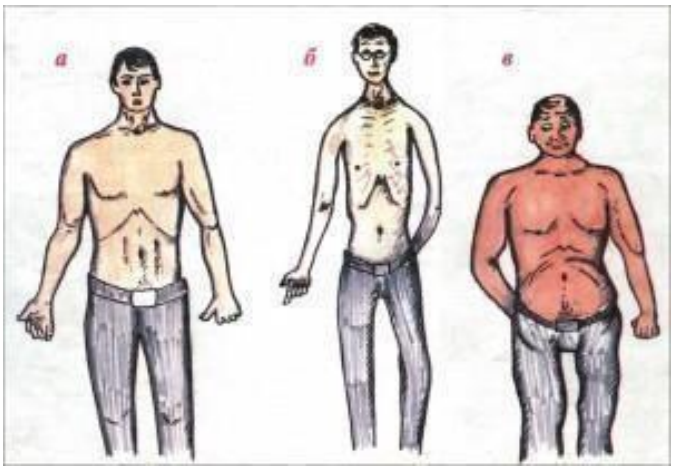
6. Apply to the administration for an incentive or penalty for the junior staff of the treatment room.

7. Take part in the work of the council of procedural nurses, conferences, etc.

Body build – the ratio of height and transverse dimensions of the body; symmetry and proportionality of its individual parts + type of constitution. ***Correct physique*** **-**chest circumference - ½ of height; both halves of the body are symmetrical; the body is proportional; There are no anomalies or physical defects. According to three main types of constitution, people can be divided into:

- normosthenics (mesomorphs) a);

- asthenics (dolichomorphs) b);
- hypersthenics (brachymorphs) c) Fig. 15.



Rice. 15.Constitutional types.

These types are divided according to the ratio of the longitudinal dimensions of the chest to the longitudinal dimensions of the abdominal cavity, the length of the lower extremities, the total length and width of the body, and other characteristics. Belonging to one or another type of constitution can be established, for example, by the value of the intercostal angle (in mesomorphs it is approximately equal to 900, in dolichomorphs it is noticeably less than this value, in brachymorphs it is noticeably more) or by the ratio of the length of the femur to the total length of the body.

You can also determine your constitution by calculating the index of proportionality (IP) of your physique:

$$IP = \frac{\text{chest circumference}}{\text{height}} \times 100\%,$$

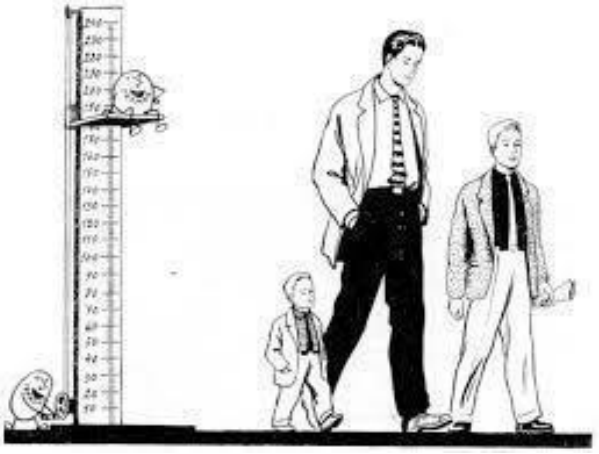
while normosthenic PI for men = 52-54%, for women – 50-52%. Indicators lower than these are typical for asthenics, higher – for hypersthenics.

Obvious pathology of the physique can provide information about possible diseases in the patient:

gigantism(men over 200 cm tall, women over 190 cm) – with overproduction of somatotropic hormone of the pituitary gland, with hypogonadism, congenital anomaly of connective tissue (Marfan syndrome) (Fig. 16);

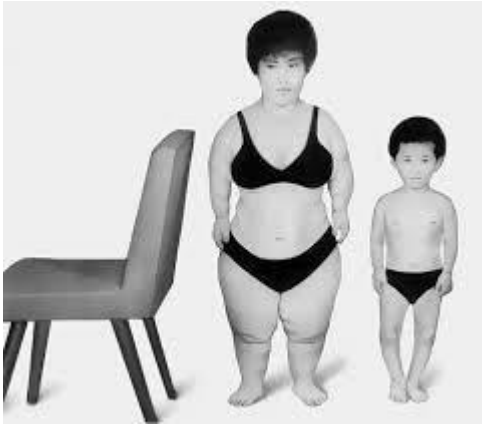
Rice. 16.Gigantism.

dwarfism(less than 135 cm, proportionally folded) - dwarfism due to hypothyroidism, chromosomal abnormalities, hypoproduction of growth hormone, tuberculous lesions of the spine (Fig. 17);



Rice. 17.Dwarfism against the background of normal growth and gigantism.

chondroplastic dwarfism (shortened limbs with normal body and head sizes) –congenital anomaly of the development of cartilage tissue (Fig. 18);



Rice. 18.Chondroplastic dwarfism ost against the background of a normal child.

- ***effeminate body in men and masculine body in women*** – disruption of the production of sex hormones – pathology of three systems: reproductive, hypothalamic-pituitary or adrenal glands (Fig. 19);

Rice. 19.Woman, occupying involved in bodybuilding.

- ***eunuchoidism***– effeminate type, combined with small head size and tall stature;
- infantilism - teenage body type in adults - with rickets, heart defects, severe anemia, diseases of the digestive system (Fig. 20).

Rice. 20.Explanations in the text.

If the patient is in satisfactory condition, he undergoes anthropometry (weighing, measuring height and chest circumference). Anthropometry is a set of methods and techniques for measuring the human body (Greek anthropos - man, and metreo - I measure).

The patient is weighed upon admission to the hospital, weekly and upon discharge. In severe debilitating diseases, an increase in body weight indicates an improvement in the patient's condition, and in case of obesity, a decrease in body weight indicates the correctness of treatment. In heart failure, an increase in body weight, on the contrary, is a bad sign (fluid retention in the body), and a decrease is a good sign (reduction of edema). This procedure is carried out under certain conditions: in the morning, on an empty stomach, after bowel movement ***cervix and bladder, in the same underwear.***Patients in serious condition can be weighed while sitting, having first weighed the chair (Fig. 21).

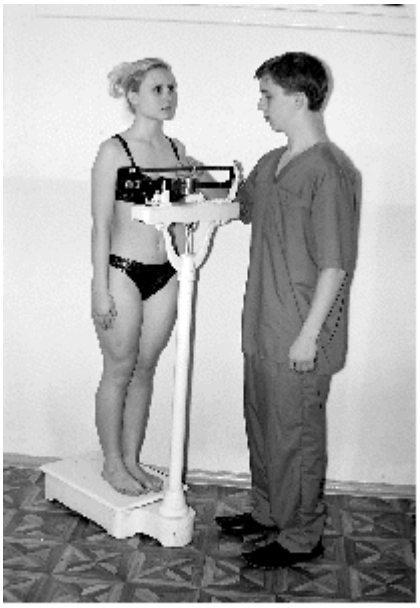


Рис. 1.5.
Взвешивание на медицинских весах рычажного типа.

Rice. 21.Explanations in the text.

Based on the ratio of the patient's height and weight, a conclusion is made about whether he is normal, overweight or underweight (Fig. 19).

There are various assessment methods, for example, the Broca index, which is determined by the formula:

$$\frac{\text{weight (kg)}}{\text{height (cm)} - 100} X 100\%$$

and is equal to the norm of 90 – 110%, if it is more than 110%, then the weight is considered overweight, if less than 90%, then it is underweight.

Quetelet index:

$$\frac{\text{weight (kg)}}{\text{height (m)}2} = X$$

in this case, the norm is considered to be a result from 18 to 24.9.

Fig.22.Explanations in the text.

Practical skills.

Determination of body weight.

*Equipment:*medical scales, clean disinfected oilcloth 30 x 30 cm on the scale platform, 5% chloramine solution with 0.5% detergent solution, rags for double processing of oilcloth, latex gloves.

Required conditions:

- weighing is carried out on an empty stomach at the same hours;
- Pre-empty your bladder;
- after emptying the intestines (preferably);
- in underwear.

Progress of the study:

1. Warn the patient about the upcoming procedure, explain the purpose and preparation conditions.
2. Lower the scale shutter.
3. Set the scale weights to the zero position and adjust the scales.
4. Close the shutter.
5. Place disinfected oilcloth on the scale platform.

6. Invite the patient to carefully stand in the center of the scale on the oilcloth (without slippers).
7. Open the shutter and establish balance by moving the weights.
8. Perform weighing.
9. Close the shutter.
10. Instruct the patient to carefully step off the scale.
11. Record the weighing data on the temperature sheet.
12. Evaluate the result.
13. Remove the oilcloth and treat it by wiping it twice with a 5% chloramine solution and a 0.5% detergent solution.

Definition of height.

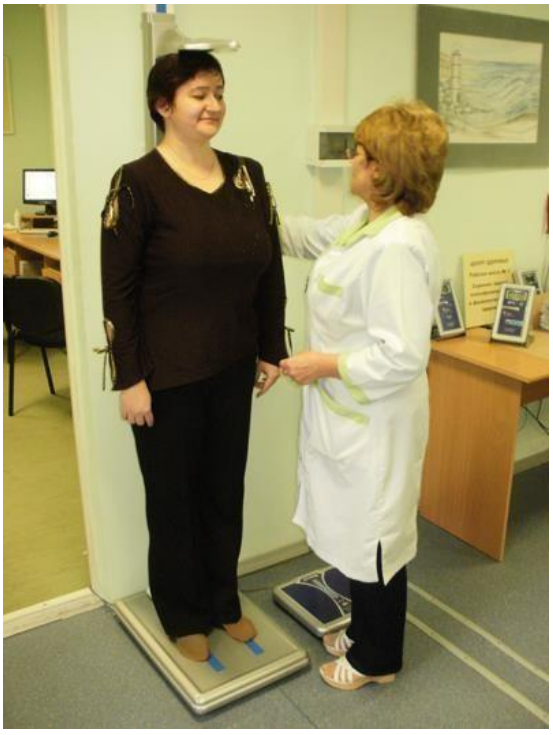


Fig.23.Definitiongrowth.

*Equipment:*stadiometer, clean disinfected oilcloth 30x30 cm, container with disinfectant solution, 5% chloramine solution with 0.55 solution of detergent, rags for processing oilcloth, stadiometer, paper, pen, latex gloves.

*Required conditions:*The patient’s height is determined after removing shoes and headgear (Fig. 23).

Progress of the study.

1. Establish a trusting relationship with the patient by explaining the purpose of the study and body position during the procedure.
2. Wash your hands, put on gloves.
3. Place oilcloth on the stadiometer platform.
4. Stand to the side of the stadiometer and raise the bar above the patient's expected height.
5. Invite the patient to stand on the stadiometer platform, on the oilcloth, so that he touches the vertical bar with the back of his head, shoulder blades, buttocks, and heels.
6. Position the patient's head so that the outer corner of the orbit and the external auditory canal are at the same horizontal level.
7. Lower the stadiometer bar onto the patient's crown.
8. Invite the patient to step off the stadiometer platform.
9. Use the stadiometer scale to determine the patient's height.
10. Inform the patient about the measurement results.
11. Remove the oilcloth and wipe twice with a 5% chloramine solution with a 0.5% detergent solution.
12. Remove gloves, immerse in disinfectant container, wash and dry hands.

Chest circumference measurement.

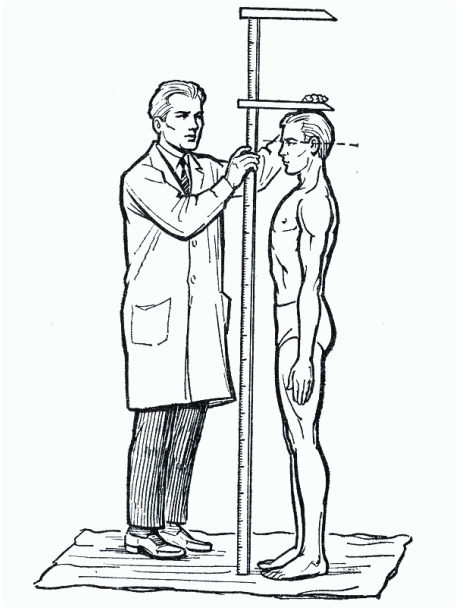


Рис. 6. Измерение роста антропометром Мартина.

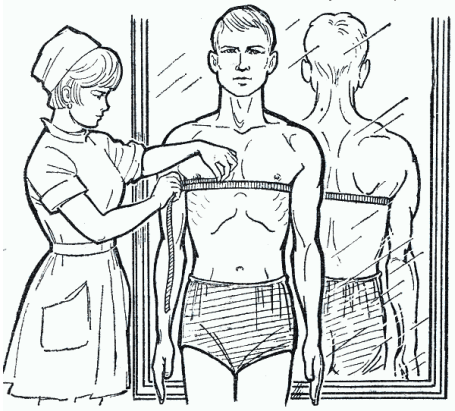


Рис. 7. Измерение окружности грудной клетки.

Rice. 24.Explanations in the text.

*Equipment:*measuring tape, 70% ethyl alcohol or 1% chloramine solution, gauze pads, latex gloves, sheet of paper, pen (Fig. 24).

Progress of the study:

1. Explain to the patient the purpose of the study and the procedure, obtain consent.
2. Wash and dry your hands, put on gloves.
3. Invite the patient to stand facing the nurse with his hands down.

4. Place a measuring tape on the patient's body from behind under the lower angles of the shoulder blades, from the front along the fourth rib, along the nipple line (in men) or above the mammary gland (in women).
5. Determine the circumference of the chest at rest, maximum inspiration, full exhalation.
6. Write data: OGK rest; $OGK_{inhale;\ OGK\ exhale.}$
7. Disinfect the measuring tape (wipe with a cloth moistened with alcohol or 1% chloramine solution, twice on both sides).
8. Remove gloves, wash and dry your hands.

Test questions for topic No. 2.

1. What is the sanitary and hygienic regime of the therapeutic department.
2. How are corridors and utility rooms cleaned?
3. What are the responsibilities of a ward nurse?
4. What are the responsibilities of a procedural nurse?
5. How the rooms are cleaned.
6. How patients are weighed.
7. How to measure the height of patients.

Topic No. 3.

Transportation of patients.

A. Methods of transporting patients.
B. Supporting the patient when walking and moving in bed.

The student must have an understanding of:

1. Methods of transporting patients to hospital departments.
2. Biomechanics of the body of the patient and the nurse.
3. Ways to maintainpatient while walking.
4. Helping the patient move in bed.

5. Assisting the patient in moving from bed to chair.

The student must have the following skills:

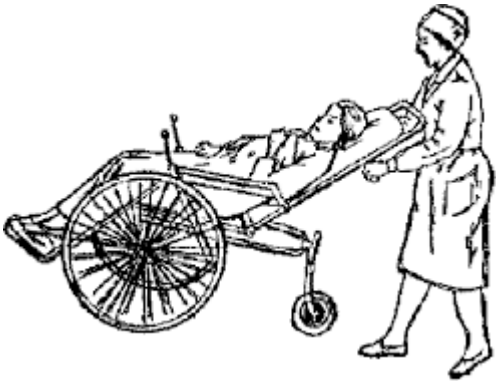
1. Transporting the patient.
2. Application of the rules of biomechanics of the nurse's body to prevent spinal injuries.
3. Properly seat the patient in a wheelchair.
4. Transfer the patient from the stretcher to the bed, from the bed to the stretcher.

The method of transporting the patient is determined by the severity of his condition.

It can be transported on a stretcher by hand, on a gurney, wheelchair or on foot. Patients in satisfactory condition are sent to the department on foot, accompanied by medical personnel. Weakened patients, disabled people, elderly and senile patients are often transported in a wheelchair. Seriously ill patients are transported on a stretcher (manually or on a gurney) lying down. Transferring a patient from a stretcher to a bed requires skill and care: this is done by 2-3 health workers. For ease of carrying, the stretcher is placed in relation to the bed at a right angle, parallel, sequentially, closely; shifting the patient with the stretcher placed close to the bed requires effort from the patient and is therefore not always acceptable.

Practical skills.

Transportationpatient on a wheelchair (Fig. 1).



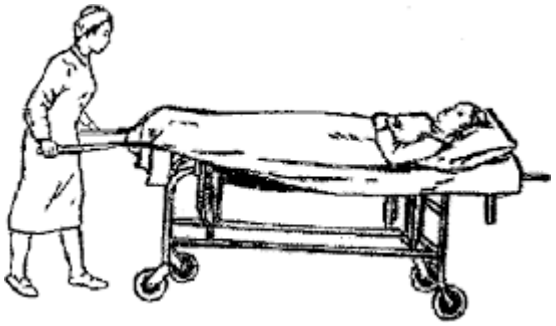
Rice. 1.Wheel chair.

*Equipment:*wheel chair.

Performancemanipulations:

1. Prepare the wheelchair for transportation and check its serviceability.
2. Tilt the wheelchair forward by stepping on the footrest.
3. Ask the patient to stand on the footrest, sit him down, supporting him in the chair, and cover him with a blanket.
4. Place the wheelchair in its original position.
5. During transportation, ensure that the patient's arms do not extend beyond the armrests of the wheelchair.
6. The patient can be transported on a wheelchair in a sitting, reclining, lying position, changing the position of the backrest and foot panel.

Transporting the patient on a gurney (Fig. 2).



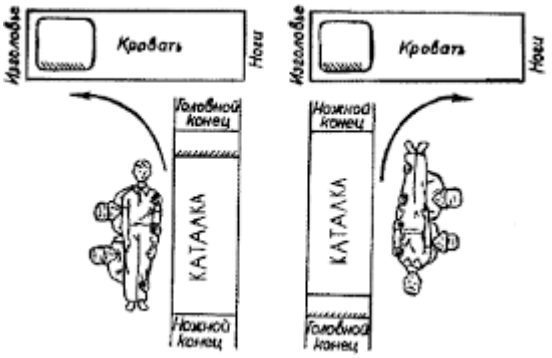
Rice. 2.A gurney for transporting patients.

*Equipment:*gurney (stretcher).

Manipulation progress:

1. Prepare the gurney for transportation and check its serviceability.
2. Place a sheet (oilcloth if necessary) on the gurney, a pillow and a blanket.
3. Place the gurney (stretcher) with the foot end perpendicular to the head end of the couch (bed).
4. The three of you stand near the patient on one side: one puts his hands under the patient’s head and shoulder blades, the second - under the pelvis and upper thighs, the third - under the middle of the thighs and shins.

5. Lift the patient at the same time, turning 90° towards the gurney.
6. Cover the patient with the free end of the blanket and place a pillow under his head.
7. One health care worker stands in front of the gurney, with his back to the patient, and the other stands behind the gurney, facing the patient.
8. Inform the department that the patient is being transported to them.
9. To transportpatient to the department with a medical history.
10. In the department: bring the head end of the gurney to the foot end of the bed.
11. Remove the blanket from the bed.
12. The three of us lift the patient and, turning 90°, put him on the bed (Fig. 3).



Rice. 3 Explanations in the text.

You cannot shift a patient on a sheet!

Transportationthe patient on a stretcher manually (Fig. 4a, b).

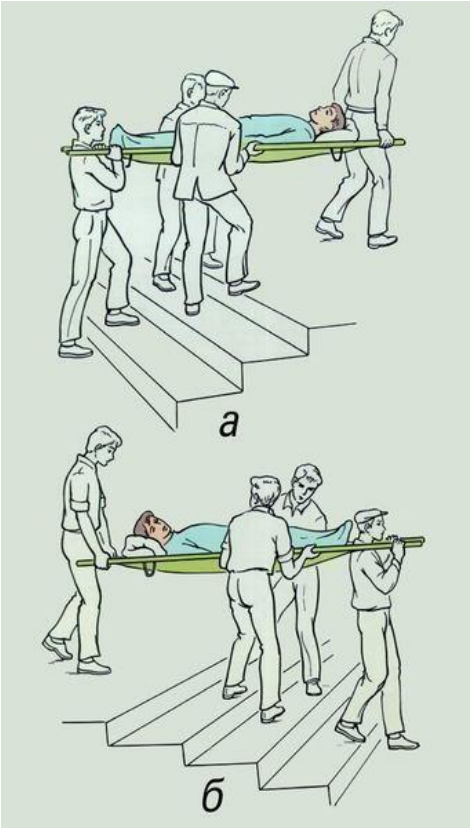


Fig.4 a, b.Explanations in the text

*Equipment:*stretcher: a) when lifting; b) during descent.

*Manipulation progress:*stretcher.

1. The patient should be carried on a stretcher without haste or shaking.
2. Cover the stretcher with a blanket, a sheet on top, and, if necessary, lay down oilcloth.
3. Explain to the patient the peculiarities of his behavior during transportation.
4. When transporting a stretcher with a patient up the stairs, the person walking in front holds the handles of the stretcher on his lowered arms, and the person walking behind holds them on his shoulders.
5. When going down the stairs, they do the opposite: the person walking behind holds the handles of the stretcher on outstretched arms, and the person walking in front holds them on their shoulders.
6. The patient is carried up the stairs head first, and down the stairs feet first.

To reduce the negative impact of a limited mode of physical activity on the

patient, prevent damage to organs when carrying out various movements of the patient, reduce the risk of possible

injuries in a nurse who cares for a patient must know and follow a number of rules of biomechanics.

Biomechanics-a science that studies the laws of mechanical motion in living systems. In medicine, he studies the coordination of the efforts of the musculoskeletal system, the nervous system and the vestibular apparatus, aimed at maintaining balance and ensuring the most physiological position of the body at rest and during movement.

According to the laws of biomechanics, only that movement is effective that ensures the achievement of the set goal with the greatest benefit for the body, the least muscle tension, energy consumption and load on the skeleton in any position of the human body.

Before moving the patient, it is necessary to determine;

- purpose of movement;
- statepatient health, opportunities for cooperation;
- availability of aids for moving (cane, crutch, walker).
- define the role of a leader who can give clear, concise commands and explanations to the patient.

When performing various movements, lifting, moving, maintenance personnel must remember:

- Before lifting the patient, you need to bring him to a safe, comfortable position;
- for service personnel to take a safe, comfortable position while maintaining balance in relation to the patient's weight and direction of movement;
- Use your own body weight to relieve tension caused by arm movements, especially if several rocking movements are necessary to create the necessary moving force to lift the patient.

❖ When starting to lift, you need to make sure that your legs are in a stable position;

❖ Make sure you choose the best position to hold the patient, keep your back straight, get as close to the patient as possible and move at the same rhythm as the other assistants.

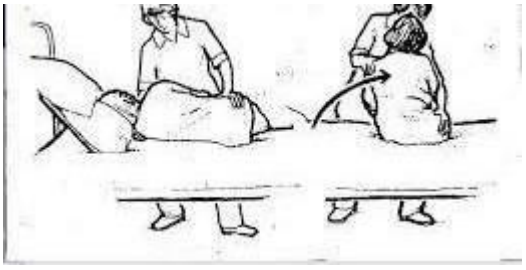
It must be remembered that patient movement can only be successful if there is coordination among the team:

❖ choose a leader who will be the team leader and give commands;

❖ choose the best technique for treating the patient;

❖ determine who will take on the hardest work - holding the patient's hips and torso (this should be the strongest and healthiest nurse, regardless of position)

Moving the patient from the "lying on his side" position to the "sitting with legs down" position (Fig. 5).



Rice. 5.Moving the patient.

*Indications:*forced passive position, changing the patient's body position at the risk of bedsores.

Performed by one nurse.

Manipulation progress:

1. Establish a trusting relationship with the patient.
2. Assess the patient's condition and the possibility of help on his part.

3. Assess the environment to ensure patient safety.
4. Lower the side rails (if equipped) on the nurse's side.
5. Stand opposite the patient, place your left hand under his shoulders, your right hand under his knees, covering them from above.
6. Raise the patient by lowering his legs down and at the same time turning him in bed in a horizontal plane at an angle of 90°.
7. Sit the patient down, continuing to face him and holding him with his left hand by the shoulder, and with his right hand by the body.
8. Make sure the patient is sitting securely and confidently.
9. Place a support under the patient's back.
10. Put slippers on the patient and place a bench under his feet.
11. Wash and dry your hands.

Moving the patient from the chair-sitting position to "lying on the bed" **(Fig.6).**

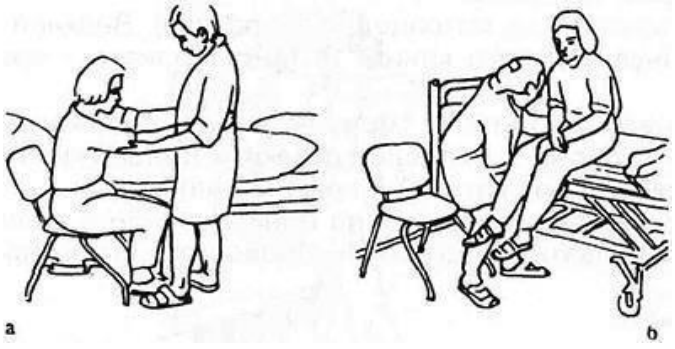


Fig.6.Explanations in the text.

*Indications:*moving the patient if the patient can help.

Performed by one nurse.

Movemanipulation.

1. Establish a trusting relationship with the patient.
2. Assess the patient's condition and the possibility of help on his part.
3. Assess the environment to ensure patient safety.
4. Warn the patient that on the count of three you will help him stand up.

5. Warn the patient that on the count of three you will help him stand up.
6. Place the patient on his feet at the count of three (turn at the same time as him, foot to foot, until he feels the edge of the bed.)
7. Place the patient on the bed. Stand facing the patient at his side, closer to the head of the bed
8. Place your feet 30cm wide
9. Turn your leg, located closer to the head, outward.
10. Keep your back straight.
11. Place one hand under the patient's knees and grasp the patient's shoulders.
12. Raise the patient's legs onto the bed, turning his torso 90° around its axis and lowering his head onto the pillow.
13. Cover the patient, make sure he is lying comfortably and comfortably.
14. Wash and dry your hands.

Test questions for topic No. 3.

1. How are patients transported to the departments?
2. By what laws of biomechanics are human movements ensured?
3. What assistance does the nurse provide when moving a patient in bed?
4. How to properly seat a patient in a wheelchair.
5. How to correctly transfer a patient from a bed to a stretcher.

Topic No. 4.

Personal hygiene of the patient.

A. Change of underwear and bed linen. B. Vessel delivery.
B. Washing a seriously ill patient. D. Washing the feet of a seriously ill patient in bed.
D. Hygiene of the oral cavity, eyes, nose, ears, hair. E. Skin care.

The student must have an understanding of:

1. Personal hygiene of the patient.
2. Rules for changing underwear and bed linen.
3. Technique for delivering a bedpan to a seriously ill patient.
4. The main techniques used when washing patients.
5. Hair washing technique for seriously ill patients
6. Rules for washing feet in bed.
7. Features of oral cavity treatment in seriously ill patients.
8. Hygiene of eyes, nose, ears.
9. Risk factors for the formation of bedsores.
10. Places of possible formation of bedsores, stages of their formation.

The student must have the following skills:

1. Change the patient's underwear and bed linen.
2. Prepare the bed for the patient, taking into account the prevention of bedsores.
3. Provide a bedpan and urinal to a seriously ill patient.
4. Clean a seriously ill patient.
5. Carry out hygienic treatment of hair and feet.
6. Treat the oral mucosa.
7. Organize and provide assistance during the morning toilet: washing, wiping the eyes, cleansing the external auditory canal, nasal cavity.
8. Treat natural folds and prevent diaper rash.
9. Rub the skin with a light massage for the bed patient.

Personal hygiene -This is a broad concept that includes the implementation of rules that preserve and strengthen human health. The first priority is to maintain cleanliness of the body.

Hygiene is necessary for the patient’s well-being and positive self-esteem.

In practice, hygiene is highly individual and is influenced by the patient’s personality traits, including those listed below:

a) cultural level;

b) socio-economic status; c) religion;

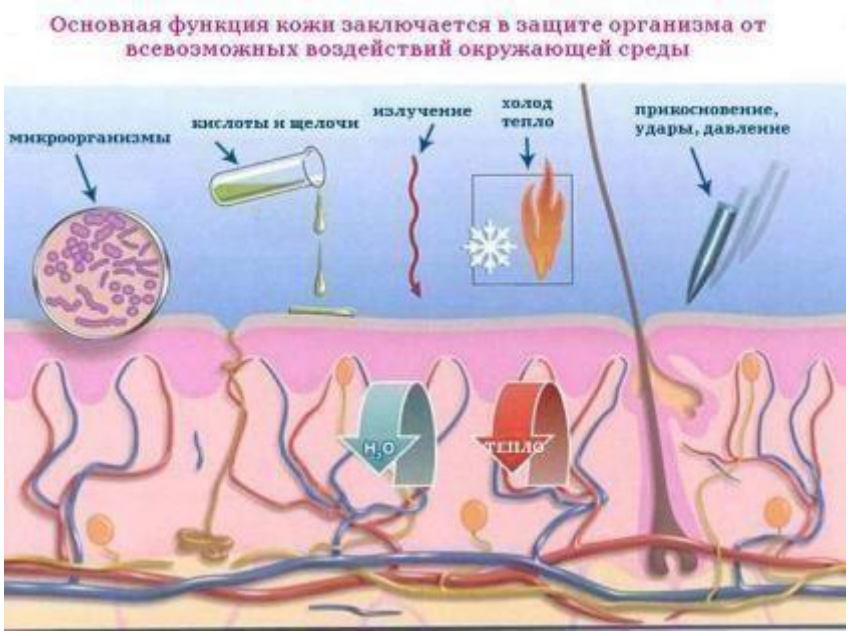
d) level of general development;

e) condition health;

e) personal preferences.

The nurse must be aware of all these factors in order to provide individualized care to the patient. She is obliged to help the patient satisfy all hygienic needs, since some of them can only be realized with outside help. The nurse needs to encourage the patient's best efforts to maintain hygiene.

Skin of the bodyperforms a protective function (protects the body from mechanical damage, penetration of harmful and toxic substances, microorganisms from the external environment), participates in metabolism (respiratory, excretory functions), heat regulation is a component of one of the sense organs - the skin analyzer (Fig. 1) .



Rice. 1.Functions of the skin.

During physical activity, with increased body temperature, with diseases of the kidneys, liver, respiratory system, digestive tract and skin

the excretory function is in a state of tension. Gas exchange through the skin increases, and the amount of substances released increases many times. Water, urea, uric acid, sodium, potassium and other substances are released through the skin and its sweat glands. At rest at normal temperature, about a liter of sweat is released per day, and in febrile patients - up to 10 liters or more. In some diseases, sweating increases sharply.

Contamination of the skin disrupts the protective properties of the skin and the ratio of microorganisms that normally inhabit it, creating conditions for the proliferation of foreign microbes and parasitic fungi. All this can lead to the appearance of a pustular rash, peeling, diaper rash, ulcerations, and bedsores. For normal functioning of the skin, it is necessary to keep it clean and protected from damage.

Patients on a general regime wash themselves in a bath or shower at least once every 7 days. The nurse should keep a schedule for administering a hygienic bath to walking patients with a note in the medical history. Underwear and bed linen are changed at least once a week after taking a bath, as well as in case of accidental contamination.

For patients who are prescribed bed rest or strict bed rest, the use of a hygienic bath or shower is contraindicated due to the severity of the condition and the high risk of complications. However, maintaining skin hygiene for such patients is extremely necessary. Seriously ill patients are recommended to wipe the skin at least twice a day with a swab or the end of a towel moistened with warm water or an antiseptic solution (10% solution of camphor alcohol, vinegar solution - 1 tablespoon per glass of water, 70% ethyl alcohol and half water, 1% salicylic alcohol). Then the rubbed areas are wiped dry (Fig. 2).

Fig.2.Skin care.

The nurse washes the patient (face, neck, hands) with a sponge moistened with warm water. Then he dries the skin with a towel. The patient's feet are washed two to three times a week, placing a basin on the bed, after which, if necessary, the nails are cut short. With poor skin care, diaper rash, bedsores and other complications can occur that worsen the patient's condition.

It is especially necessary to wash and dry the folds of skin under the mammary glands in women (especially obese women), armpits, and inguinal folds, since otherwise there is a high risk of developing diaper rash. In this case, the protective properties of the skin are reduced, and microorganisms are able to penetrate through damaged skin. In order to prevent diaper rash, it is necessary to inspect the folds of skin under the mammary glands, in the armpits, and in the groin folds daily. After washing and drying, these areas of the skin must be powdered with powder.

The patient's position in bed should be comfortable, the bed linen should be clean, the bed net should be taut, and the mattress should be flat. For seriously ill patients and patients with urinary and fecal incontinence, oilcloth is placed on the mattress pad. For women with heavy discharge, a diaper is placed on an oilcloth, which is changed as it gets dirty.

For patients on strict bed rest, if necessary, bowel movements are provided with a bedpan, and when urinating, a urinal is provided (women use bedpans). Vessels are made of metal with an enamel coating and rubber. A rubber bedpan is used for weakened patients, as well as in the presence of bedsores, urinary and fecal incontinence. Before giving a urine bag to the patient, it must be rinsed with warm water (Fig. 3).

Fig.3.Vessel delivery.

Patients who can take care of themselves wash themselves with boiled water and soap every day, preferably in the morning and evening.

Seriously ill people who remain in bed for a long time and are unable to regularly take a hygienic bath should be washed after each act of defecation and urination. Patients suffering from incontinence must be washed several times a day, since the accumulation of urine and feces in the perineum and inguinal folds can cause diaper rash, bedsores, and infection (Fig. 4).

Fig.4.Washing the patient.

Patients who stay in bed for a long time require constant hair care. Men have their hair cut short and their hair is washed once a week during a hygienic bath. For those patients for whom a bath is prohibited, you can wash your hair in bed. To do this, place a basin at the head end of the bed, and the patient's head is thrown back over the basin. While soaping (preferably with soap foam), you need to thoroughly rub the scalp under the hair, then rinse the hair, wipe dry and comb. To do this, take a fine comb. Short hair is combed from roots to ends, and long hair is divided into strands and slowly combed from ends to roots, trying not to pull them out. After washing, the head is tied with a towel or scarf (to avoid hypothermia) (Fig. 5).

Fig.5.Hair care.

In addition to washing, you need to comb your hair daily. To do this, use an individual fine-toothed comb. A fine-toothed comb moistened with a vinegar solution is good for combing out dandruff and dust. Scallops should be kept clean, wiped with alcohol, vinegar, washed in hot water with soda or ammonia. Combs and combs must be individual.

Oral care is a necessary procedure for all patients, since microorganisms accumulate there, causing bad breath and causing inflammatory changes in the teeth, mucous membranes of the oral cavity, and the excretory ducts of the salivary glands. Assistance in such care should be provided to patients who are not able to do this themselves.

Patients should thoroughly brush their teeth, especially near the gums, 2-3 times a day, preferably after each meal. If this is not possible, you should rinse your mouth after eating with lightly salted water (1/4 teaspoon of table salt per glass of water) or a solution of baking soda (1/2 teaspoon per glass of water). This procedure is also necessary for people who have no teeth.

For seriously ill patients who cannot brush their teeth themselves, a nurse should clean the oral cavity after each meal. After this, the gums are carefully and thoroughly wiped with a cotton ball or gauze cloth, secured with a clamp or forceps and moistened with an antiseptic solution (Fig. 6).

Fig.6.Oral care.

Patients who have impaired nasal breathing and who breathe almost entirely through their mouths often suffer from dry lips and mouth. After some time, cracks form in the corners of their mouth, which can be painful, especially when talking, yawning, or eating. The patient must be taught not to touch these wounds with his hands and not to open his mouth wide. The lips are carefully wiped with a swab moistened with a solution of furatsilin 1:4000, and then lubricated with vegetable, or olive, or vaseline or sea buckthorn oil.

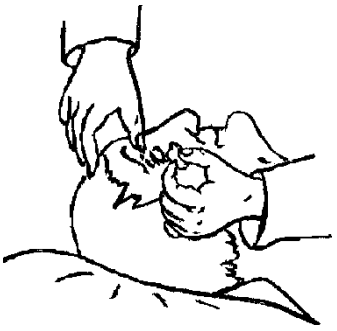
To prevent the formation of cracks and drying of the lips, patients in a coma during artificial ventilation are given a gauze cloth moderately moistened with a solution of furatsilin, which is replaced as it dries.

Patients with high fever, viral infection or severe circulatory problems sometimes develop aphthous stomatitis, which causes bad breath. To get rid of this smell, it is necessary to treat, first of all, the underlying disease. Be sure to rinse your mouth with disinfectant solutions (0.2% sodium bicarbonate, 1% sodium chloride solution or dental elixir).

If the patient has removable dentures at night, they are removed, washed thoroughly with running water and stored in a dry glass. Before putting it on, wash it again (Fig. 7).

Fig.7.Caring for dentures.

Walking patients take care of their eyes independently during the morning toilet. Seriously ill patients often develop discharge from the eyes, sticking together the eyelashes and making it difficult to see. To remove purulent discharge, the eyes are washed with a 3% solution of boric acid, or a solution of rivanol, or a weak solution of potassium permanganate from a rubber can or a gauze swab (Fig. 8). To collect the flowing liquid, use a tray, which the patient himself holds under his chin. You can wash your eyes in a special glass with a stem (undinka) (Fig. 9).



Rice. 8.Eye wash.

Fig.9.Eye wash cup (undinka)

It is necessary to remember that a separate sterile swab is taken for each eye. After manipulating the patient's eyes, the nurse should thoroughly wash their hands with soap and treat them with alcohol.

Walking patients take care of their nose independently during the morning toilet. Seriously ill patients who are unable to maintain nasal hygiene must clear the nasal passages of secretions and crusts that form. The nurse should do this daily. To do this, wrap cotton wool around a metal probe (or take a cotton swab), moisten it with petroleum jelly, insert it into the nasal passage and remove the crusts with rotational movements (Fig. 10).

Rice. 10.Nose care.

It must be remembered that crusts cannot be removed with dry cotton wool, because... may cause bleeding.

Patients on a general regimen wash their ears independently during their daily morning toilet routine. Patients on bed rest have their ears cleaned 2-3 times a week to prevent wax plugs from forming. Earwax falls out of the ear in the form of lumps or crumbs. It can accumulate in the ear canal and form wax plugs, which can dramatically reduce hearing (Fig. 11, 12).

Fig. 11.Ear care

Rice. 12.Instillation of 3% hydrogen peroxide into the ears to soften wax plugs.

Seriously ill patients may develop bedsores - necrosis

(necrosis)skin with subcutaneous tissue and other soft tissues, developing as a result of constant compression, impaired local circulation and nervous trophism. The formation of bedsores is facilitated by the lack of mobility of the patient, poor quality care of the patient's skin, uncomfortable bed, and infrequent re-making of it (Fig. 13).

Rice. 13.Skin care for seriously ill patients.

Every cell of the human body needs the supply of oxygen, water and nutrients and the removal of waste products from it. Blood brings necessary substances to cells and carries away waste. The metabolism necessary to maintain the life of the cell takes place. The movement of blood throughout the body occurs as a result of the work of the heart.

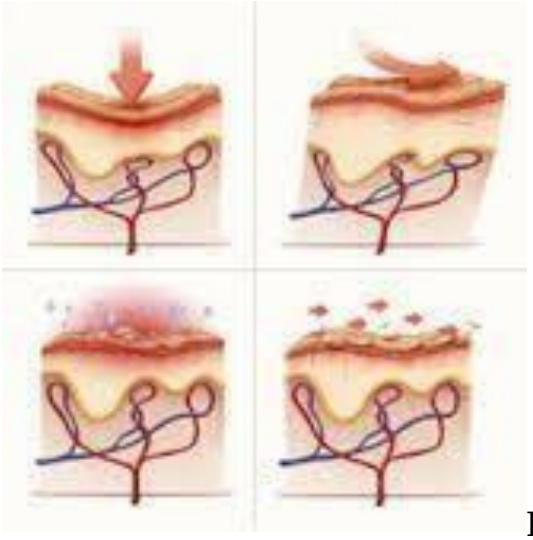


Fig. 14.Vessels of the microvasculature of the skin.

The vital exchange of oxygen, nutrients and other waste products occurs as long as blood moves through the

capillaries (Fig. 14). The formation of bedsores is caused by disruption of blood flow in the capillaries, which are located at the points of contact of the skin with the surface of the bed, where a flattening zone is formed. These are places where blood flow is disrupted in compressed areas of the skin. If blood flow is blocked for a long time, a significant number of cells die. Over the course of several days, dead cells disintegrate, resulting in tissue necrosis - a bedsore (Fig. 15).

In the occurrence and development of bedsores, the leading role belongs to two factors:

- deep trophic disorders in the body;
- prolonged compression of soft tissues.

Fig. 15.Bedsores on the back.

It must be remembered that the formation of bedsores can be facilitated by compression of soft tissues if the patient's body rests against hard objects (headboard, side restraint on the bed, etc.).

If the patient has impaired mobility, any hard object that puts pressure on the skin can be dangerous. Buttons, knots on clothing, pins and other small objects caught in the bed can create areas of strong pressure on the patient's body and block

blood movement. Poorly applied splints, bandages, and catheters also contribute to the formation of bedsores. Skin damage can occur in a patient in bed when he rests his elbows and heels on its surface, trying to move. He slides, rubbing his elbows and heels on the sheets, causing a “burn” from the injury. A similar situation occurs when an immobile patient is pulled along the bed, causing friction between the skin and the sheet.

An ordinary adhesive plaster can also be dangerous for the skin. If applied unevenly, it will stretch the skin, forming folds. When the patch is removed from the surface of the skin, the epidermis is torn off, which makes the skin thinner and more easily damaged.

Bedsores are divided into two groups:

1. Exogenous
2. Endogenous.

Exogenous bedsores can be external or internal. External exogenous bedsoresoccur when soft tissues are compressed (especially if they do not contain muscles - for example, in the area of the ankles, tubercle of the calcaneus, condyles and trochanters of the femur, olecranon, etc.), between the bone (usually a bony protrusion) and any external object (mattress surface, bandage, splint, etc.). In the overwhelming majority of cases, such bedsores occur in operated patients who are in a forced position for a long time, in trauma patients with an incorrectly applied plaster cast or splint, an inaccurately fitted prosthesis, corset, or medical orthopedic apparatus (Fig. 16).

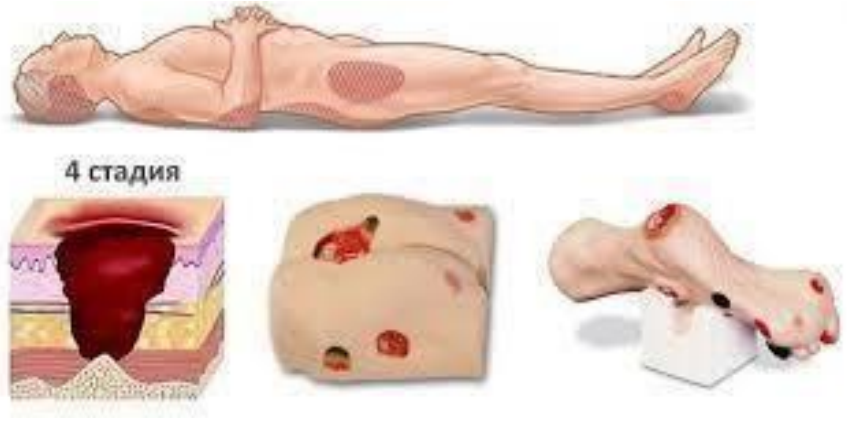


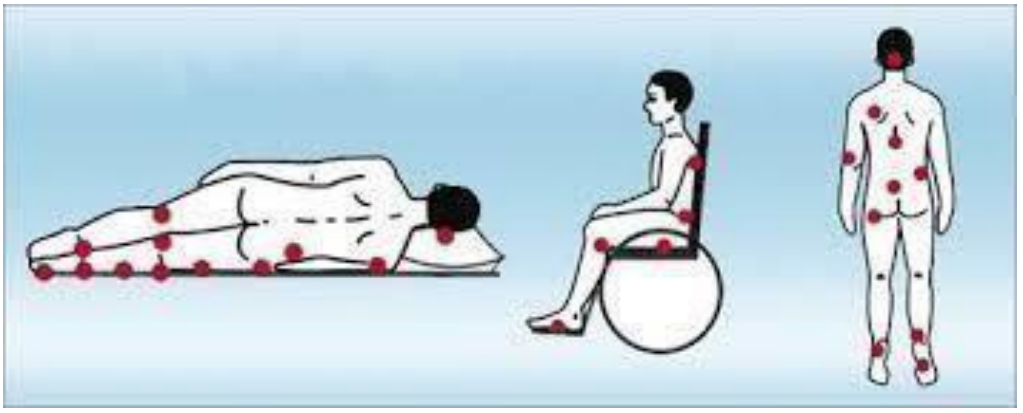
Fig. 16.Bedsores.

Internal exogenous bedsoresoccur in the walls of the wound, in the mucous membrane of an organ, in the wall of a vessel as a result of a long stay in the depths of the wound or the corresponding organ of rigid drainage tubes, a dense tampon, a tracheotomy tube, a denture, or a catheter.

In the occurrence of endogenous bedsores, the main role is played by the factor of weakening of the body, profound disruption of its basic vital functions and tissue trophism. They are divided into two groups:

1. Mixed
2. Neurotrophic.

Endogenous mixed pressure ulcersoccur in exhausted, seriously ill patients with profound circulatory disorders, often suffering from diabetes mellitus, who are forced to lie motionless in bed for a long time, without the strength to independently change the position of the body or its individual parts (legs, arms). In this case, even slight pressure in a limited area leads to ischemia of the skin and underlying tissues and the formation of pressure sores. Bedsores occur (Fig. 17):



Rice. 17.Places of formation of bedsores.

- when the patient is positioned on his back - in the area of the tubercles of the heel bones, sacrum, shoulder blades, on the back surface of the elbow joints, less often over the spinous processes of the thoracic vertebrae and in the area of the external occipital protrusion;
- when the patient is positioned on his stomach - on the anterior surface of the legs, especially above the anterior edges of the tibia, in the area of the patellas and superior anterior iliac spines, as well as at the edge of the costal arches;
- when the patient is positioned on his side - in the area of the lateral malleolus, condyle and greater trochanter of the femur, on the inner surface of the lower extremities in places where they are closely adjacent to each other;
- when the patient is forced to sit, in the area of the ischial tuberosities.

The first sign of bedsore formation- pallor of skin areas followed by redness, swelling, and peeling of the epidermis. Then blisters and skin necrosis appear. In severe cases, necrosis occurs not only in soft tissues, but also in the periosteum and superficial layers of bone substance. The addition of infection can cause sepsis and lead to the death of the patient (Fig. 18).

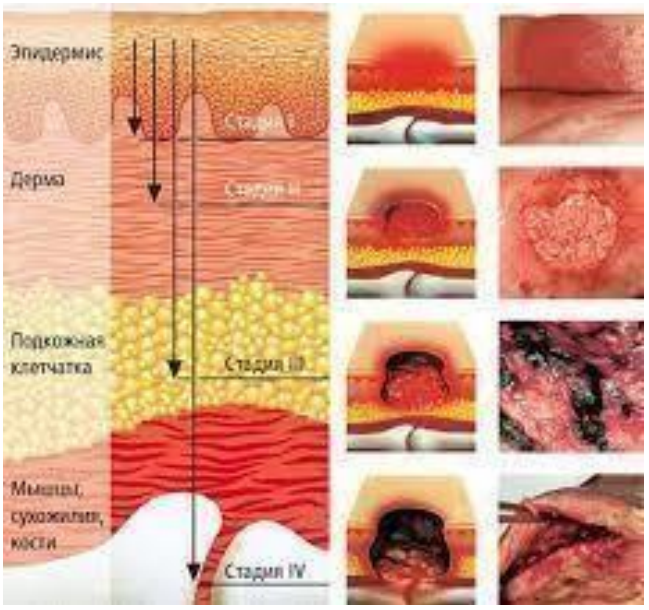


Fig. 18.Stages of bedsore formation.

In the development of necrobiotic processes in bedsores, three stages are distinguished:

1 stage (Art. I, II Fig. 18)(circulatory disorders) – characterized by pallor of the corresponding area of the skin, which is quickly replaced by venous hyperemia, then cyanosis without clear boundaries; the tissues take on a swollen appearance and are cold to the touch. At this stage, with the exogenous development of bedsores, the process is still reversible: eliminating tissue compression usually leads to normalization of local blood circulation. With a bedsore of endogenous origin (and with continued pressure on the tissue with an exogenous bedsore), at the end of stage 1, bubbles appear on the skin, which, merging, cause detachment of the epidermis with the formation of excoriations.

At this stage, patients rarely complain of severe pain; more often they note mild local soreness and a feeling of numbness. In patients with spinal cord injury, erythema may appear within a few hours, and after 20-24 hours small areas of necrosis already appear in the sacral area.

2 stage (st III, IV Fig. 18)(necrotic changes and suppuration) – characterized by the development of the necrotic process. In addition to the skin, subcutaneous tissue, fascia, tendons, etc. can undergo necrosis. With exogenous

Bedsores are more often observed to form dry necrosis, the rejection of which occurs with the participation of a saprophytic infection; with an endogenous bedsore, an inflammatory process caused by pathogenic microflora develops, and wet gangrene develops with symptoms of intense suppuration.

In the case when a bedsore develops as a dry necrosis, the general condition of the patient is not noticeably aggravated, and intoxication phenomena do not occur. A strictly limited area of skin and underlying tissues is subject to mummification; there is no tendency for necrosis to expand in area and depth. After several weeks, the mummified tissue begins to gradually be rejected, and the wound heals. This clinical course of a pressure ulcer is most favorable for the patient.

When a bedsore develops according to the type of wet necrosis, the dead tissues acquire a edematous appearance, and a foul-smelling, turbid liquid is released from underneath them. In the decaying tissues, pyogenic or putrefactive microflora begins to rapidly multiply and wet gangrene develops, called decubital gangrene.

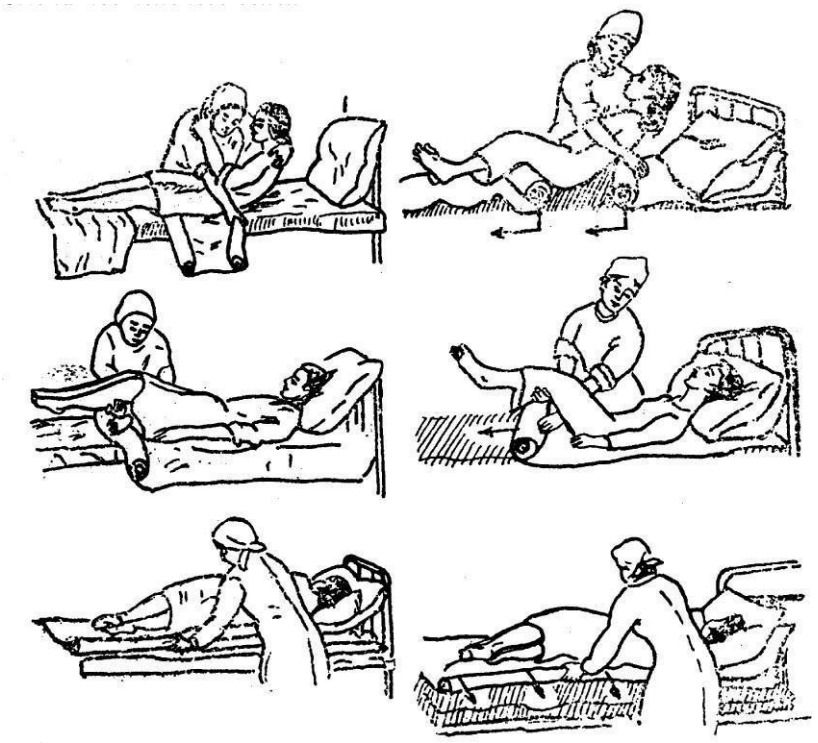
The process of decay and suppuration spreads across the area and deep into the tissues, quickly reaching the bones, which are often exposed in the area of bedsores. Decubital gangrene leads to a serious deterioration in the general condition of the patient. Clinically, this is manifested by signs of purulent-resorptive fever - a rise in temperature to 39-40 ° C, increased breathing, tachycardia, muffled heart sounds, decreased blood pressure, and enlarged liver. Leukocytosis with neutrophilia, anemia, accelerated ESR are detected in the blood; dysproteinemia; proteinuria, hematuria, pyuria.

Bedsores can be complicated by phlegmon, abscess, purulent streaks, erysipelas, purulent tendovaginitis, arthritis, gas phlegmon, anaerobic infection, cortical osteomyelitis, etc. The most typical complication for severely weakened patients is the development of sepsis.

3 stage (healing)- characterized by the predominance of reparative processes, the development of granulation tissue, partial or complete epithelization of the defect. The clinical picture may vary depending on the etiology of the bedsore, the patient's condition, the presence of pathogenic microflora, and the nature of necrosis.

Practical skills.

***Change of bed linen*(Fig. 19).**



Rice.19.Change of bed linen. Explanations in the text.

For a seriously ill patient, bed linen can be changed in two ways.

First way:

1) roll the dirty sheet into a roll from the side of the patient's head and legs;

2) carefully lift the patient and remove the dirty sheet;

3) Place a clean sheet rolled up in the same way under the patient's lower back and straighten it.

The second method (longitudinal method, performed by one nurse). ***Target:***changing bed linen for patients on bed rest.

Equipment: a set of clean linen (pillowcase, sheet, duvet cover, oilcloth, diaper); gloves; oilcloth bag for used bedding
linen

*Required conditions:*compliance with infection safety, correct biomechanics of the patient's body and the nurse when moving the patient in bed.

Preparation for the procedure:

1. Explain the procedure to the patient and obtain consent.
2. Prepare a set of clean linen: roll the sheet lengthwise into a roll (if necessary, roll up an oilcloth lining, a diaper).
3. Wear gloves and place a dirty laundry bag nearby.
4. Lower the head of the bed to a horizontal level (if the patient's condition allows).
5. Make sure that there are no small things of the patient in the bed (if you find them, remove them and notify the patient about this).

Execution of the procedure.

1. Stand on the side of the bed, lower the rails.
2. Remove the duvet cover from the blanket, temporarily cover the patient with a clean duvet cover, fold the blanket and hang it on the back of the chair (make sure that the clean bedding you prepared is nearby).
3. Go around the bed, stand on the opposite side, release the edges of the sheet from under the mattress.
4. Turn the patient on his side towards you.
5. Raise the side rail (the patient can support himself in a lateral position by holding onto the rail).

6. Return to the opposite side of the bed, release the edges of the sheet from under the mattress on this side.

7. Raise the patient's head and adjust the pillow.

Note: If there are drainage pipes, make sure they are not kinked.

8. Roll up a dirty sheet towards the patient’s back and slip this roll under his back (if there is an oilcloth with a diaper, roll them together with the sheet into a roll).

Note:if the patient’s skin is heavily contaminated (with secretions, blood), wet wipe the skin.

9. Cover the edge of the bed with a clean sheet rolled into a roll, roll out the roll along the length of the patient's back and slip it under his back.

10. Help the patient roll over the sheets towards you, making sure they are lying comfortably and that the drainage tubes are not kinked.

11. Raise the other side rail.

12. Return to the opposite side of the bed and lower the handrail.

13. Remove the dirty sheet by rolling it up while unrolling the clean sheet.

14. Tuck a clean sheet under the mattress at the head of the bed using the “corner bevel” method, then tuck in the top third, bottom third of the sheet, placing your hands palms up.

15. Place dirty laundry in an oilcloth bag.

16. Straighten a clean sheet (if necessary, oilcloth with a diaper, make sure that the diaper covers the edges of the oilcloth).

17. Help the patient turn onto his back and lie in the middle of the bed.

18. Place the blanket into the clean duvet cover that covered the patient.

Note:place the blanket on top of the duvet cover. Ask the patient to hold the top edge of the duvet cover, insert and straighten the duvet so that it hangs equally on both sides of the bed.

19. Tuck the edges of the blanket under the mattress.

20. Change the pillowcase in the usual way, removing the pillow from under the patient's head.

21. Elevate the patient's head and shoulders and provide a pillow.

22. Raise the side rail of the bed.

End of the procedure.

1. Remove gloves, place them in a container for disinfection, wash and dry your hands.

2. Make sure the patient is lying comfortably.

***Vessel delivery*(Fig.20).**

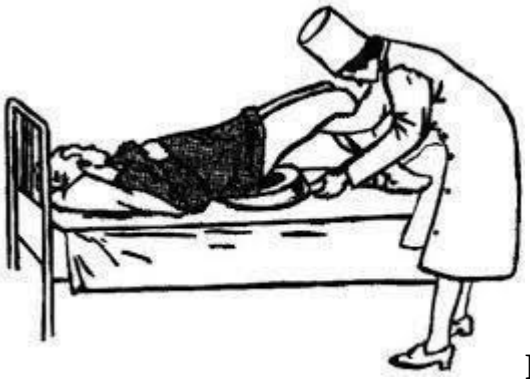


Fig.20.Delivery of a vessel to a seriously ill patient.

Equipment: boat, 2 marked oilcloths - "for ships", "backing oilcloth", diaper, screen, toilet paper, 2 pairs of gloves, regulated disinfectant solution in containers marked accordingly

"disinfection of gloves", disinfection of oilcloths", "disinfection of vessels" are recommended.

Performanceprocedures.

1. Separate the patient from others with a screen and place an oilcloth under the basin.

2. Rinse the vessel with warm water, pour a small amount of disinfectant solution into the vessel.

3. Place your left hand under the patient's sacrum from the side, helping the patient raise the pelvis (his legs are bent at the knees).

4. With your right hand, move the vessel under the patient's buttocks so that the perineum is above the opening of the vessel.
5. Cover the patient with a blanket and leave him alone.
6. After defecation, pour the contents of the vessel into the toilet, rinsing the vessel with hot water (with powder) and a disinfectant solution.
7. Wash the patient, dry the perineum, remove the oilcloth.
8. Remove gloves and place in container for disinfection.
9. Wash the patient's hands and dry them
10. Wash the nurse's hands and dry them.

***Washing the patient*(Fig.21).**

Fig.21.Washing a seriously ill patient.

Goal: maintaining the patient's personal hygiene, preventing ascending infection.

Equipment: sterile: tray, forceps, napkins, oilcloth, diaper, soap, vessel, Esmarch jug or mug with water (water temperature 35-38oC), gloves.

Execution of the procedure.

Washing women.

1. Establish a friendly, confidential relationship with the patient.
2. Wear gloves.
3. Place an oilcloth and a diaper under the patient's pelvis, place the vessel under her sacrum on the oilcloth.

4. Help bend your knees and spread them slightly to the sides.
5. Stand to the patient's right.
6. Prepare a soap solution.
7. Take the rubber tube from Esmarch's mug or the jug in your left hand, and the forceps with a gauze cloth soaked in a soapy solution in your right hand.
8. Treat the external genitalia in the following sequence: first, wash the labia minora (with two different tampons or one large one, but on different sides), then the labia majora, inguinal folds, and lastly, wash the anus area, changing tampons each time.
9. Rinse the patient's perineum in the same sequence as washing.
10. Wash, rinse and thoroughly dry the patient's perineum and anal area.
11. Remove the vessel, oilcloth, take off gloves.
12. Straighten the bed linen and cover the patient.
13. Remove gloves, wash and dry your hands.

Washing men (Fig. 22).

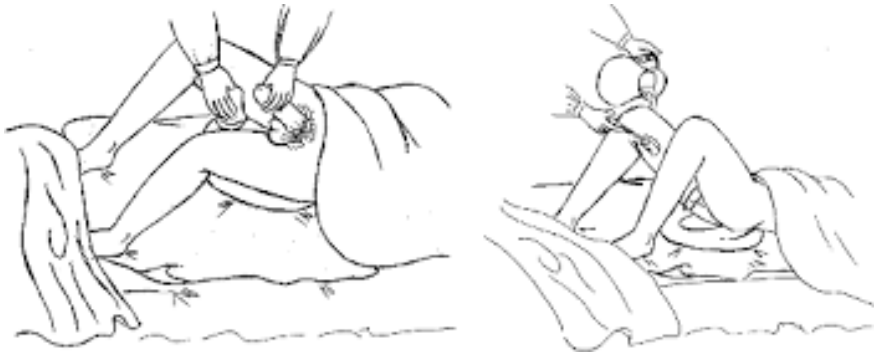


Fig.22.Technique for washing men on the left, women on the right.

1. Preparation for the procedure is the same as for women (see points 1-6).

2. Take the penis with one hand and pull back the foreskin.

3. Wash the head of the penis in a circular motion in the direction from the urethra to the pubic area and dry.

4. Return the foreskin to its natural position.

5. Carefully treat, rinse and dry the rest of the penis, the skin of the scrotum, anus, changing tampons.

6. Remove the vessel, oilcloth, take off gloves.

7. Straighten the bed linen and cover the patient.

8. Remove gloves, wash and dry your hands.

Washing the feet of a seriously ill patient in bed**(Fig. 23).**

Fig.23.Washing the feet of a seriously ill patient.

Equipment: oilcloth, basin with warm water, individual soap, sponge, towel, scissors, gloves.

Performanceprocedures.

1. Establish a friendly, confidential relationship with the patient.

2. Wash hands, dry.

3. Wear gloves.

4. Roll the mattress under the patient's knees with a bolster.

5. Lay down an oilcloth and place a basin with warm water.

6. Wash the patient's feet in the basin using an individual sponge and soap.

7. Dry your feet with a personal foot towel.

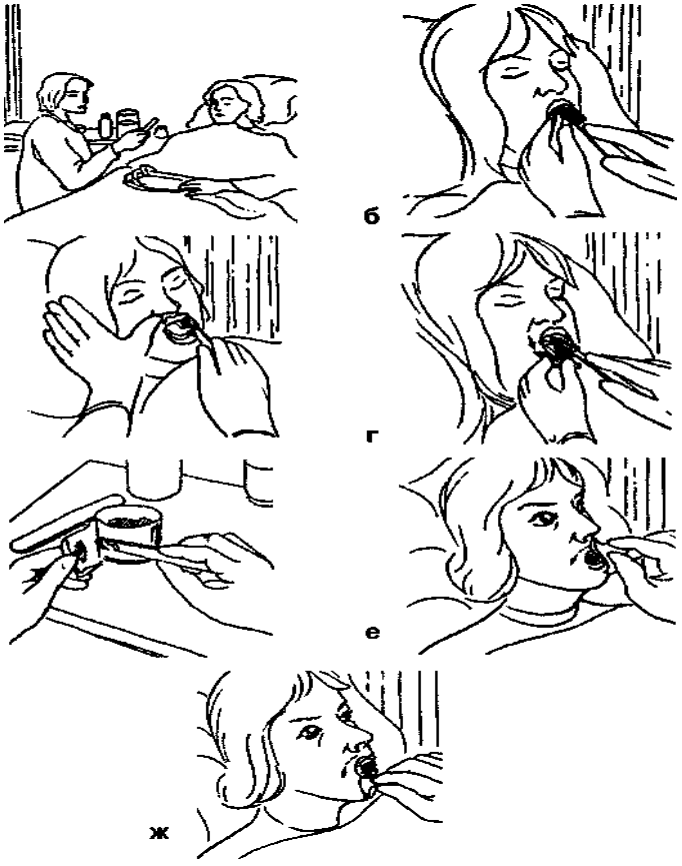
8. Trim your nails.

9. Disinfect scissors.

10.Remove all foot washing items and straighten the mattress.

11.Remove gloves, wash and dry hands.

***Oral care*(Fig.24).**



Rice. 24.Caring for the oral cavity of a seriously ill patient.

Caring for the oral cavity of an unconscious patient.

Goal: preventionstomatitis, caries, periodontitis.

Equipment: sterile – tray, 2 spatulas, napkins, mouth dilator; a glass with rinsing solution, two towels, gloves - 2 pairs, adhesive tape, scissors, a clean tray, a toothbrush, Vaseline or lip cream, a cup, a paper napkin, a container for disinfecting gloves.

Performanceprocedures.

1. Wash and dry your hands.

2. Pour an antiseptic solution into a cup to treat the oral cavity.
3. Wrap a napkin around the spatula and secure it with adhesive tape.
4. Sit opposite the patient, turn his head towards you so that his face is on the edge of the pillow.
5. Raise the patient's head and place a pillow underneath it.
6. Cover the patient's chest and neck with another towel and place the tray under the chin.
7. Wear gloves.
8. Carefully open the patient's mouth, making sure there are no dentures.
9. Insert the first and third fingers of one hand between the upper and lower teeth.
10. Press the upper and lower teeth with these fingers, opening the patient's mouth wider, and place a spatula or mouth opener between the teeth.

Note:prevent damage to teeth when opening your mouth.

11. Wrap a napkin around your index finger, holding it with your thumb, fix it securely and moisten it in an antiseptic solution.
12. Treat the palate, the inner surface of the cheeks, teeth, gums, tongue, and the space under the tongue, then the lips with a napkin fixed on the index finger.

Note:change napkins as they become contaminated with mucus, plaque, and sticky saliva. Dispose of used wipes in a disinfectant solution. You can use a soft brush (without toothpaste!) to clean your teeth.

13. Apply Vaseline or other lip cream to your lips.
14. Remove used items.
15. Remove gloves and discard them in the disinfectant solution.
16. Place the patient in a comfortable position.
17. Wash your hands and dry.

Test questions for topic No. 4.

1. Define the concept of personal hygiene of the patient.
2. What concerns the patient’s personal hygiene.
3. What function does the skin of the body perform?
4. What is skin hygiene?
5. What are the rules for caring for the perineum?
6. Describe the technique for washing patients.
7. How to properly care for patients' hair.
8. Why do you need to maintain oral hygiene?
9. How to care for your eyes.
10. How to care for your ears.
11. How to care for the nasal cavity.
12. Define the concept of bedsores.
13. Describe the pathogenesis of bedsore formation.
14. What complications can develop when bedsores form?
15. Describe the stages of bedsore formation.
16. How to change bed linen for a patient.
17. How to deliver a bedpan to a patient.
18. How to wash the feet of a seriously ill patient in bed.

Topic No. 5

Nutrition of the sick.

A. Diet.
B. Drawing up a requirement.
B. Characteristics of the main treatment tables.

The student must have an understanding of:

1. Organizationsfeeding patients in the department.
2. The role of nutrition in the treatment of the patient.
3. Rules for drawing up portion requirements.
4. Diet tables.
5. Artificial nutrition.
6. Parenteral nutrition.

The student must have the following skills:

1. Conducting conversations with patients about the essence of the prescribed diet.

2. Feed a seriously ill patient from a spoon and sippy cup.
3. Introduce a nutrient mixture into the rectum of a seriously ill patient.

Nutrition -This is one of the necessary physiological needs of the human body. “Let your food be your medicine,” instructed Hippocrates (Fig. 1). With food, a person receives biologically active compounds (BACs) - proteins, fats, carbohydrates, as well as water, mineral salts, trace elements, vitamins - substances necessary for normal cell metabolism.

Rice. 1. Hippocrates.

When broken down through the process of catabolism, BAS release heat (energy), which is measured in calories. 1 calorie (kcal) corresponds to the amount of heat that is necessary to heat 1 kg of water by 1° C. The calorie content, or energy value of products, is calculated using special tables.

The science of rational nutrition is called dietetics, and diet determines the diet, composition and quantity of food. Diet therapy is the therapeutic nutrition of a patient during treatment. Therapeutic nutrition is based on the teachings of I.P. Pavlov, who proved the need for timely food intake, the importance of not only the calorie content of food, but also the appearance of the dishes and even the persons serving them. Meals should be regular, nutritious, varied and

moderate. A healthy person receives per day about 150 g of proteins, 100 g of fats, 400-500 g of carbohydrates, 1500-2000 ml of liquid, about 10 g of NaCl, the required amount of K, Ca, Fe, Mn and other trace elements, as well as vitamins The diet should contain about 40-50 g of ballast substances - dietary fiber (Fig. 2).

Rice. 2. Ratio of essential nutrients.

The body's need for food is regulated by appetite and the feeling of satiety. Monotonous food can suppress appetite even in a healthy person. Food must be well prepared so that it is easily digested and absorbed. If there are no contraindications to various seasonings and spices, then to improve the taste they can be added to the patient's food (Fig. 3).

Rice. 3.Explanations in the text.

Meals in hospitals are carried out 4 times a day, for heart diseases, gastric and duodenal ulcers - 5-6 times a day at a certain time, without haste. The temperature of hot dishes should be about 60°C, cold food 10-15°C (Fig. 4).

Fig.4.Explanations in the text.

Food in medical institutions is of a therapeutic nature. Some patients are prescribed enhanced nutrition (those with malnutrition, pregnant and nursing mothers), others are recommended complete fasting (uncontrollable vomiting, bleeding in gastric ulcers). Some patients limit the consumption of certain foods, for example, fatty foods for diseases of the gallbladder and liver, rough, spicy foods for stomach diseases, table salt for arterial hypertension, kidney diseases, fluids for edema. All these dietary features are reflected in 15 treatment tables from 1 to 15, some of them have their own departments (see the textbook by V.N. Oslopov, O.V. Bogoyavlenskaya "General care for therapeutic patients," 2009 pp. 104 - 136).

Diet -a special diet, diet, compiled for a patient as a method of treatment or to prevent complications.

In most medical and preventive institutions there is a centralized system, in which all processes of processing raw materials and preparing food are concentrated in the central catering unit (Fig. 5).

Fig.5.Food department of the district hospital.

The departments are supplied with food by special personnel using intrahospital transport, which is equipped with thermal insulation containers (Fig. 6).

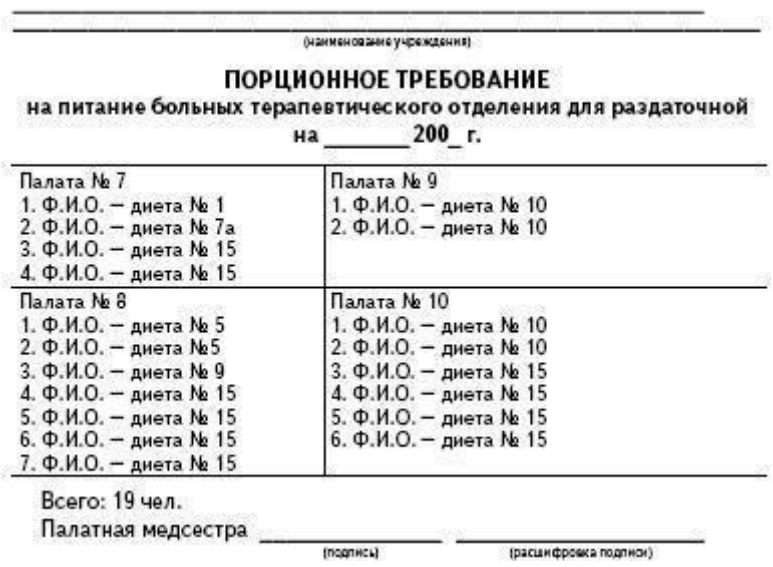
Fig.6.Distributing food to department nurses.

To monitor the nutrition of patients in large hospitals there are nutritionists, and in departments there are dieticians; their functions can be transferred to the head nurse of the department.

Every day, based on medical prescriptions, the nurse draws up portion requirements for the nutrition of patients in the department. This document contains information about the number of different dietary tables and individual diets per department. The work of the catering unit is planned based on the portion requirements of all departments of the hospital (Fig. 7, 8).

The department has a pantry where patients eat food. The barmaid must keep food containers properly clean. The tanks are installed on a special

Fig.7.Portion requirement.



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_____

(наименование учреждения)

ПОРЦИОННОЕ ТРЕБОВАНИЕ

на питание больных терапевтического отделения для раздаточной

на _____200_ г.

Палата № 7 1. Ф.И.О. – диета № 1 2. Ф.И.О. – диета № 7а 3. Ф.И.О. – диета № 15 4. Ф.И.О. – диета № 15	Палата № 9 1. Ф.И.О. – диета № 10 2. Ф.И.О. – диета № 10
Палата № 8 1. Ф.И.О. – диета № 5 2. Ф.И.О. – диета №5 3. Ф.И.О. – диета № 9 4. Ф.И.О. – диета № 15 5. Ф.И.О. – диета № 15 6. Ф.И.О. – диета № 15 7. Ф.И.О. – диета № 15	Палата № 10 1. Ф.И.О. – диета № 10 2. Ф.И.О. – диета № 10 3. Ф.И.О. – диета № 15 4. Ф.И.О. – диета № 15 5. Ф.И.О. – диета № 15 6. Ф.И.О. – диета № 15

Всего: 19 чел.

Палатная медсестра _____ _____

(подпись) (расшифровка подписи)

Rice. 8.Portion requirement(sample)

cial mobile tables with a heating device and are delivered to the pantry or ward (Fig. 9).

Fig.9.Mobile table for distributing food in wards.

There should be stoves in the department's pantry to heat food if necessary. Tableware is stored in the pantry in special cabinets, washed in special sinks twice with hot water and mustard or soda, always disinfected with a 0.2% clarified solution of bleach, then rinsed with hot water and placed in drying cabinets. After meals, tables are cleared, and after dinner they are washed with hot water and soap. The pantry should have refrigerators for storing butter, milk and other perishable foods. Food waste is collected in separate closed buckets or bins. In summer, the windows in the pantry should be covered with a fly screen. The presence of cockroaches and flies in the pantry indicates its poor sanitary condition (Fig. 10).

Fig. 10.Distributing food in a hospital department.

Patients on general treatment eat their own meals in the pantry, which has tables for 2-4 people. They are seated according to the principle of dietary tables (Fig. 11).

Rice. eleven.Canteen in a hospital department.

Patients with limited mobility eat food in the ward. Before eating, the nurse helps the patient wash his hands and makes him sit comfortably in bed.

Fig. 12.Bedside table for a seriously ill patient.

To feed bedridden patients, bedside tables are used, which are placed on the bed in front of the patient at different levels. The patient's neck and chest are covered with an apron or napkin. It is necessary to ensure that the patient does not have objects that suppress appetite (jars of sputum, foul-smelling medications, etc.) in sight of the patient while eating.

Feeding of seriously ill patients is carried out by medical personnel. Weak patients are given a semi-sitting position by adjusting the functional bed. Seriously ill patients are fed in the most comfortable position for them. Bedside tables are used to feed patients (Fig. 12). The patient's head should be slightly elevated to avoid aspiration of food. Weakened patients are spoon-fed. The caregiver is located to the right of the patient's bed. With his left hand he lifts the patient’s head along with the pillow, and with his right hand he brings a spoon to his mouth. Food should be given

in small portions, pureed or crushed. For drinking and taking liquid food, special sippy cups are used (Fig. 13, 14 a, b)

. **Fig. 13.Feeding a seriously ill patient**.

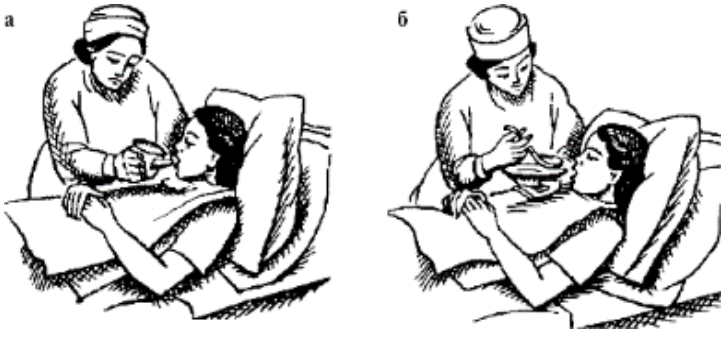


Fig.14 a, b.Feeding is difficult sick.

When nutrition is not possible through natural means, food is introduced into the stomach or intestines through a tube or stoma, through an enema. When this is not possible, then nutrients are administered into the rectum or parenterally (Fig. 15).

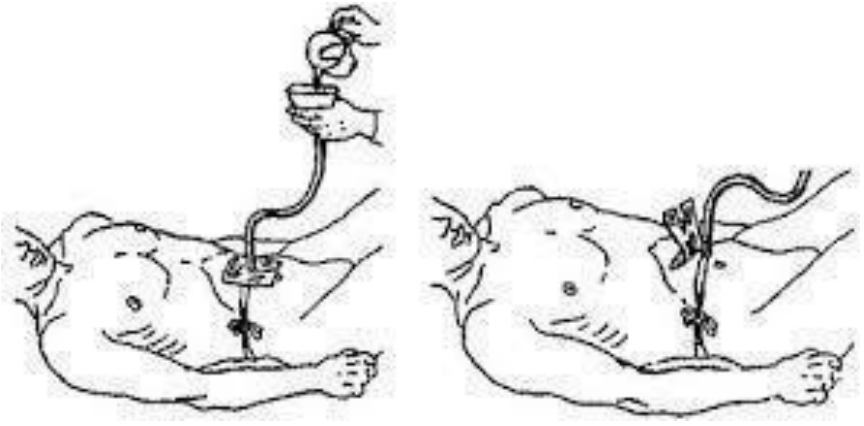


Fig. 15.Nutrition through a stoma.

With artificial nutrition, the daily calorie content of food should be about 2000 calories, the ratio of proteins - fats - carbohydrates: 1: 1: 4. The patient receives water in the form of water-salt solutions, on average 2 liters per day. Vitamins are added to food mixtures or administered parenterally. Only liquid food can be administered through a probe or fistula: milk, broth, cream, raw eggs, melted butter, slimy or pureed vegetable soup, liquid jelly, fruit juices, tea, coffee.

Nutritional formula recipes:

A. Liquid nutritional mixture: 2000 – 2500 ml water, 250 g milk powder, 200 g sugar, 4-6 g salt.

B. Spasokukotsky mixture: 400 ml of warm milk, 2 raw eggs, 50 g of sugar, 40 ml of alcohol, a little salt.

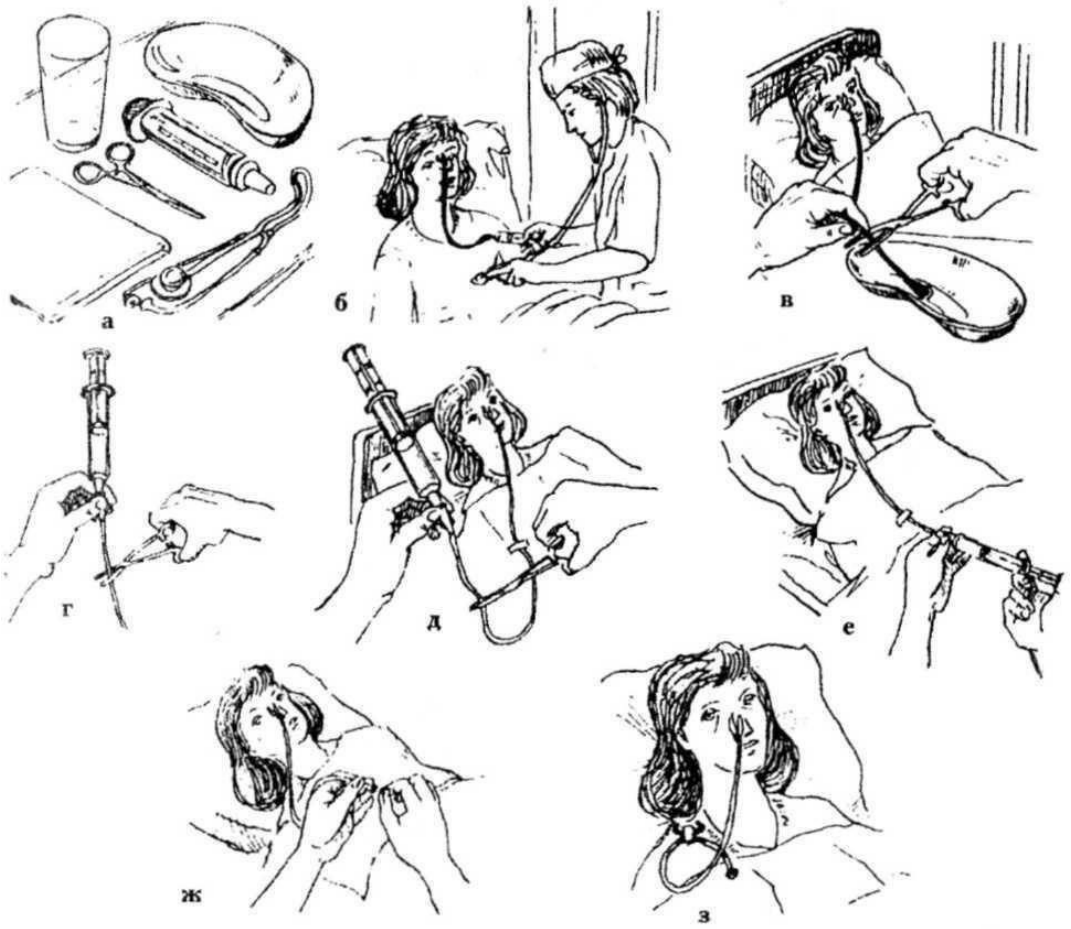
Water-salt solutions: the concentration of salts in them is the same as in human blood plasma:

A. The simplest water-salt solution of 0.85% isotonic sodium chloride solution.

B. Rintger-Locke solution: NaCl - 9 g, KCl - 0.2 g, CaCl2 - 0.2 g, H2CO3 - 0.2 g, glucose - 1 g, H2O - 1000 l.

Patients who cannot chew independently (for some oral diseases) or refuse food (for mental illnesses) have to be fed through a gastric tube. The probe is inserted through the lower nasal passage to a depth of 15-18 cm, moving it slowly along the inner wall of the pharynx - into the esophagus. If the probe enters the larynx instead of the esophagus, the patient begins to have a sharp cough, and air escapes through the probe when breathing. When the probe enters the esophagus, a funnel or Janet syringe is placed on the free end of the probe. Various nutrients are poured through it (broth, cream, milk, fruit jelly, juices) in the amount of 2-3 glasses (Fig. 16 a-h).

а-з –Кормление через НГЗ шприцем Жанэ



Rice. 16.Stages of feeding a seriously ill patient through a nasogastric tube.

In cases where liquid food does not pass through the esophagus (burns or tumors of the esophagus), patients are fed through a specially created gastric fistula. Then the probe is inserted directly into the stomach.

Feeding patients can also be done using nutritional enemas.

Nutrient enema- introduction of nutrients through the rectum. This is one of the types of artificial nutrition, since meat broth, cream, proteins, amino acids, vitamins, alcohol, isotonic sodium chloride solution, and glucose solution are absorbed in the lower part of the large intestine. The volume of a nutritional enema should not exceed 200 g. They are given after the rectum has been emptied with a regular enema. After that, straight

5% glucose solution or 0.85% sodium chloride solution heated to 36-40°C is injected into the intestine. These solutions are administered 100-200 ml 3-4 times a day.

If the patient does not retain solutions well, then add 5-6 drops of opium tincture. However, the use of nutritional enemas is currently limited, since only water, saline, glucose solution, alcohol and minimal amounts of amino acid are absorbed in the lower intestines. In addition, the volume of a nutritional enema should not exceed one glass. 30-40 minutes before the introduction of nutrients, the patient must undergo a cleansing enema.

In severe conditions of patients, nutrient solutions can be administered parenterally, preferably intravenously. Usually a 40% glucose solution is used, blood is transfused, plasma, plasma substitutes, hydrolysates (polyamine, Vamin, Aminosol, etc.) are administered, which contain the necessary amino acids. 2-3 liters of liquid are administered per day.

In During meals, the ward should be clean, patients should be calm. If the patient falls asleep, he should be woken up. However, if the patient has been administered narcotic drugs or sleeping pills, he should not be woken up.

To comply with all the rules of medical nutrition, strict control must be exercised over the food products received to feed patients in the hospital, and over the products brought by visitors. This is monitored by nursing staff. The ward nurse should have a list of patients indicating the number of the treatment table they are receiving. Instructions should be posted in the emergency department and hospital departments indicating the quantity and type of products that patients are allowed to eat. The wards must have refrigeration

nicks for storing food; Doctors and nurses need to systematically check the quality of food in refrigerators and bedside tables.

In the nightstands you can store soap, toothpaste, a toothbrush in a case or a cellophane bag, magazines, and newspapers. Sweets, jam, and cookies are stored on another shelf of the nightstand.

Fruits and perishable foods are stored in the refrigerator. Fermented milk and dairy products are stored for no more than 2 days.

Canned meat and fish products should not be stored in the refrigerator.

Practical skills.

Feeding a seriously ill patient from a spoon or sippy cup (Fig. 14 a, b).

Indications: bed rest, severepatient's condition.

1. Ask the patient in what order he prefers to eat.

2. Test the temperature of hot drinks by placing a few drops on the back of your hand. It is better to give drinks through a straw.

3. Give liquids to drink when there is no solid food in the mouth.

4. Wash your hands and the patient’s hands (or wipe with a damp towel) and dry.

5. Cover the patient's chest or neck with a napkin or towel.

6. Place warm food on the bedside table or bedside table (you cannot place the plate on the patient’s chest!).

7. Give the patient a comfortable position (if possible) - sitting or semi-sitting.

8. Raise the patient's head with the left hand along with the pillow (if a sitting position is not possible), and with the right hand bring the sippy cup or spoon with food to the mouth.

9. Feed the patient.

10. Wipe the patient's lips and chin with a (wet) towel moistened with water, and wipe with the dry end of the towel.

11. Remove the dishes, shake off the crumbs from the bed, and place the patient in a comfortable position.

12. Wash and dry your hands.

Administration of nutritional enemas.

Indications: Inability to use normal oral nutrition, diseases accompanied by obstruction of the pharynx, esophagus, and cardia of the stomach.

Nutrient enemas are carried out in the same way as medicinal ones.

*Equipment:*Esmarch's irrigator; a rubber, enamel or glass tank with a capacity of up to 2 liters with a rubber tube, at the end of which there is a tap that regulates the flow of water; clean glass or ebonite tip; wooden spatula (stick) for lubricating the tip with Vaseline; rubber can with a capacity of 200 g; petrolatum; nutrient liquid.

Contraindications: inflammation in the colon, bleeding hemorrhoids, rectal prolapse, gastric and intestinal bleeding.

Progress of manipulation.

1. 30-40 minutes before performing a nutritional enema, do a cleansing enema until the intestines are completely emptied.

2. Fill Esmarch's mug 2/3 full with water at room temperature.

3. Close the tap on the rubber tube.

4. Check the integrity of the edges of the tip, insert it into the tube and lubricate it with Vaseline.

5. Open the screw on the tube and release some water to fill the system.

6. Close the tap on the tube.

7. Hang Esmarch's mug on a tripod.

8. Place the patient on a trestle bed or bed closer to the edge on his left side with his legs bent and pulled up to his stomach.

9. Place an oilcloth under the buttocks, lower the free edge into a bucket.

10. Spread the buttocks and carefully insert the tip into the rectum with a rotational movement.

11. Open the tap on the rubber tube.

12. Gradually introduce water into the rectum.

13. Monitor the patient's condition: if abdominal pain or the urge to stool occurs, lower the Esmarch mug to remove air from the intestines.

14. When the pain subsides, raise the mug again above the bed until almost all the liquid comes out.

15. Leave a little liquid so as not to introduce air from the mug into the intestines.

16. Carefully remove the tip with a rotating motion while the tap is closed.

17. Leave the patient in a supine position for 10 minutes.

18. A walking patient should be sent to the toilet to have a bowel movement.

19. Place a bedpan on the patient who is on bed rest.

20. After bowel movements, wash the patient.

21. Cover the bedpan with oilcloth and take it to the toilet room.

22. It is convenient to lay the patient down and cover him with a blanket.

23. Rinse Esmarch's mug and tip thoroughly and disinfect with a 3% chloramine solution.

24. Heat the injected liquid to 38-40 °C.

25. Pour the heated nutrient liquid into the bottle until 1-2 drops of liquid appear from it.

26. Lubricate the end of the can with Vaseline.

27. Place the patient on his left side with his knees bent.

28. Having filled the bottle with nutrient liquid, remove the air until liquid appears outside, gradually pressing on the bottle.

29. Spread the patient's buttocks.

30. Insert the end of the can into the rectum.

31. Gradually, under slight pressure, squeeze the liquid out of the can until it is completely empty and remove the end of the can.

32. After the enema, treat the anus area.

33. Leave the patient lying in bed for about 1 hour. If the urge to stool appears, recommend that he breathe deeply through his nose.

34. Store the tips in clean jars with cotton wool at the bottom, and boil the tips before use.

Diet tables according to Pevzner.

*Diet tables*are nutritional systems that are focused on improving the health of various organs and systems of the human body through the consumption of the most healthy foods. A medical diet is a therapeutic diet based on the correct selection of products, the use of the most optimal culinary processing, calculating the safe temperature of consumed dishes, as well as the appropriate frequency of meals. At the beginning of the 20th century, the Soviet therapist M.I. focused on the nutrition of the patient as a way to cure many diseases. Pevzner (Fig. 17). It was he who in 1920 developed dietary tables, which are still used by domestic medical institutions.

Rice. 17.M.I. Pevzner

Under the leadership of M. Pevzner, many medical diets were developed, including hyposensitizing, anti-inflammatory, “magnesium”, “potassium”, etc. Research of that time in the field of dietetics made it possible to make therapeutic nutrition an important element in the complex treatment of not only diseases of the digestive system, but also other systems.

In the table diets of Professor M.I. Pevzner, the interests of the most seriously ill were taken into account, therefore, in the case of a milder form of the disease, with the permission of the doctor, small deviations from the principles of a certain medical nutrition system are possible.

All health care and health resort institutions use a numbered diet system. Many of them have several options, for example, No. 1a, 16, No. 7a, 76, 7c, 7d. Since these diets are found in hospitals and sanatoriums, we introduce you to them, keeping the numbering indicating the diseases for which they are prescribed.

If the exacerbation of the disease has passed and the patient has returned to an active lifestyle, the general principles of the diet should not change: first of all, this applies to foods excluded from the diet, but you can expand the methods of culinary processing (stew, bake after boiling), and include home-canned vegetables. The lack of vitamins can be compensated for with ready-made pharmaceutical forms (hexavit, dekamevit, gentavit, etc.), rosehip decoction, and wheat bran. Prohibited in all diets

alcoholic drinks; in individual cases, the question of their use is decided by the attending physician.

When one patient has a combination of two diseases that require dietary nutrition, nutrition is prescribed in compliance with the principles of both diets. Thus, during an exacerbation of a peptic ulcer in a patient with diabetes, diet No. 1 is prescribed, but with the exclusion of all foods contraindicated in diabetes.

Brief description of treatment tables (diets) according to M.I. Pevzner.

Diet No. 0 - If you have difficulty eating.

Diet No. 0used when it is difficult or impossible to eat solid food. Such conditions are observed in the postoperative period in the gastrointestinal tract, with disturbances of consciousness, for example, in infectious and febrile patients. Diet No. 0a has been developed, which provides maximum unloading and spares the digestive organs, preventing the phenomena of intestinal dyspepsia.

Diet No. 1 - For diseases of the esophagus, stomach and duodenum.

Indications for Diet No. 1: Peptic ulcer of the stomach and duodenum in the stage of fading exacerbation, during the period of recovery and remission (duration of dietary treatment is 3-5 months), acute gastritis during the recovery period and in the convalescence phase, chronic gastritis with secretory insufficiency in the acute phase, chronic gastritis with normal and increased secretion. This diet aims to moderately protect the stomach from mechanical, chemical and temperature aggression.

Diet option No. 1 has been developed:

Diet No. 1a.This table is recommended for maximum limitation of mechanical, chemical and thermal aggression on the stomach. This diet is prescribed for exacerbation of peptic ulcer disease, bleeding, acute gastritis.

Diet No. 1b.This table is for less severe, in comparison with table No. 1a, limitation of mechanical, chemical and temperature aggression on the stomach. This diet is indicated for mild exacerbation of gastric or duodenal ulcers, in the stage of subsidence of this process, for chronic gastritis.

Diet No. 1R(extended). The main indication for its use is peptic ulcer disease with an unfavorable, severe course and metabolic disorders.

Diet No. 2 - For diseases with gastric secretory insufficiency.

Indications for Diet No. 2: chronic gastritis with secretory insufficiency, acute gastritis during the recovery period, chronic enteritis and colitis after an exacerbation. The effect of this table on the body is to eliminate mechanical irritation of the stomach while maintaining chemical irritation to stimulate the secretory function of the stomach.

Developed diet option No. 2

Diet No. 2a. This diet is prescribed during the recovery period after acute colitis, enteritis, enterocolitis, gastritis, as well as for chronic gastritis with secretory insufficiency and preserved secretion. This diet aims to slightly limit mechanical and chemical irritants that irritate the mucous membrane of the gastrointestinal tract.

Diet No. 3 - For intestinal diseases with constipation syndrome

Indications for***Diet number 3***: chronic intestinal diseases with constipation. The diet is aimed at enhancing peristalsis and aims to empty the intestines with the inclusion of mechanical, physical and temperature stimuli in the diet. This diet is used for constipation caused by poor diet, without pronounced signs of intestinal irritation.

Diet No. 4 - For intestinal diseases with diarrhea syndrome

Indications for Diet No. 4: acute diseases and exacerbation of chronic intestinal diseases with severe diarrhea, condition after intestinal surgery. With the help of this diet, chemical, mechanical and thermal irritations to the intestines are limited in the diet. The diet is indicated for intestinal diseases that occur with diarrhea: dysentery, gastroenteritis during an exacerbation, chronic colitis during an exacerbation.

Diet options No. 4 have been developed:

Diet No. 4a.It is used for any intestinal diseases that occur with a predominance of fermentation processes. Sharply limits the content in the diet of all substances that irritate the intestines and enhance fermentation processes in it.

Diet No. 4b. This diet is used during periods of exacerbation of chronic and acute intestinal diseases, when intestinal diseases are combined with diseases of the pancreas, stomach, liver and biliary tract. This diet slightly limits the content of mechanical and chemical irritants of the receptor apparatus of the gastrointestinal tract in the diet.

Diet No. 4c.This diet is prescribed during the period of recovery after acute intestinal diseases as a transition table to general nutrition, as well as during the period of remission of intestinal diseases, when intestinal diseases are combined with diseases of the pancreas, stomach, liver and biliary tract.

Diet No. 4ag– Gluten-free diet. A special version of diet No. 4 is diet No. 4ag, intended for patients with celiac enteropathy, in whom the body loses the ability to digest gluten (a component of grain proteins) due to the absence of a specific peptidase in the epithelium of the intestinal mucosa, as a result of which gliadin is not broken down , which is part of gluten.

Diet No. 5 - For diseases of the liver, biliary tract and pancreasglands

Indications for Diet No. 5: chronic hepatitis of a progressive but benign course with signs of mild functional liver failure, chronic cholecystitis, cholelithiasis, acute hepatitis during the recovery period.

The diet is also used for chronic colitis with a tendency to constipation, chronic gastritis without severe disorders. The intended purpose of such a table is to relieve fat and cholesterol metabolism, spare liver function, and stimulate normal intestinal activity.

Diet options No. 5 have been developed:

Diet No. 5a. It is used at the stage of exacerbation of diseases of the liver and biliary tract, when they are combined with colitis and gastritis, chronic colitis (acute hepatitis, acute cholecystitis, cholangitis, exacerbation of chronic hepatitis and cholecystitis). After liver surgery. In this case, maximum sparing of the affected organs is achieved, normalization of the functional state of the liver and other digestive organs.

Diet No. 5b.With prolonged exacerbations of cholecystitis, especially with severe pain arising as a result of an acute inflammatory process in the gallbladder and surrounding tissues.

Diet No. 5p. The indication for use of this table is chronic pancreatitis. The purpose of application is to create maximum functional rest for the pancreas. Mechanical sparing of the stomach, duodenum and intestines, reducing reflex excitability of the gallbladder.

There are 2 options for diet No. 5p. Indications for first version of diet No. 5p- acute pancreatitis and chronic pancreatitis in the acute stage. Indications for seconddiet option No. 5p- acute pancreatitis in the phase of subsidence of the main manifestations of the disease, chronic pancreatitis in the phase of mild exacerbation.

Diet No. 5. The indication for the use of this table is postcholecystectomy syndrome in the acute stage, accompanied by concomitant duodenitis, exacerbation of chronic gastritis, hepatitis. Intended purpose: maximum sparing of the liver and other digestive organs, reducing the intensity of bile secretion.

Diet No. 5f or 5l/f. Indications for the use of this table are chronic liver diseases accompanied by bile stagnation, the condition after cholecystectomy with the presence of bile stagnation syndrome and hypomotor dyskinesia of the biliary tract. Purpose: enhancing bile secretion, improving hepatic-intestinal circulation of bile components, providing a lipotropic effect by introducing complete proteins and polyunsaturated fatty acids into the diet.

Diet No. 5p or diet P. The indication for the use of this table is dumping syndrome after gastric resection for peptic ulcer. Diet options developed

No. 5p (Diets R): mashed version, non-mashed version and an intermediate option.

Diet No. 6 - For gout and urolithiasis with oxaluria

Indications for Diet No. 6: gout, urolithiasis with the formation of stones from uric acid (uraturia), uric acid diathesis, oxaluria. Purpose: normalization of metabolism (purines), reduction of the formation of uric acid and its salts in the body, shift of urine reaction to the alkaline side, as well as normalization of all intestinal functions.

In case of exacerbation of gout, until the pain attack decreases, Diet No. 6 is recommended - ***Diet No. 6e***.

Diet No. 7 - For kidney disease

Indications for Diet No. 7: acute diffuse glomerulonephritis, during the recovery period, chronic nephritis without exacerbation. Intended purpose: sparing kidney function, lowering blood pressure, reducing edema, restoring water and electrolyte balance.

Various versions of Diet No. 7 have been developed:

Diet No. 7a- low protein. Indications: chronic nephritis with severe renal failure. The intended purpose of such a table is maximum kidney sparing, increased urination, unloading of protein metabolism, and anti-inflammatory effect.

Diet No. 7b.Indications: chronic kidney disease with severe azotemia. The purpose of such a table is to maximize the sparing of the kidney parenchyma, as well as to increase the amount of urine excreted and provide an anti-inflammatory effect.

Diet No. 7b.Indications: chronic kidney disease (glomerulonephritis, amyloidosis, renal tuberculosis, nephropathy of pregnancy), accompanied by nephrotic syndrome. Purpose: replenishment of protein loss, reduction of hypercholesterolemia, proteinuria, reduction and elimination of edema.

Diet No. 7a. Indicated for terminal conditions of chronic renal failure, i.e. while undergoing hardware treatment (artificial kidney).

Diet No. 7r. The indications for the use of this table are hyperuricemia, end-stage renal failure, when patients are on regular hemodialysis.

Diets No. 8Indications is the increased weight of the patient: varying degrees of obesity in conditions of performing mental or physical labor, in the absence of complications from the digestive organs, circulatory system and other systems requiring special diets. Purpose: impact on impaired metabolism, primarily lipid metabolism, to eliminate the progression of excess fat deposition.

Variants of Diet No. 8 have been developed:

Diet No. 8a. It differs from diet No. 8 in its greater calorie restriction. This diet is prescribed for a short period of time.

Diet No. 8 "0". The indication for the use of this table is obesity without concomitant diseases of the digestive organs and cardiovascular system. It is a more strict version of Diet No. 8 and No. 8a.

Diet No. 9 - For diabetes mellitus.PIt is used in the treatment of diseases such as mild to moderate type 2 diabetes mellitus, joint diseases, and a large group of allergic diseases. Purpose: creating conditions that contribute to the normalization of carbohydrate metabolism, determining the patient's tolerance to carbohydrates.

Variants of Diet No. 9 have been developed:

Trial Diet by V. G. Baranovis prescribed in the first stage of treatment for long-term diabetes mellitus until the doses of drug treatment are completed and the glycemic level is normalized.***Diet No. 9 b*** Recommended for patients with insulin-dependent diabetes mellitus receiving large doses of insulin.

Diets No. 9for patients with bronchial asthma intended for patients with bronchial asthma and other allergic diseases after usehypoallergenicdiets .

Diet No. 10 - For diseases of the cardiovascular system.

Indications for Diet No. 10: heart defects, cardiosclerosis, hypertension with mild signs of circulatory failure. Purpose: creating the most favorable conditions for blood circulation while simultaneously fully meeting the body's needs for nutrients and energy. This diet has found wide application and is used for diseases of the cardiovascular system in a state of compensation and subcompensation, as well as for kidney diseases.

Diet No. 10 options have been developed:

Diet No. 10a.Indications: diseases of the cardiovascular system, accompanied by circulatory failure stage II-III. The intended purpose of such a table is maximum unloading of the cardiovascular system in case of its diseases in a state of decompensation.

Diet No. 10b.Indications for the use of this dietary table are rheumatism with a low degree of activity, occurring without circulatory disturbances, as well as rheumatism in the attenuation phase.

Diet No. 10c. Indications: atherosclerosis of coronary, cerebral and peripheral vessels, atherosclerosis of the aorta, atherosclerotic cardiosclerosis, coronary heart disease. Purpose: slowing down the progression of the atherosclerotic process, restoring impaired lipid metabolism and general metabolism.

Diet No. 10r. The indication for use of this table is rheumatoid arthritis.***Diet No. 10g.***The indication for the use of this table is essential arterial hypertension.

Diet No. 10i.Indications: myocardial infarction. Purpose: acceleration of reparative processes in the myocardium, improvement of the function of the circulatory system as a whole, normalization of intestinal motor function.

Diet No. 11 - For exhaustion, anemia, tuberculosis.e

Indications for Diet No. 11: pulmonary tuberculosis, recovery period after a long serious illness, exhaustion, anemia. Purpose: fully meeting the body's needs for protein, fat, carbohydrates and essential nutritional factors, activating the body's immunobiological defense, increasing reparative processes in the affected organ, strengthening the body's defenses during recovery and increasing its resistance to acute and chronic infections.

Developedoptions for Diet No. 11taking into account the localization and nature of the tuberculosis process, the state of the digestive organs, and the presence of complications.

There is also***Diet No. 11o***- for burn disease. The diet is adequate to compensate for the protein and energy needs of the body for superficial burns with an area of no more than 10–20% of the body surface.

Diet No. 12 - For diseases of the nervous system

Indications for Diet No. 12: diseases of the nervous system, accompanied by its increased excitability. The intended purpose of such a table is a sedative effect on the central nervous system.

At present, it is practically not prescribed, since, depending on the nature of the disease of the nervous system and concomitant disorders in other body systems, various versions of diets No. 5, 10, 15 are recommended.

Diet No. 13 - For infectious diseases

Indications for Diet No. 13: acute infectious diseases, conditions after major operations (but not on the gastrointestinal tract). Purpose: activation of restorative-adaptive mechanisms and reparative processes in tissues. The diet is aimed at sparing the digestive organs, as well as at the speedy removal of microbial toxins from the body.

Diet No. 14 - For urolithiasis with phosphaturia.

Indications for Diet No. 14: urolithiasis with the release of phosphorus-calcium salts into the urine sediment (phosphaturia). Purpose: creating favorable conditions that prevent the precipitation of phosphorus-calcium salts in the urine and promote their removal from the body (promoting a shift in the acid-base balance towards acidity).

Diet No. 15 - General diet for patients without digestive system disordersthemes.

Indications for Diet No. 15: diseases in which there is no dysfunction of the digestive system and for which a special diet is not required. Purpose: providing adequate nutrition in a medical facility; in the absence of indications for prescribing special dietary treatment. A rational diet is intended for nutrition of practically healthy people during the period of recovery from various general diseases.

Standard diets usedin inpatient medical institutions of the Russian Federation

According to the "Instructions for organizing therapeutic nutrition in medical institutions" Order of the Ministry of Health of the Russian Federation No. 330 dated August 5, 2003 "On measures to improve therapeutic nutrition in medical institutions of the Russian Federation" is currently in medical treatment - Russian healthcare institutions use standard diets.

***The main version of the standard diet*.**

Indications for use of the main version of the standard diet: Chronic gastritis, peptic ulcer of the stomach and duodenum in remission. Chronic intestinal diseases with a predominance of IBS with predominant constipation.

Acute cholecystitis and hepatitis in the recovery stage. Chronic hepatitis with mild signs of functional liver failure. Chronic cholecystitis, cholelithiasis. Gout, uric acid diathesis, nephrolithiasis, hyperuricemia, phosphaturia. Type II diabetes mellitus without concomitant overweight or obesity. Diseases of the cardiovascular system with mild circulatory disorders. Hypertonic disease. IHD, atherosclerosis of the coronary arteries of the heart, cerebral, peripheral vessels. Acute infectious diseases. Feverish conditions.

This diet option replaced the following standard Diets according to M.I. Pevzner: No. 1, 2, 3, 5, 6, 7, 8, 9, 13, 14, 15.

Variant of the standard diet with mechanical and chemical sparing Indications for use*Variants of a standard diet with mechanical and chemical sparing*: Acute gastritis, chronic gastritis with preserved and high acidity in the phase of mild exacerbation. Peptic ulcer of the stomach and duodenum in the acute stage and unstable remission. Gastroesophageal reflux disease.

Disorders of the function of the masticatory apparatus. Acute pancreatitis, fading stage

exacerbations. Chronic pancreatitis, severe exacerbation. The recovery period after acute infections and after operations (not on internal organs).

This diet option replaced the following standard Diets according to M.I. Pevzner: No. 1b, 4b, 4c, 5p (1st option).

A variant of the standard diet with increased protein content (high proteindiet).

Indications for use of a variant of a standard diet with a high protein content: After gastric resection for peptic ulcer, 2–4 months in the presence of dumping syndrome, cholecystitis, hepatitis. Chronic enteritis in the presence of a pronounced impairment of the functional state of the digestive organs. Gluten enteropathy. Chronic pancreatitis is in remission. Chronic glomerulonephritis of the nephrotic type in the stage of fading exacerbation without impairment of the nitrogen excretory function of the kidneys. Diabetes mellitus type 1 and 2 without concomitant obesity and impaired nitrogen excretory function of the kidneys. Rheumatism with a low degree of process activity with a protracted course of the disease without circulatory impairment. Rheumatism in the stage of fading exacerbation. Pulmonary tuberculosis. Suppurative processes. Anemia of various etiologies. Burn disease.

This diet option replaced the following standard Diets according to M.I. Pevzner: No. 4e, 4ag, 5p (2nd option), 7v, 7g, 9b, 10b, 11, 1R.

A variant of the standard diet with a reduced amount of protein (low proteindiet).

Indications for use of a variant of a standard diet with a reduced amount of protein: chronic glomerulonephritis with severe and moderate impairment of nitrogen excretory function of the kidneys, severe and moderate azotemia. This diet option replaced the following standard Diets according to M.I. Pevzner: No. 7b, 7a.

A variant of a standard diet with reduced calorie content (low-calorie diet)eta)

Indications for use of a variant of a standard diet with a reduced calorie content: Various degrees of nutritional obesity in the absence of pronounced complications from the digestive system, circulatory system and other diseases requiring the prescription of special diets. Diabetes mellitus type 2 with obesity. Cardiovascular diseases in the presence of excess body weight.

This diet option replaced the following standard Diets according to M.I. Pevzner:

No. 8, 8a, 80, 9a, 10c.

Specialized diets

In medical practice, diets are used that are not included in the nomenclature of therapeutic diets according to M.I. Pevzner and "Instructions for organizing therapeutic nutrition in medical institutions."

Hypoallergenic diet.Diet

for pleurisy.

Diet after surgery on the esophagus.

Carrel's diet.

Potassium diet.

Magnesium diet.

Fasting diets.

The so-called "Fashion Diets" are very popular all over the world, proposed by various authors (doctors, artists, writers, etc.) to achieve some super-tasks. "Fashionable diets" are designed to reduce body weight, prolong life, and improve health. Most of these diets are not physiological, are deficient in many nutrients and are not recognized by official medicine.

Test questions for topic No. 5.

1. The importance of nutrition in the treatment of patients.
2. Daily requirement of a healthy person for nutrients.
3. Organization of nutrition for patients in medical institutions.
4. Methods of feeding patients.
5. Methods of artificial nutrition.
6. Basic dietary tables.
7. Describe the technique of spoon feeding a seriously ill patient.
8. What are the indications for administering a nutritional enema to a patient?
9. Describe the technique of performing a nutritional enema.

Topic No. 6.

The simplest physical procedures.

A. Ice pack.

B. Warming compresses. V.
Mustard plasters.
G. Grelka.

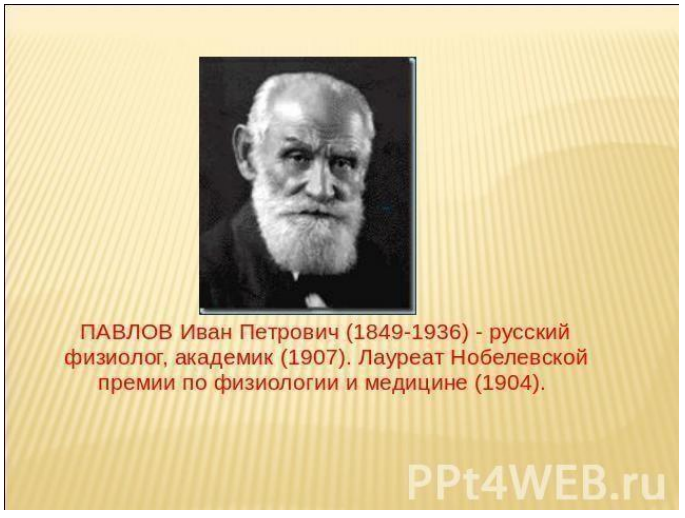
The student must have an understanding of:

1. The mechanism of action of the simplest physiotherapy procedures.
2. Indications and contraindications for placing an ice pack.
3. Ice pack technique.
4. Indications and contraindications for the use of warm compresses.
5. Application technique warm compresses.
6. Indications and contraindications for prescribing mustard plasters.
7. Technologystaging mustard plasters.
8. Indications and contraindications for the use of a heating pad.
9. Technique for using a heating pad.
10. Indications and contraindications for the use of medicinal baths.
11. Conditions for medicinal baths.

The student must have the following skills:

1. Setting up an ice pack.
2. Staging mustard plasters.
3. Make a heating pad.

The autonomic nervous system controls the activity of all organs, participating in the implementation of plant functions of the body (nutrition, respiration, excretion, reproduction, circulation of fluids), as well as provides trophic innervation (I.P. Pavlov) (Fig. 1).

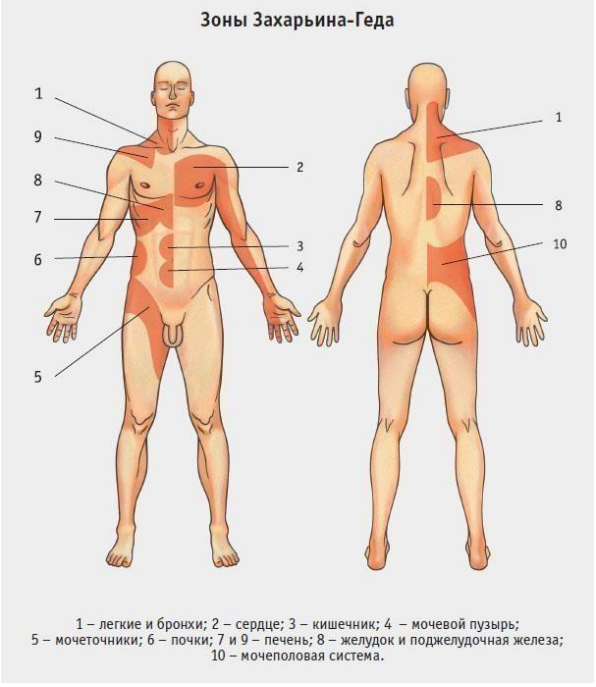


Rice. 1. I.P. Pavlov

The connection between the skin and internal organs was established by professors G.A. Zakharyin (1889) (Fig. 2) and Ged (H. Head, 1893).

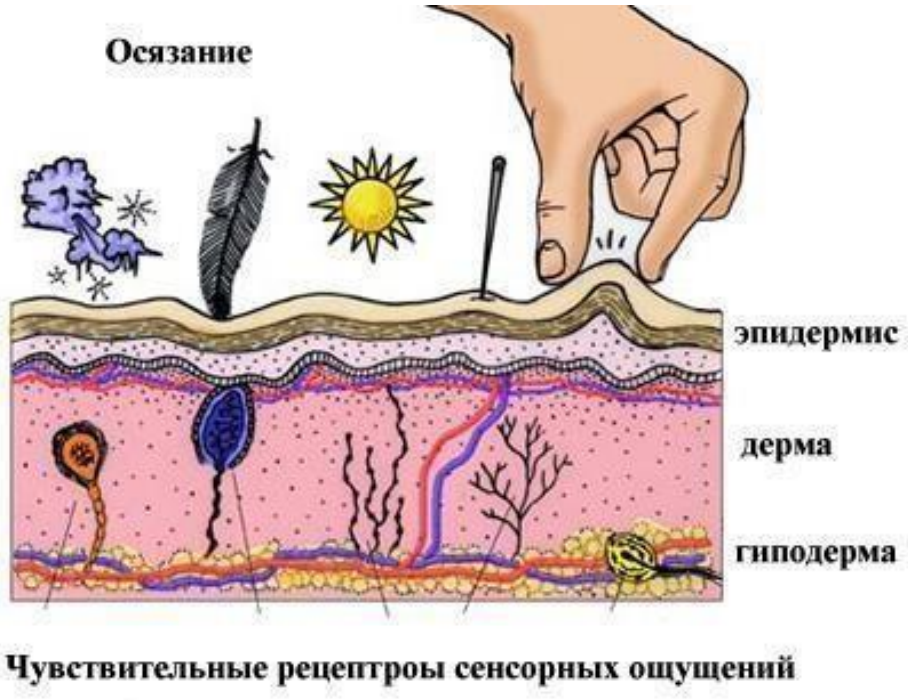
Fig.2. G.A. Zakharyin.

They showed that in diseases of the internal organs, in certain areas of the skin surface belonging to the same segments of the spinal cord, referred pain occurs (Zakharyin-Ged zones), accompanied by skin hyperesthesia. Doctors use influence on the active points of these zones to normalize the functions of internal organs (Fig. 3).



Rice. 3. Zakharyin-Ged zones.

Human skin is equipped with a large number of nerve endings that perceive various influences of the external environment (Fig. 4). Various physical factors (cold, heat, mechanical stress, pressure, etc.) when exposed to the skin of a person or a certain part of his body are able to cause a therapeutic effect in diseases of organs located below the site of manipulation. Such a therapeutic effect on the skin in order to change the functional state of underlying organs and systems is called physiotherapeutic procedures.



Rice. 4. Skin receptors.

Physiotherapeutic procedures refer to measures affecting blood circulation. Heat and cold are used to promote tissue repair. When nerve receptors are irritated by heat, the blood vessels dilate, which improves blood supply to the damaged part of the body. Thermal procedures have an anti-spastic and analgesic effect. The effect of heat on muscles with prolonged exposure is manifested by relaxation of their tone and increased fatigue. The reaction to heat does not extend to the entire body, but only affects the underlying tissues.

The use of heat can also cause adverse local effects (burns, swelling) (Fig. 5).

Fig.5. Complication when using a heating pad.

The primary effects of cold application are vasoconstriction and slowing down metabolism (Fig. 6). The body's response to cold consists of three phases:

- in the first phase, vasoconstriction occurs, the skin turns pale, becomes cold to the touch, blood moves to the internal organs, pain decreases;
- the second phase occurs in 1 minute or less, when vasodilation occurs, the skin acquires a pink-red color and becomes warm to the touch;
- if the effect of cold continues, the third phase begins, when the skin becomes purple-red, bluish, cold and the excitability of the nerves decreases, “goose bumps” appear.

Fig.6.Using an ice pack for bruises.

Prolonged exposure to cold causes poor circulation as well as tissue damage due to lack of oxygen.

Application of heat or cold may cause burns or tissue damage in the following patients:

1. Elderly patients due to decreased pain or temperature sensitivity.

2. Small children: their skin is very delicate, and they cannot always express their complaints in words.

3. Patients with diseases of the peripheral blood vessels, for example, diabetes mellitus, or arteriosclerosis of the peripheral arteries. In such patients, pain and temperature sensitivity of the skin is reduced, which further disrupts blood flow in the affected areas.

4. Patients with spinal cord damage, confused or unconscious due to the inability to perceive pain or temperature stimuli.

Ice pack It is a flat rubber bag with a wide opening and a lid; before use it is filled with chopped pieces of ice. In modern conditions, industry produces various configurations of medical ice containers, as well as chemical

packages that need to be kept in the freezer for a certain time before use (Fig. 7)

Fig.7.Ice pack.

Compress is a special therapeutic multi-layer bandage. Most often in practice, wet warming compresses are used. Warming compresses can be water, water-alcohol (semi-alcohol - salicylic, camphor, ethyl alcohol is added to water), oil, medicinal. A wet warming compress is used as a distracting and absorbent agent. A layer of water vapor, warmed to body temperature, forms between the skin and the wet tissue of the compress. A warming compress leads to a uniform and long-lasting dilation of blood vessels, which increases blood flow to the tissues, venous stagnation decreases, and, consequently, tissue swelling decreases. As a result of local warming and reflex effects, active tissue hyperemia occurs, which is associated with the therapeutic effect. The compress has a resolving and pain-relieving effect.

Mustard plastersare sheets of thick paper measuring approximately 8 X 12.5 cm, covered with a thin layer of defatted mustard seed powder or bags of compressed filter paper, between

layers of which contain mustard powder (Fig. 8)

Rice. 8.Mustard plasters

The active ingredient of mustard plasters is allyl isothiocynate, the so-called “essential mustard (allylic) oil,” which is part of mustard and is released from it at a temperature of 40-45°C. This substance causes irritation of skin receptors and its hyperemia, leads to the expansion of blood vessels located deeper than the internal organs, due to which an analgesic effect is achieved, and the resorption of certain inflammatory processes is accelerated.

On every tenth mustard plaster the expiration date of the entire batch is indicated.

They should be stored in a dry, dark place. Suitable for useMustard plaster has a pungent smell of mustard oil and does not crumble. Before using it, these qualities must be checked.

If incorrectWhen stored, mustard loses its properties.

Note!*Before using mustard plasters, check their expiration date and suitability for use: the mustard should not fall off the mustard plasters, the specificthe smell of mustard.*

Practicalskills.

Setting up an ice pack.

*Indications:*acute inflammatory phenomena in the abdominal cavity; bleeding; in traumatology in the first hours and days with bruises, fractures,

dislocations; periodfever; insect bites; mastitis; postoperative period; concussion.

*Contraindications to the use of cold:*chronic inflammatory processes, skin diseases.

*Equipment:*ice bubble, towel (diaper), tray with pieces of ice (Fig. 8).

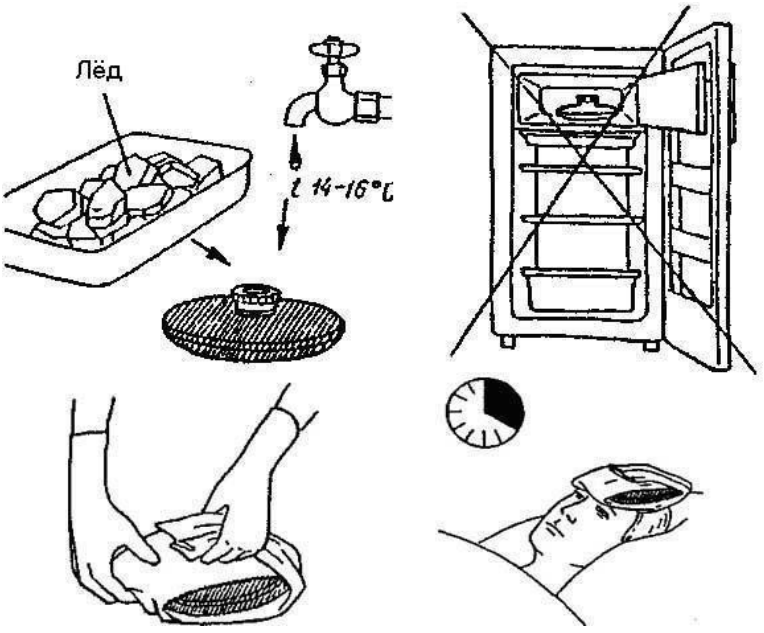


Fig.8.Using an ice pack.

Manipulation progress:

1. Determine whether the patient has had to undergo this procedure:

- if so, for what reason and how did he endure it;
- if not, then it is necessary to explain to the patient the essence of the procedure.

2. Obtain the patient's consent for the procedure.

3. Wash the hands.

4. Fill a wide-necked rubber bladder halfway with pieces of ice prepared in the freezer and add cold water.

Note: You cannot freeze water poured into a bubble in the freezer, since the surface of the resulting ice conglomerate is large, which can lead to hypothermia of a body area, and sometimes to frostbite.

5. Place the ice pack on a horizontal surface and screw on the lid.

6. Wrap the ice pack in a diaper folded in four and place it on the desired area of the body for 20 minutes.

Note: The bubble can be kept for a long time, but every 20 minutes you need to take a break for 10-15 minutes. Considering that an ice pack provides more pronounced cooling than a cold compress, in order to avoid hypothermia or pain from pressure, it is advisable not to apply an ice pack to the body, but to hang it (over the head, stomach, etc.), every half an hour with ten-minute breaks.

7. Drain the water as it melts in the bubble and add ice cubes.

8. At the end of the procedure, drain the water from the bladder.

9. Inquire about the patient's well-being.

10. Disinfect the bladder, then rinse it with water and dry it.

11. Wash the hands.

Medical documentation.

A. Indicate the type and duration of the cold treatment, as well as the area of the body subjected to it.

B. Describe the circulatory status and general appearance of the skin on the cooled area of the body before, during, and after the procedure.

IN. Assess the patient's response to the procedure: tolerance, pain relief, reduction in swelling or bleeding.

Instructions for the nurse.

A. During cold treatment, assess the condition of the skin on the cooled area at least once every 10 minutes.

B. Palpate the peripheral pulse distal to the cooled area; if cyanosis and spots on the skin appear or the patient complains of numbness, you should immediately inform the doctor.

IN. Avoid chills in the patient by exposing only the area of the body to be cooled and covering the rest with a bath sheet.

Applying a warm compress (Fig. 9a, b, c; 10).

*Indications:*local inflammatory processes: skin, subcutaneous tissue, infiltrates after injections, phlebitis, lymphadenitis, etc.; diseases of joints and periarticular tissues; inflammatory processes of the larynx; hematomas; bruises (one day after the injury); catarrhal otitis.

*Contraindications:*violation of skin integrity; bruises in the first hours and days; high fever; allergic and purulent rashes: dermatitis, pyoderma, furunculosis; neoplasms.

*Equipment:*compress (waxed) paper or plastic film, cotton wool, bandage, gauze folded in eight layers Fig. 9a), water at room temperature (22-25oC), or ethyl alcohol 40-45% or camphor oil, kidney-shaped tray, scissors.

Рис. 2. Согревающий компресс на грудную клетку: *1* — вата; *2* — клеенка; *3* — полотно.

Rice. 9.Warmingcompress. **Rice. 10.Warming compress.**

Progress of manipulation.

1. Determine whether the patient has had to undergo this procedure:

- if so, for what reason and how did he endure it;
- if not, then it is necessary to explain to the patient the essence of the procedure.

2. Obtain the patient's consent for the procedure.

3. Wash the hands.

4. Using scissors, cut off the required piece of bandage for the compress (depending on the area of application) and fold it into eight layers.

5. Cut a piece of compress paper: 2 cm larger than the napkin around the perimeter.

6. Prepare a piece of cotton wool around the perimeter that is another 2 cm larger than the compress paper.

7. Place the compress layers on the table, starting with the outer layer: at the bottom

– cotton wool, then compress paper (Fig. 9a).

8. Pour camphor oil or water at room temperature into a beaker, moisten a napkin, squeeze it lightly and place it on top of the compress paper.

Note: When applying a compress to the ear, cut the napkin and compress paper in the center.

9. Place all layers of the compress sequentially (napkin - compress paper - layer of cotton wool) on the desired area of the body. Do not apply a compress to skin lubricated with iodine.

10. Secure the compress with a bandage in accordance with the requirements of desmurgy so that it fits tightly to the skin, but does not restrict movement (Fig. 9 b, c).

Note: When applying a compress to the buttock area, it is better to fix it with adhesive tape or medical glue.

11. Remind the patient about the time to apply the compress:

- a water compress is applied for 8-10 hours;
- semi-alcohol – for 4-6 hours;
- oil – for 24 hours.

12. Wash the hands.

13. 1.5 – 2 hours after applying the compress with your finger, without removing the bandage, check the moisture level of the napkin. Strengthen the compress with a bandage.

14. Wash the hands.

15. Remove the compress after the prescribed time.

16. Wipe the skin with water or alcohol, then dry with a towel.

17. Inquire about the patient's well-being.

18. Wash the hands.

Medical documentation.

1. Indicate the duration of the compress, the start and end time, the type of compress, and the area of the body subjected to heat treatment.

2. Describe the condition of the patient's skin before and after the thermal procedure.

3. Describe the patient's reaction to the thermal procedure.

Instructions for the nurse.

1. When conducting a thermal procedure, it must be remembered that the nurse is obliged to ensure the safety of the patient.

2. Each thermal procedure must be carried out within the prescribed time frame.

3. Tell your doctor if your skin is sore or severely red after the procedure.

4. Be especially vigilant in patients at increased risk for burns or other skin damage. During the procedure, the nurse should stay with the patient, especially if he is immobile or suffers from impaired pain or temperature sensitivity. The nurse should check the condition of the skin of such patients every 5 minutes.

5. A nurse call button must be installed within reach of the patient.

INSTALLATION OF MUSTARD PLASTERS.

Target:*therapeutic: reflex expansion of blood vessels in deeply located organs and tissues, resorption of inflammatory processes, reductionpain relief, warming effect.*
Prerequisite:the manipulation is carried out in the ward.

***Indications*:**hypertensive crisis, angina pectoris, bronchitis during recovery, pneumonia in the resorption phase, intercostal neuralgia, myositis.

Places for placing mustard plasters (Fig. 10):

1. Back of the head (acute rhinitis, hypertensive crisis).
2. Upper part of the sternum (acute tracheitis, angina).
3. Interscapular area and under the shoulder blades (bronchitis, pneumonia).
4. Calf muscles (effective for acute inflammation of the upper respiratory tract)ny ways).

Rice. 10. Places for placing mustard plasters.

*Remember: you must avoid stagingmustard plasters*on nipples, mammary glands, spine, birthmarks, heart area
(with the exception of direct indications - pain in the heart area).

Contraindications:

1. Skin sensitivity disorders.

2. Pulmonary hemorrhages.

3. Diseases and damage to the skin in this area (pyoderma, neurodermatitis,eczema).

4. Increased body temperature above 38 °C.

5. Malignant neoplasms.

6. Blood diseases.

7. Bronchial asthma.

Equipment: mustard plasters, soap, towel, water thermometer for measuring water temperature, mustard plasters, water container, absorbent paper or cloth, napkins, tray for used material.

*Remember:*the water should not be higher than 40-45°C, since at higher temperatures mustard oil loses its properties; paper with printing ink and waterproof paper cannot be used.

Progress of manipulation.

1. Explain the procedure to the patient.

2. Wash your hands with soap and dry with a personal towel.

3. Remove the patient's shirt or lift it up to the neck.

4. Invite the patient to lie on his stomach, turn his head to the side, tuck his hair under a scarf or cover with a towel.

5. Pour water at a temperature of 40-45° C into the tray, immerse the mustard plaster in water for 1-3 seconds.

6. Remove it from the water, shake off the water slightly, and place it mustard side down in the place prescribed by the doctor. For highly sensitive skin, mustard plasters are applied with the reverse side or through paper or fabric. In this case, only the thermal effect is preserved.

7. Press the mustard plaster onto the patient's skin.

8. Cover the patient first with a towel or a sheet folded twice or three times, and a blanket on top.

9. Clarify the patient's sensations and determine the degree of hyperemia after 2-5 minutes.

10. Leave the mustard plasters for 5-15 minutes, taking into account the patient's individual sensitivity to mustard (until the persistent appearance of hyperemia).

11. Remove the mustard plasters and throw them into the waste tray,dry the patient's skin with a towel, remove the remaining mustard, and cover him warmly.

Test questions for topic No. 6.

1. Mechanismactions of the simplest physiotherapy procedures.
2. Effect on blood circulation of heat.
3. Effect of cold on blood circulation.
4. Indications and contraindications for the use of an ice pack.
5. Ice pack technique.
6. Indications and contraindications for the use of compresses.
7. Technique for applying a warm compress.
8. Indications and contraindications for the use of mustard plasters.
9. Technique for setting mustard plasters

Topic No. 7.

The simplest manipulations.

A.Enemas.

B.Gas outlet pipe.

The student must have an understanding of:

1. Types of enemas (cleansing, siphon, drip, radiopaque, medicinal, nutritional).
2. Contraindications and possible complications when performing various types of enemas.

The student must have the following skills:

1. Properpreparation for performing an enema.
2. Administration of enema regardless of purpose.

3. Installation of the gas outlet pipe.

Enema– a therapeutic and diagnostic procedure, which is a method of introducing liquid substances into the lower segment of the colon.

Therapeutic enemasare used for the following purposes:

1) for mechanical emptying of the colon (cleansing enemas);

2) for washing the colon (siphon enemas), medicinal effects on the colon;

3) for introducing water, medicines, nutrients into the body through the intestines (medicinal, nutritional enemas).

Diagnostic enemasallow you to determine the capacity of the colon and introduce a contrast agent for an X-ray examination of the colon. There are two ways to introduce fluid into the rectum: from a reservoir located above body level - hydraulic

way; injection using appropriate devices – injection method.

To perform a hydraulic (cleansing) enema, you must have the following:

1) a reservoir for injected liquid (Esmarch mug, glass funnel, rubber mug) with a capacity of one to 5 liters (Fig. 1, 2);

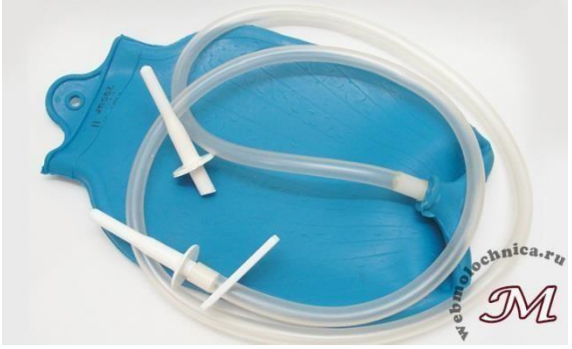


Fig.1.Esmarch's irrigator.

Rice. 2.Esmarch's mug in a modern modification.

2) a rubber tube conducting liquid, about 1.5 meters long, with a diameter of at least 1 cm;

3) an intestinal tip inserted into the lumen of the rectum, made of different materials (thick-walled rubber, ebonite, plastic), at least 15 cm long with a rounded intestinal end (Fig. 3, 4);

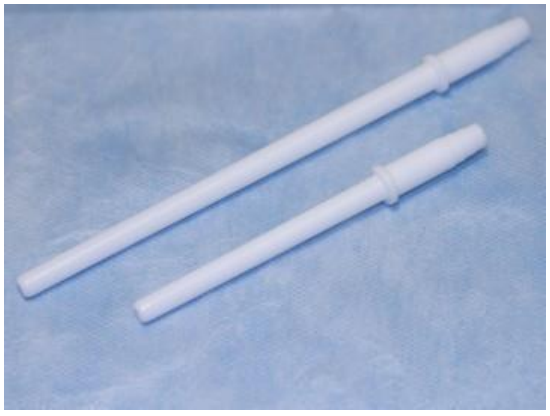


Fig.3.Disposabletips for enemas.

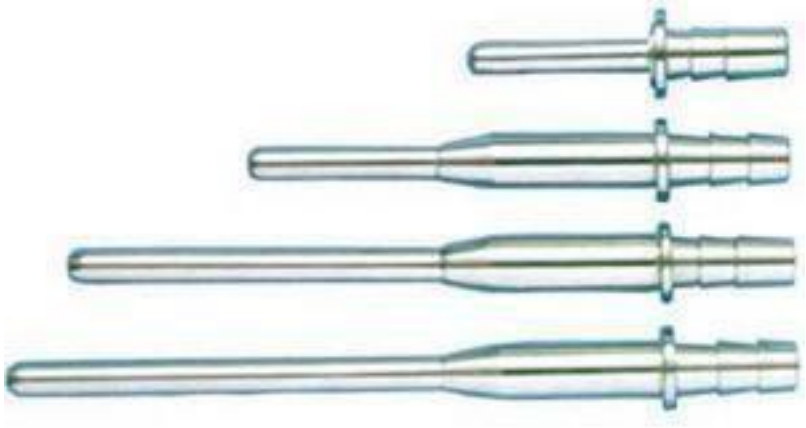


Fig.4.**Tips for Esmarch mugs.**

4) thermometer for measuring liquid temperature.

A special connecting tube with a tap is placed between the rubber tube and the tip, designed to regulate the amount of injected liquid (you can use a clamp to regulate the diameter of the tube lumen). On average, for an adult, take 1 - 2 liters of boiled water at a temperature from 12 to 42 C, depending on the type of constipation: for atonic constipation - a lower temperature, for spastic - a higher temperature, which has a relaxing effect. Usually take water at a temperature of 37 ° C, to enhance the effect add a soap solution - 1 tbsp. spoon of soap shavings + 2 tbsp. spoons of glycerin or vegetable oil.

Cleansing enemasused in the following cases:

1) with constipation and stool retention of various origins;
2) in case of poisoning of external and internal origin;
3) before operations, childbirth and x-ray examination of the abdominal and pelvic organs, as well as before the use of medicinal, drip and nutritional enemas.

*Contraindications*for the use of cleansing enemas are:

1) acute inflammatory, purulent and ulcerative processes in the anus, in particular acute appendicitis;
2) inflammation of the peritoneum;
3) gastric and intestinal bleeding, in particular bleeding hemorrhoids, disintegrating rectal cancer;
4) the first days after surgery on the pelvic and abdominal organs;
5) anal fissure and gaping, as well as rectal prolapse. The liquid administered by enema has mechanical, thermal, chi-

micronic effect on both peristalsis and emptying, and on feces, loosening and facilitating excretion.

Before using an enema, it is necessary to try other methods of stimulating the intestines. Teach the patient to sit with his thighs pressed to his stomach during defecation, allow enough time for defecation (while ensuring privacy), eat a large amount of plant fibers and drink enough fluids, and do physical exercises.

Siphon enemasare the optimal method for rapid bowel movement. Colon lavage is based on the principle of communicating vessels. One of these vessels is the intestine, and the other is a funnel inserted into the free end of a rubber tube, the other end of which is inserted into the rectum. To perform such an enema, you must have: a sterilized rubber tube 1.5 m long and 1.5 cm in diameter, at one end of which a funnel with a capacity of 0.5 liters is inserted, a reservoir with 5-10 liters of disinfectant liquid (weak potassium permanganate solution) or boiled water *temperature 38oC, as well as a bucket for draining water.*

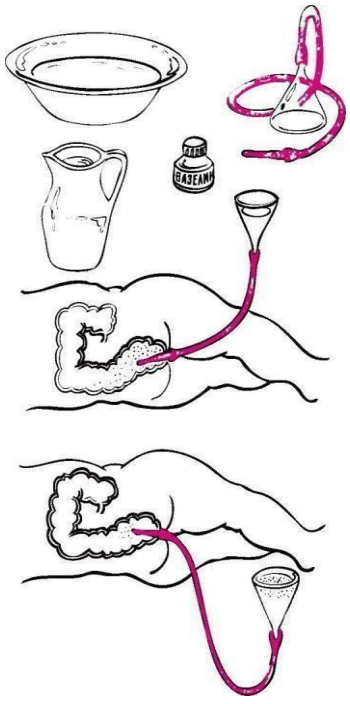


Fig.5.Carrying out a siphon enema.

In order for the siphon principle to be implemented, the funnel filled with liquid must be raised 0.5 m above the patient's body. After the liquid passes into the intestine (the level of decreasing water reaches the narrowing of the funnel), the funnel is lowered below the level of the patient's body and wait until it is filled with the contents of the intestine. The rise and fall of the funnel alternate.

Each time the funnel is raised, liquid is added to it. Thus, the intestines are washed until clean water comes out. In addition, it is necessary to carefully ensure that air does not get into the tube, which will disrupt the implementation of the siphon principle. If air gets into the tube, you must start the procedure again.

The amount of fluid released should be greater than the injected volume.

Enemas are performed using the pressure method using special rubber balloons with a capacity of 200–250 ml with a dense intestinal tip or a Janet syringe; currently complex pressure devices (Colongidromat) are also used (Fig. 6, 7).

Fig.6.Colon cleansing device.

Laxative enemas(oil and hypertonic) are used in cases where the administration of large quantities of liquid is accompanied by violent peristalsis, is undesirable or ineffective. For hypertensive

*enemas*Usually a 5-10% solution of sodium chloride, a 20-30% solution of magnesium sulfate or sodium sulfate is used. 100-200 ml of a warm solution is injected into the rectum using a rubber balloon - a "pear", which comes in different sizes and modifications. Oil enemas are used for persistent constipation. Vegetable oils are used for them: sunflower, hemp,

Fig.7.Room for bowel cleansing.

olive, Vaseline. For one enema, take 50-100 ml of oil heated to 37-38oC. The oil is usually injected using a rubber balloon, syringe or catheter, moving it 10 cm into the rectum. The oil spreads along the intestinal wall, envelops the stool, relaxes the intestinal muscles and promotes the excretion of stool. To prevent the oil from flowing out of the rectum on its own, the patient should lie quietly for 10-15 minutes.

Medicinal enemas. If administering drugs by mouth is impossible or contraindicated, they can be administered through the rectum, where they are absorbed and quickly enter the bloodstream through the hemorrhoidal veins, bypassing the liver. Medicinal enemas are divided into local and general enemas. The former are used for inflammatory processes in the large intestine, and the latter are used for introducing medicinal or nutritional substances into the body.

A cleansing enema is given 30-40 minutes in advance and only after bowel movement is the medicine administered. Medicinal enemas are mainly microenemas, since their contents should not exceed 50-100 ml. Medicinal substances are drawn into a 20-gram syringe, a Jeanne syringe, or a rubber container with a capacity of 50 to 100 g (Fig. 8, 9).

Fig.8.Conducting a medicinal enema.

Fig.9.Capacitiesfor performing a medicinal enema.

The temperature of the medicinal substance must be at least 40°C, since at a lower temperature, the urge to defecate occurs and the medicine does not have time to be absorbed. In order not to cause mechanical, thermal, or chemical irritation of the intestines, it is necessary to inject the medicine into it in a relatively low concentration, diluted in a warm isotonic solution of sodium chloride or with an enveloping substance (50 g of starch decoction). Most often, painkillers, sedatives, and hypnotic substances are administered in microenemas.

Nutrient enemasused in cases where it is impossible to administer nutrients through the mouth. This is one of the types of artificial nutrition. However, the use of nutritional enemas is very limited, since in the lower segment of the large intestine, a limited amount of nutrients is absorbed (water, isotonic sodium chloride solution, glucose and alcohol solutions, see topic No. 5).

Gas outlet pipeused for medicinal purposes, most often for flatulence of various origins (Fig. 10, 11, 12).

Fig. 10.Gas tube for newborns

Rice. 11. Vapor tube for adults.

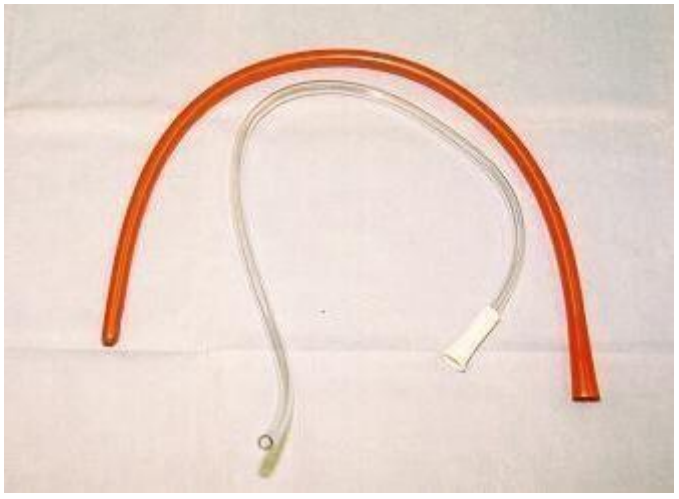


Fig. 12.Gas pipes.

Contraindications to the use of a gas outlet tube:

a) cracks in the anus;

b) dilated hemorrhoidal veins in the acute stage;

c) rectal prolapse;

d) inflammatory processes of the rectum and sigmoid colon; e)

recent colorectal surgery;

f) malignancy (or other diseases) of the perianal area; g)

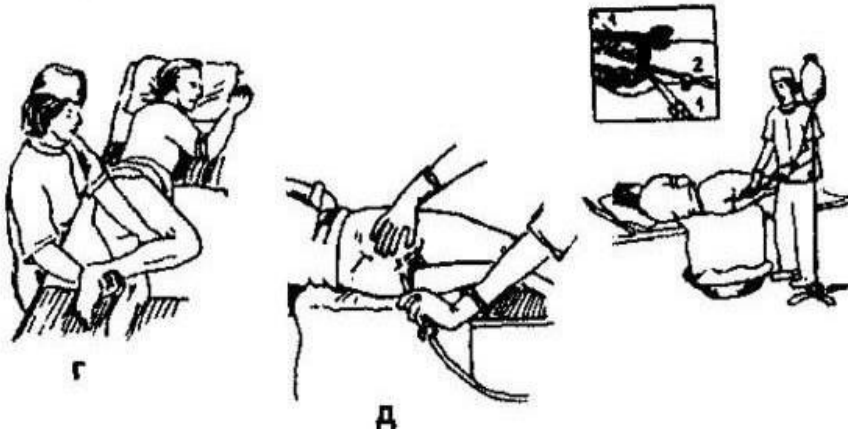
thrombocytopenia.

Intestinal bloating can occur after anesthesia, use of narcotic drugs, with a sharp change in the nature of food, as well as with a decrease in a person's physical activity. Intestinal bloating after surgery is very painful for patients.

Practical skills.

Conducting an enema.

*Equipment:*enema mug (or Esmarch mug), rubber tube with a clamp, water thermometer, petroleum jelly, oilcloth, bath towel, toilet paper, bedpan, disposable medical gloves, soft washcloth, plain towel, basin, tripod, appropriate enema solution.



Rice. 13.

Progress of manipulation (Fig. 13.a, b, c, d, e).

1. Help the patient take a position - lying on his left side with his right leg bent. Place the patient who is unlikely to be able to hold the enema on the bedpan, first placing an oilcloth under it (in this case, the patient should lie on his back).
2. The oilcloth is also placed between the thighs and under the patient's buttocks.
3. Cover the patient with a bath sheet so that only the buttocks remain exposed, and place the bedpan on the bed next to the patient.
4. Wash your hands, put on clean gloves, and pour the enema solution into the enema cup.
5. Open the clamp on the rubber tube and drain a small amount of liquid from the enema mug into the pan. Place the clamp back on the rubber tube and lubricate the tip of the tube (rectal catheter) with Vaseline.
6. Spread the patient's buttocks so that the anus is visible.
7. Ask the patient to take a deep breath and at this time insert the rectal catheter (tip) into the anus towards the navel.
8. Remove the clamp from the rubber tube so that the liquid from the enema mug flows slowly through the tube into the rectum. When using a one-time enema, squeeze the enema mug until the desired amount of water enters the rectum.
9. During the procedure, the enema mug should be held 45 cm above the level of the intestines. If the patient complains of abdominal pain or fullness of the large intestinal loops, stop the flow of fluid from the enema mug.
10. To do this, apply a clamp to the rubber tube, remove the rectal tip from the rectum and wipe the anal area with toilet paper.
11. Remove gloves and help the patient to the toilet room,

sit on a chair or put a bedpan on him so that he can get rid of feces and the liquid that has entered the large intestine.

12. Wear gloves and help the patient wash and dry the perianal area.

13. Dispose of disposable items in a special container.

14. Before emptying the vessel or flushing the toilet, inspect the patient's intestinal discharge and check for the presence of feces and water.

Medical documentation.

A)Specifytype of enema and amount of solution.

b)Describe the contents of the intestines released after the enema, its color, quantity, consistency, and the nature of the stool.

V)Note the occurrence of sharp pain or retention of fluid administered with the enema.

G)Write down how the patient experienced the enema.

Instructions for the nurse.

a. A patient with hemorrhoids must insert the enema tip into the rectum with caution, having previously lubricated it generously.

b. Do not give an enema to a patient with suspected appendicitis or obstruction. tion of the intestines.

c.If the patient is unable to control the activity of the sphincter directly wash your intestines, place a vessel under it and carry out the procedure in this way.

d.If the doctor's instructions indicate "enema to clean water," then it is necessary repeat the cleansing enema several times with a large amount of liquid until, after the enema, the discharge from the intestines looks like pure water, without admixtures of feces. In such cases, the patient

usually do no more than 3 cleansing enemas to avoid disruption of the water-salt balance.

Insertion of a gas tube into the rectum.

*Equipment:*rubber or flexible plastic tubes measuring 22-30 cm, a small plastic bag or jar for collecting stool for analysis, oilcloth, disposable medical gloves, adhesive tape (Fig. 14, 15, 16).

Rice. 14.Insertion of a gas tube into a newborn.

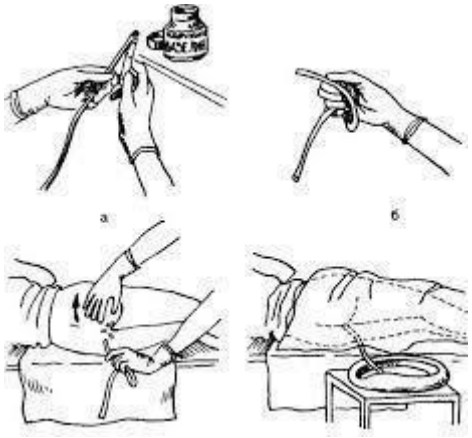


Fig. 15.Insertion of a gas outlet tube in the lateral decubitus position.

Movemanipulation.

a) Insert the distal end of the gas outlet tube into the cut of the plastic bag or the opening of the laboratory glassware and secure it with a strip of adhesive tape or an elastic band.

Fig. 16.Introduction of gas outlettubes in the supine position.

b) Wash your hands and put ongloves.

c) Help the patientlie on your left side, cover it with a bath sheet, leaving your buttocks open, under which you place an oilcloth.

d) Lubricate the tip of the gas outlet tube with Vaseline and insert it into the rectum to a depth of 10-15 cm towards the navel.

e) Attach the gas outlet tube with two strips of adhesive tape and leave it in this position for 15-20 minutes.

f) Remove the gas tube and, if necessary, wash and dry the patient's anal area.

g) Remove gloves and wash your hands.

h) If the gas outlet tube is reusable, wash it thoroughly and throw away the disposable one.

Medical documentation.

A)Specifytime of insertion and removal of the gas tube

b)Write down the amount, nature, and color of the stool that was released through the tube.

V)Note the presence or absence of abdominal bloating.

Instructions for the nurse.

a. If necessary, you can insert a gas outlet tube once every 2-3 hours.

b. Assess the degree of bowel distension before and after insertion of a gas tube.

V. After inserting the gas tube, ask the patient to change his body position in bed, and if possible, walk a little.

Test questions for topic No. 7.

1. Therapeutic enemas, what is their purpose.
2. Indications for the use of cleansing enemas.
3. Technique for performing cleansing enemas.
4. Indications for the use of siphon enemas.
5. Indications for prescribing medicinal enemas.
6. Indications for the use of a gas outlet tube.
7. Staging techniquegas outlet pipe.

Topic No. 8.

Laboratory and instrumentalresearch methods.

a) Research sputum.
b) Examination of material from the nose and throat.c) Research urine.
d) Research feces
e) Instrumental methods for studying the gastrointestinal tract.
f) Instrumental methods for studying the hepatobiliary system.
g) Instrumental methods for studying the urinary system.

The student must have an understanding of:

1. Meaninglaboratory examination of sputum.
2. Rules for collecting laboratory material (sputum) depending on the study being conducted.
3. Rules for collecting laboratory material from the throat and nose.
4. Types of laboratory tests of urine.
5. Rules for collecting urine depending on the type of study.

6. Types of laboratory tests of stool.
7. Rules for collecting stool depending on the type of study.
8. Instrumental methods for studying the gastrointestinal tract.
9. Rules for preparing a patient for instrumental methods of examining the gastrointestinal tract.
10. Instrumental methods for studying the hepatobiliary system. 11. Rules for preparing a patient for instrumental research methods of the hepato-biliary system.
12. Instrumental methods for studying the urinary system.
13. Rules for preparing a patient forinstrumental research methods urinary system.

The student must have the skill:

1. Collecting sputum for examination.
2. Taking a swab from the throat and nose.
3. Collecting urine for testing.
4. Collecting stool for research
5. Preparing the patient for instrumental methods of examining the gastrointestinal tract
6. Preparing the patient for instrumental methods of studying the hepato-biliary system
7. Preparing the patient for instrumental methods of examining the urinary system.

Sputum –This is a pathological secretion of the respiratory tract, which is released when coughing. Sputum is formed when the mucous membrane of the trachea and bronchi is damaged by infectious, physical or chemical agents (Fig. 1).

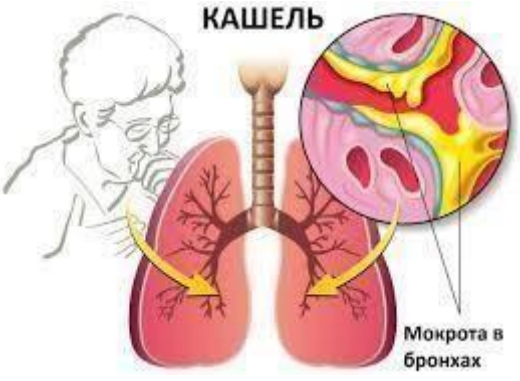


Fig.1.Sputum that provokes a cough.

Sputum is always a pathological phenomenon and is fundamentally different from the usual tracheobronchial secretion, which is formed in a healthy person in an amount of about 100 ml per day and is released from the body without coughing due to the coordinated movement of the cilia of the ciliated epithelium.

When the mucous membrane of the respiratory tract is damaged and inflamed, the secretion of tracheobronchial glands and goblet cells increases significantly and the composition of the tracheobronchial secretion changes significantly: the content of decay products of epithelial cells and microorganisms, metabolites of bacterial activity, and exudative fluid increases.

Sputum examination in many cases (although not always) allows:

- definethe nature of the pathological process;
- to clarify the etiology of damage to the respiratory tract and lung tissue, in particular to identify the causative agent of inflammation;
- determine the basic properties of the pathogen, including its sensitivity to antibiotics;
- evaluate the effectiveness of treatment.

Sputum analysisincludes:

1. Macroscopic examination (determining the nature of sputum, its quantity, color, transparency, smell, consistency, the presence of impurities and various inclusions).
2. Microscopic examination (determination of cellular and other elements of sputum, as well as the study of microbial flora in native and stained smears).
3. Microbiological research (identification and study of the properties of pre-positive pathogen).

Chemical examination of sputum has not yet found widespread use in clinical practice, although it also has a certain diagnostic value.

Collection of sputum for research.

Sputum for examination is collected in the morning on an empty stomach after preliminary thorough rinsing of the throat and mouth with boiled water (Fig. 2, 3). Sometimes it is recommended to rinse your mouth with a 1% solution of aluminum alum after this.

The patient coughs up sputum directly into a clean, dry glass container with a tight-fitting lid. If microbiological examination of sputum is expected, it is coughed up into a sterile Petri dish or other sterile container (Fig. 4). It is important to warn the patient that when collecting sputum, the introduction of saliva into the samples sent to the laboratory can significantly change the results of the study.

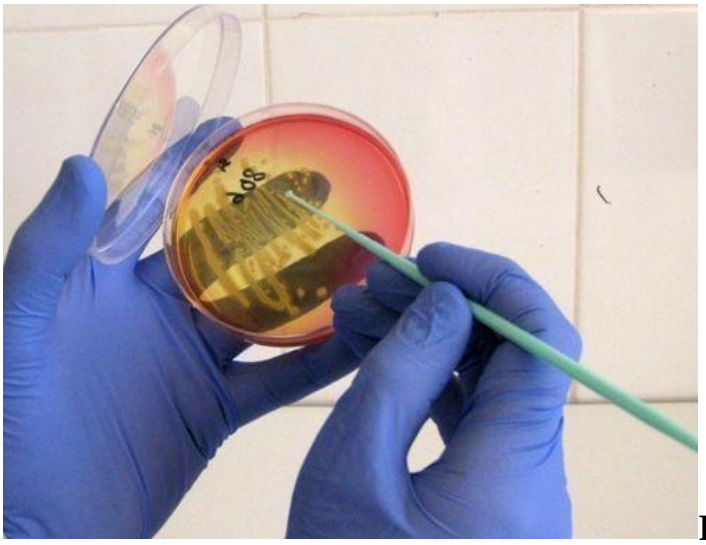
Remember: only freshly isolated sputum is sent to the laboratory, since its prolonged standing, especially at room temperature, leads to autolysis of cellular elements and proliferation of microflora. If necessary, short-term storage of sputum in the refrigerator is allowed.

To take laboratory material from the mucous membrane of the pharynx and nose, a sterile metal swab is used (a cotton swab attached to a wire, passed through a stopper into a sterile tube). For culture, plaque is usually taken from the tonsils, palatine arches and nasal mucosa. The patient must be seated in front of a light source.

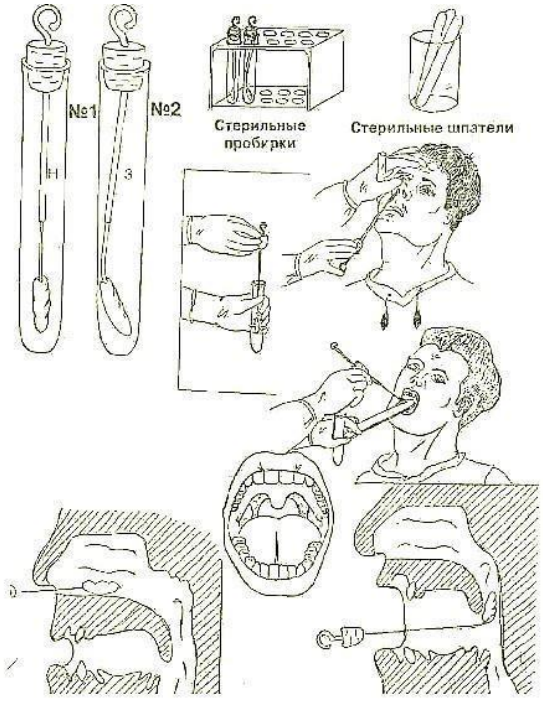

ПАМЯТКА
ПО СБОРУ МОКРОТЫ
1 Лучше всего собирать мокроту утром, натощак, но после чистки зубов. Если вы собираете мокроту днем и уже успели перекусить, перед сбором мокроты прополощите рот, чтобы остатки пищи не попали в мокроту
2 ПОКАШЛЯЙТЕ
3
Поднесите как можно ближе ко рту чистый сухой контейнер и сплюньте в него порцию мокроты
4 ПРИ ЗАТРУДНЕНИИ ОТХОЖДЕНИЯ МОКРОТЫ:
Несколько раз постучите себя в грудь
Сделайте дыхательные упражнения
Сделайте ингаляцию: на 1 литр горячей воды – 1 ст. ложку поваренной соли или пищевой соды
5 Плотно закройте контейнер крышкой и вымойте руки
Как можно скорее принесите собранный образец мокроты в медучреждение

Fig.2.

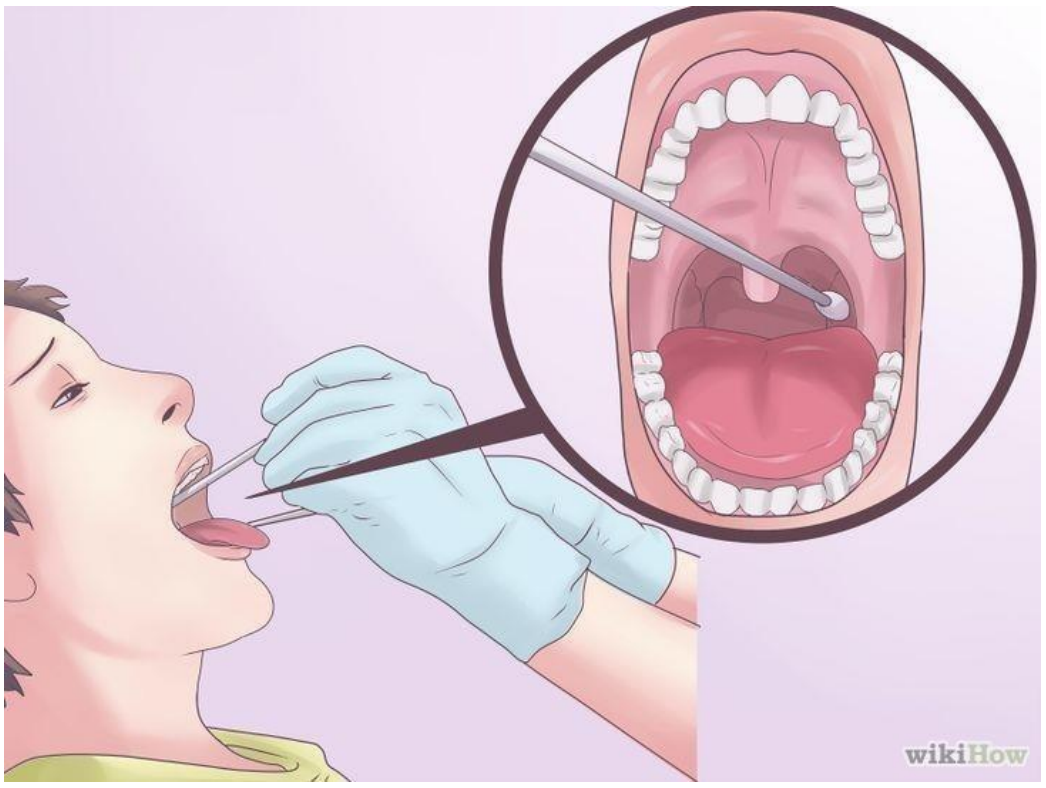
Rice. 3.Spittoons.



. **Fig.4.Explanations in the text.**



king a swab from the nose and throat.



Rice. 6. Taking a swab from the throat.

Practical skills

General sputum analysis.

*Equipment:*clean wide-necked glass jar made of transparent glass, disinfectant solution: 5% chloramine solution, 2% sodium bicarbonate solution.

Progress of the procedure.

1. Warn and explain to the patient the meaning and necessity of the upcoming study.
2. Provide laboratory glassware for outpatient examination and a referral.
3. Teach sputum collection techniques. Warn that they are collecting sapcompanyonly when coughing, not when coughing.
4. Explain that it is necessary to brush your teeth in the morning 2 hours before collecting sputum and rinse your mouth and throat with boiled water.

milk immediately before collection.

5. Cough and collect sputum in a clean jar in an amount of at least 3-5 ml. Close the lid.
6. Attach the referral and deliver it to the clinical laboratory or give it to the department nurse.

Bacteriological examination of sputum.

*Equipment:*sterile, wide-mouth glass jar with a kraft paper lid, sent to the laboratory.

Progress of the procedure.

1. Warn and explain to the patient the meaning and necessity of the upcoming study.

2. It must be borne in mind that it is advisable to collect sputum before starting antibiotic treatment.

3. Warn the patient that sputum is collected only when coughing and not when expectorating.

4. Explain to the patient that in the evening, before the examination, it is necessary to brush your teeth, and in the morning on an empty stomach, rinse your mouth and throat with boiled water immediately before collection.

5. Open the lid of the jar.

6. Cough and collect sputum (not saliva!) into a sterile jar in an amount of at least 5 ml.

Note: Make sure that the sputum does not get on the edge of the jar, and do not touch the inner surface of the lid and jar.

7. Close the lid.

8. Attach the directions and deliver to the bacteriological laboratory.

Note: Freshly isolated sputum is examined no later than 1-1.5 hours. In a hospital setting, sputum is delivered to the bacteriological laboratory in a sealed container, and if it is necessary to transport sputum over a long distance, special transport is used.

Examination of sputum for BC using the flotation method.

To test for Mycobacterium tuberculosis, sputum is collected in a clean container for 24 hours, and if necessary (small amount of sputum) for three days, keeping it in a cool place (Fig. 7).

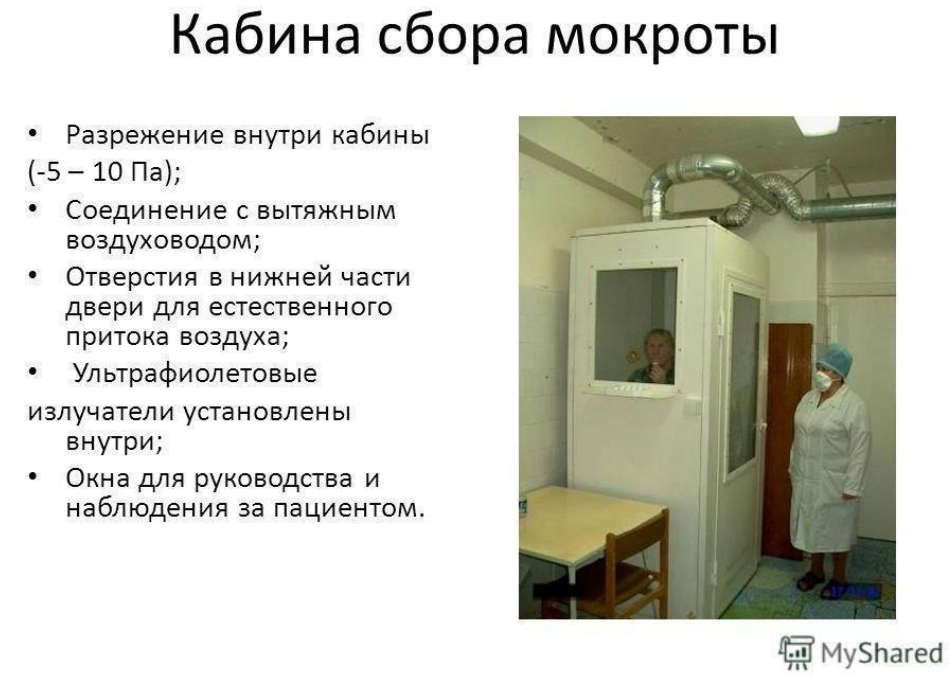


Fig.7.

When collecting sputum for Mycobacterium tuberculosis, it is necessary to keep in mind that they are detected only if their content in 1 ml of sputum is at least 10,000. Therefore, sputum is accumulated for 1-3 days and delivered to the clinical laboratory in an amount of at least 15-20 ml.

*Equipment:*a pocket spittoon to collect sputum or a clean, wide-mouth glass jar.

Progress of the procedure.

1. Warn and explain to the patient the meaning and necessity of the upcoming study.

2. Explain to the patient what is necessary to collect for 3 days in a row. sputum for examination in a dark glass container.

3. Warn the patient that sputum is collected only when coughing and not when expectorating.
4. Explain to the patient that in the evening, before the examination, it is necessary to brush your teeth, and in the morning on an empty stomach, rinse your mouth and throat with boiled water immediately before collection.
5. In the morning, cough and collect sputum (not saliva!) into a clean jar in an amount of at least 15 - 20 ml. Close the lid.
6. Attach the direction and deliver the jar to the laboratory or give it to the ward nurse.

Examination of sputum for atypical cells.

When taking sputum for atypical (tumor) cells, remember that these cells are quickly destroyed, so freshly isolated sputum is examined.

To increase the likelihood of tumor cells entering the sputum, preliminary inhalations with the proteolytic enzyme trypsin are used, which promotes the release of sputum from the deepest parts of the bronchial tree.

Patient preparation and sputum collection rules are the same as for general clinical analysis.

Collection of laboratory material from the mucous pharynx. (Fig.5, 6).

*Equipment:*a stand with sterile test tubes, tightly closed with cotton-gauze swabs, into which rods with wound dry cotton swabs are mounted for collecting material; spatula, sterile craft bag; Bix for transporting test tubes, stand; glassograph Progress of manipulation.

1. Explain to the patient the meaning and necessity of the upcoming study and obtain consent.
2. Wash your hands with soap, wear a mask and gloves.

3. Place the patient facing the light source and sit opposite the patient.
4. Using a glass graph, mark the number on the test tubes corresponding to the number on the direction: ZEV - No. 1, place the test tube in a stand.
5. Take a spatula and a test tube with the mark: ZEV - No. 1 in your left hand.
6. Ask the patient to open his mouth, insert the spatula into the mouth, and use it to fix the patient's tongue.
7. Remove the rod with the sterile swab from the test tube with your right hand, holding it by the plug in the form of a cotton-gauze swab.
8. Take a smear without touching the mucous membrane of the mouth and tongue with a sterile swab, sequentially wiping the right tonsil, then the palatine arch, uvula, left palatine arch, left tonsil and the back wall of the pharynx.
9. Remove the tampon without touching the mucous membrane of the oral cavity and tongue.
10. Remove the spatula from the mouth and immerse it in the disinfectant solution.
11. Insert the swab into the test tube without touching the outer surface of the test tube and close it tightly.
12. Place the test tube in the rack, then in the bin, closing it with a "lock".
13. Remove gloves and mask, immerse them in a disinfectant solution.
14. Wash and dry your hands.
15. Designreferral to a bacteriological laboratory.
16. Deliver the tube with the accompanying directions to the laboratory.

Note: The test tube can be stored in a special refrigerator for no more than 2-3 hours.

Collection of laboratory material from the nose. (Fig.5).

*Equipment:*the same as when collecting material from the oropharynx.

Progress of manipulation.

1. Explain to the patient the meaning and necessity of the upcoming study and obtain consent.
2. Wash your hands with soap, wear a mask and gloves.

3. Place the patient facing the light source and sit opposite the patient.

4. Examine the patient's nasal cavity to make sure it is clean.

5. Use a glass graph to mark the number on the test tubes, corresponding to the number on the direction: NOS - 2, place the test tube in a stand.

6. Take a closed test tube labeled “NOS-2” in your left hand under the 3rd, 4th, 5th fingers, and with your right hand, insert a tampon deep into the right, then the left nasal cavity.

7. Remove the tampon from the nasal cavity.

8. Place the test tube in the rack, then in the bin, closing it with a “lock”.

9. Remove gloves and mask, immerse them in a disinfectant solution.

10. Wash and dry your hands.

11. Submit a referral to a bacteriological laboratory.

12. Deliver the tube with the accompanying directions to the laboratory.

Note: The test tube can be stored in a special refrigerator for no more than 2-3 hours.

Test questions for topic No. 8.

1. What is phlegm?
2. How is sputum formed?
3. What can be determined by examining sputum.
4. What are the general rules for collecting sputum for laboratory testing?
5. What is the technique for collecting sputum for general analysis.
6. What is the technique for collecting sputum for microbiological analysis.
7. What is the technique for collecting sputum for atypical cells.
8. What is the technique for collecting sputum for Mycobacterium tuberculosis.
9. What are the rules for collecting laboratory material from the throat.
10. What are the rules for collecting laboratory material from the nose?

Topic No. 9.

Methods of drug administration.

A.Rules for prescribing and storing medications.
B.Methods of drug administration.

IN. Administration techniquemedications.

The student must have an understanding of:

1. Rules for prescribing and receiving medicines.
2. Requirements for the storage of medicines.
3. Ways and methods of introducing drugs into the body.
4. Types of syringes and needles.
5. Anatomical areas of parenteral drug administration.

The student must have the skill:

1. Selections of prescriptions from the medical history.
2. Teaching the patient how to take various dosage forms.
3. A set of medicines from ampoules, bottles.
4. Assembling the syringe from a sterile table.
5. Carrying out intradermal, subcutaneous, intramuscular injections.
6. Carrying out intravenous infusions.
7. Assess possible complications arising from the parenteral route of drug administration.

The use of drugs is the main method of treatment. Prescribing and receiving medications from the pharmacy is carried out by the head nurse of the department in accordance with the needs of the department at the request of ward nurses after a daily selection of prescriptions from prescription sheets. Requirements for obtaining medicines from a pharmacy are written out in Russian in two copies. The request form is certified by the head of the department (Fig. 1.).

Requirements for poisonous and narcotic drugs are written out in Latin in triplicate and certified by the signature of the chief physician and the seal of the institution. The requirements for obtaining potent, poisonous, and acutely shortage drugs indicate the numbers of medical records, last name, first name, patronymic of the patient for whom the drug is prescribed (Fig. 2).

Утверждаю

Главный врач _____ "___" _____ 200__г.

ТРЕБОВАНИЕ № _____

Отделение _____ Старшая м/сестра _____
(Ф., И., О.) Подпись

Зав. отделением _____
(Ф., И., О.) Подпись

№ п/п	Наименование лекарственного средства	Един. изм.	Затребовано	Разрешено к отпуску	Отпущено	Цена	Сумма

Отпустил _____ Получил _____
(Ф., И., О.) Подпись (Ф., И., О.) Подпись

Fig.1.Request formfor medicines.

Приложение № 1

ФОРМА
специального рецептурного бланка на наркотическое средство и психотропное вещество
Рецепт на право получения лекарства,
содержащего наркотическое вещество и психотропное вещество
АБ № 495 272

(штамп лечебного учреждения)
«_____»_____200 г.

Rp: _____
Документ особого учета _____ остается в аптеке
Прием _____
Гр. _____
История болезни № _____
Врач _____
(разборчиво)

М.П.

Заполняется чернилами
Исправления не допускаются

Rice. 2. Form – prescription for obtaining narcotic and potent substances.

When storing medicines, the rules for placing them into groups are observed:

1. list A - poisonous and narcotic
2. list B - potent drugs
3. common list.

Group A and B drugs are stored in a safe in the department. The keys to the safe must be held by the persons appointed by the order of the medical institution, responsible for the storage and dispensing of medicines of group A (Fig. 3).

Drugs of these groups, as well as alcohol and hard-to-find drugs are subject to subject-quantitative accounting, control of distribution, which is maintained in a special book, numbered, laced and sealed and signed by the head physician of the medical institution.

Other medicines should be stored in the department at the nurse's station, in locked cabinets on various shelves with markings depending on the method of use: "External", "Internal",
"Parenteral", etc. All sterile solutions are stored in glass

Rice. 3.Safe for storing narcotic and potent drugs.

cabinet in the treatment room (Fig. 4).

The supply of narcotic medicines should not exceed the three-day requirement of the department, poisonous – five-day, and potent – ten-day. Temperature conditions must be observed in storage areas. Photosensitive products are stored separately, in tightly closed boxes. Decoctions, infusions, emulsions, antibiotics, suppositories, serums are stored only in the refrigerator at a temperature from +2 to +10 o C, which

This container is intended only for storing medicines. The basic rule that must be remembered is that medicines must be used within the established expiration dates.

Fig.4.Cabinet for storing medications in the treatment room.

In medical practice, various routes of drug administration are used, depending on the existing pathology of the patient, as well as on the effect that we expect to achieve. Exist

external, inhalation, enteral and parenteral routes of drug administration.

Depending on which route of administration we choose, we also use forms of drugs.

1. ***Externally***You can administer medications through the skin - these are ointments, emulsions, powders, mash, tinctures, gels (Fig. 5).
2. ***Through mucous membranes***for the eyes - drops and ointments, for the nasal mucosa - preparations in the form of powders, vapors, solutions (in drops), ointments. Externally used drugs are injected into the ears in the form of drops of aqueous and oil solutions; the peculiarity of administration to this area is that the drugs must be administered heated to 37o C (Fig. 6. 7).

Rice. 5. Applying ointment to the skin of the face.

Drugs also affect the vaginal mucosa. The dosage forms that are used in this case are balls, tampons, powders, and douching solutions (Fig. 8, 9, 10).

Fig.6.Putting drops into the nose.

Fig.7.Putting drops in the ear

Fig.8.Balls and candles.

3. ***Enteral***method of administration, when absorption occurs through the gastrointestinal tract - through the mouth (per os), you can consume powders, tablets, pills, drops, potions, tinctures,

Fig.9.Vaginal tampons.

decoctions, infusions, dragees. Medicines can be administered in any dosage and in a non-sterile form (Fig. 10). These are the advantages of this method of administration. A significant disadvantage of this method of administration is that the drugs are absorbed in the small intestine, then enter the liver through the portal vein system and only then enter the

general system.

blood flow As a result of such a long journey, the drug is exposed to gastric and intestinal juices, and most importantly, significant transformations occur in the liver hepatocytes.

Fig. 10.Taking medications per os.

Thus, there is a significant change in the drug, both its chemical formula and its concentration. This is a serious drawback of this method of drug administration.

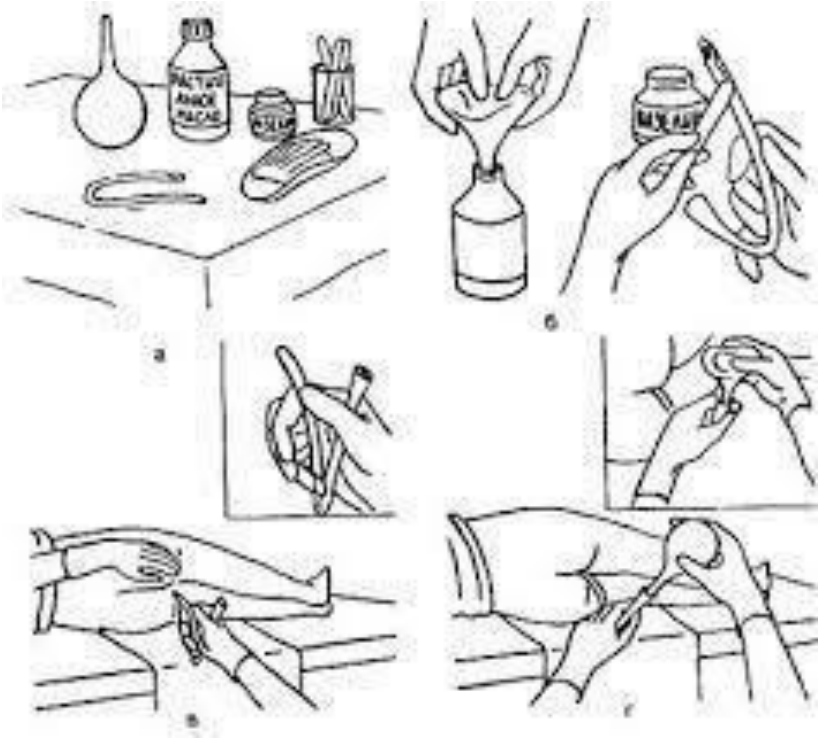
The next enteral route of administration is under the tongue (sub lingva). So it is possibleadminister drops, dragees, tablets (nitroglycerin, validol, hormone preparations) Fig. 11. The advantage of this method of administration is that the medicine is quickly absorbed and goes directly into the bloodstream, bypassing the action of digestive enzymes and bypassing the liver. The disadvantage of this method is that only drugs that are used in small doses can be administered this way.

Transbuccal route of administration (trans bucca) is the administration of drugs through the mucous membrane of the upper gum. Drugs that are used with this method of administration are produced in the form of plates. The domestic industry produces Trinitrolong plates, which are glued over the fang, and the drug is gradually released from the plate into the blood.

Fig. 11.Taking medications sublingually

*Through the rectum (per rectum)*liquid medications (infusions, decoctions, mucus) are administered using a pear-shaped balloon - medicinal enemas. The amount of the drug should be administered simultaneously from 50 ml to 200 ml to a depth of 7-8 cm, otherwise the patient may not be able to withstand the time of contact of the drug with the rectal mucosa (Fig. 12 a, b, c, d).

You must first give a cleansing enema. The advantage of this method of drug administration is that the drugs are quickly absorbed into the vessels of the hemorrhoidal plexus and can be accurately dosed. The drugs are not exposed to digestive enzymes and enter directly into the inferior vena cava, bypassing the liver.



Rice. 12.Stages of administering a medicinal enema.

Suppositories or suppositories are inserted with a pointed end, usually at night, to allow time for the suppository to dissolve and the drug to be absorbed (Fig. 13).

Fig. 13.Insertion of a suppository into the rectum.

4. For various diseases of the respiratory tract, the inhalation method of administering drugs is used. In this case, the mucous membrane of the bronchial tree is affected. This method can be used to administer drugs that may have a local effect on

mucous membrane of the bronchial tree, as well as a systemic effect on other organs. For example, gaseous substances are oxygen, nitrous oxide, vapors of volatile liquids that are used for anesthesia, aerosols (a suspension of the smallest particles of solutions). The most commonly used canisters with metered aerosol drugs are a pocket inhaler (Fig. 14).

Fig. 14.Using a metered dose inhaler can.

In addition to cans, nebulizers are used. A nebulizer is a device that converts a solution of a medicinal substance into an aerosol to deliver the drug with air or oxygen directly to the patient's bronchi. Compressed air turns the liquid drug into a misty cloud and delivers it along with air and oxygen (Fig. 15).

Rice. 15.Nebulizer.

Another device for delivering aerosols into the respiratory tract is *spacer*. A spacer is a special chamber adapter from the inhaler to the mouth, in which particles are suspended.Inhalationlekar-stVeNNoh prePmacawTov mnOGOlmedicine settles on the back wall of the mountainsTani and the walls of the oral cavity, since the stream from the inhaler is quite powerful. To avoid this, a spacer is used (Fig. 16).

Fig. 16.Using a spacer to inhale medications.

Fig. 17.

Fig. 18.Spacer.

The stream of medicine in the spacer turns into a cloud, which more smoothly enters the bronchi when inhaling. The amount of medication entering the respiratory tract increases. Large particles of the drug, which would not have passed into the bronchi anyway and remained in the oral cavity, settle on the walls of the spacer. Less freon enters the bronchi.The advantage of a spacer is that it limits the contact of medications with the oral mucosa. This is very important, for example, when using inhaled glucocorticoids, which can provoke the development of fungal infections of the oral cavity.

5. ***Parenteral route of drug administration***. Parenterally – this means bypassing the digestive tract. It is carried out by means of injections: intradermal, subcutaneous, intramuscular, intravenous, intra-arterial; intracavitary - this is into the pleural cavity, into the abdominal cavity, into the heart cavity, into the bone marrow, into the spinal canal, into the joint cavity.

The advantages of this method of administration include the speed of action of drugs, dosage accuracy, and the entry of drugs into the blood unchanged.

Significant disadvantages of this method of administration include the mandatory participation of trained medical personnel, strict adherence to

lack of rules of asepsis and antisepsis, difficulty in administering medications in case of bleeding, damage to the skin at the injection site. If all these conditions, and sometimes even one of them, are not met, serious complications may develop. In addition, injections must be carried out in premises adapted for this purpose - the treatment room of a hospital or clinic, however, under certain conditions, it is possible to carry out in a ward or at home, when the patient is visited by a health worker. In extreme situations, injections are also performed at the scene of the incident, of course, in compliance with the rules mentioned above.

For injections, appropriate equipment is used: syringes and needles. Before using the syringe, you need to make sure that its packaging is tight - this is the first and second thing, before you draw the medicine into the syringe, you must carefully read its name and dosage, and finally, the third thing is that the ampoules must be stored for some time after the injection, until you are sure that you have *the patient has no reaction to the administered drug.*

The most common post-injection complications are:

Infiltrate- the most common complication after subcutaneous and intramuscular injections. Most often, infiltration occurs if: a) the injection is performed with a blunt needle; b) for intramuscular injection, a short needle is used, intended for intradermal or subcutaneous injections.

Abscess- purulent inflammation of soft tissues with the formation of a cavity filled with pus. The reasons for the formation of abscesses are the same as for infiltrates. In this case, infection of soft tissues occurs as a result of violation of asepsis rules.

Needle breakageduring the injection with a sharp contraction of the buttock muscles during intramuscular injection, if the patient is not

a preliminary conversation was carried out before the injection or the injection was given to the patient in a standing position.

Drug embolismcan occur when injecting oil solutions subcutaneously or intramuscularly (oil solutions are not injected intravenously!!!) and the needle gets into the vessel. Oil, once in the artery, will clog it, and this will lead to disruption of the nutrition of the surrounding tissues and their necrosis.

Air embolismwith intravenous injections is the same dangerous complication as oil. The signs of embolism are the same, but they appear very quickly, within a minute.

Damage to nerve trunkscan occur with intramuscular and intravenous injections, either mechanically (if the injection site is chosen incorrectly), or chemically, when the drug depot is located next to the nerve, as well as when the vessel supplying the nerve is blocked.

Thrombophlebitis- inflammation of a vein with the formation of a blood clot in it - observed with frequent venipunctures of the same vein, or with the use of blunt needles.

Phlebitis- inflammation of the entire venous wall. Any drug with a high concentration can cause aseptic inflammation of the venous intima with subsequent spread to the entire venous wall.

***Necro*h**tissue can develop due to unsuccessful vein puncture and erroneous injection of a significant amount of irritating agent under the skin.

Hematomacan also occur during inept venipuncture: a purple spot appears under the skin, because the needle pierced both walls of the vein and blood penetrated into the tissue.

Fainting– short-term loss of consciousness caused by acute insufficiency of blood supply to the blood vessels of the brain. This complication can develop when an intravenous injection is performed ineptly due to resiliency.

someone painful irritation or the sight of blood. The patient loses consciousness, severe pallor of the skin, cold sweat, cold extremities, and a weak, rapid pulse are noted. In uncomplicated cases, fainting lasts no more than 20–40 seconds, after which consciousness is restored. It is necessary to provide emergency assistance to the patient before the doctor arrives in accordance with the standard.

Allergic reactionsto the administration of a particular drug by injection can occur in the form of urticaria, acute runny nose, acute conjunctivitis, Quincke's edema, often occurring after 20-30 minutes. after administration of the drug. The most severe form of an allergic reaction is anaphylactic shock.

Anaphylactic shockdevelops within a few seconds or minutes from the moment of drug administration. The faster the shock develops, the worse the prognosis.

The reasons for this may be: the use of non-sterile syringes, insufficient cleaning of the hands of the nurse, as well as violations of the technique of administering medications, ignorance of the patient's allergy history. Particular attention should be paid to injections of antibiotics, without making them without a preliminary test for sensitivity, vaccines, protein preparations, analgin solutions, non-steroidal anti-inflammatory drugs, vitamins, which can cause severe allergic reactions up to the development of anaphylactic shock.

If the rules of asepsis and antisepsis are not followed, after the administration of drugs, signs of an inflammatory infiltrate may develop already on the first day. A painful lump appears at the injection site, redness of the skin, and the local temperature reaction increases.

If no help is provided in this case, an abscess may develop in the future.

– purulent melting of tissues, which already requires surgical intervention.

When administering drugs parenterally, the following rules must be adhered to:

1. The nurse must strictly follow all the rules of asepsis and antisepsis when performing injections.
2. The capacity of the syringe must be selected depending on the amount of solution that needs to be injected, and the length of the needle and diameter - depending on the injection site and the nature of the solution to be injected. Use only sterile, hermetically sealed, not expired syringes.
3. Before performing the injection, carefully palpate the tissue. If there is a deep seal, then you cannot inject in this place.
4. You cannot insert the needle into the tissue with a “slap”, as sterility is violated, it is impossible to accurately select the puncture site and insert the needle to a sufficient depth.
5. When introducing oil solutions or suspensions after a puncture, it is necessary to pull the syringe plunger towards you to make sure that the needle does not fall into the vessel. Drops of an oil solution entering a vessel can clog it. The nutrition of surrounding tissues is disrupted, and their necrosis develops. With the blood flow, oil emboli can enter the vessels of the lungs and cause their blockage, which is accompanied by severe suffocation and can cause the death of the patient. Oil solutions are poorly absorbed, so an infiltrate may develop at the injection site.
6. Do not administer coldsolutions (from the refrigerator). Oil solutions are heated to 37-38 o C.
7. After injection, it is recommended to use heat to improve drug absorption, especially when administering oil solutions.
8. Hypertonic solutions (analgin, magnesium sulfate) should be diluted with novocaine 0.25%, or saline solution for rapid absorption.

In the event of anaphylactic shock, the nurse must provide emergency care to the patient before the doctor arrives, using standard equipment, which should be located in each treatment room!Actions nurse:

1. If the patient's condition worsens, immediately stop administering the drug.
2. Lay the patient down: turn the head to the side, extend the lower jaw, remove dentures, raise the lower limbs.
3. Apply a tourniquet above the injection site if it is a limb and inject 0.15 - 0.5 0.1% epinephrine solution into the injection site or inject a dose of 0.3 - 0.5 ml of 0.1% adrenaline solution with 4-5 ml of physiological solution.
4. Place an ice pack or cold pack on the injection site.
5. For intravenous injection, immediately stop administering the drug and administer corticosteroids 30-60-90 mg of prednisolone per 10-15 ml of 5% glucose, depending on the severity of the condition, to relieve the allergic reaction.
6. Administer antihistamines(desensitizing) agents 1% solution of suprastin 2.0-4.0 ml; 0.25% solution of pipolfen 2.0-4.0 ml; 1% diphenhydramine solution 2.0-5.0 ml. To relieve swelling of the mucous membrane of the upper respiratory tract and desensitize.
7. If signs of heart failure appear, administer cardiac glycosides: 0.05% solution of strophanthin 0.5 ml in 10 ml of saline solution intravenously or 0.06% solution of corglycon in 10 ml of saline solution very slowly.
8. For asphyxia and suffocation, 2.4% solution of aminophylline 10.0 intravenously per 10 ml of physiological solution.
9. Cover the patient with heating pads.
10. Monitor blood pressure.

11. If the heart and breathing stop, immediately begin chest compressions and artificial respiration.

12. The patient is hospitalized in the intensive care unit for observation.

Practical skills.

Instillation of drops into the ear (Fig. 19, 20).

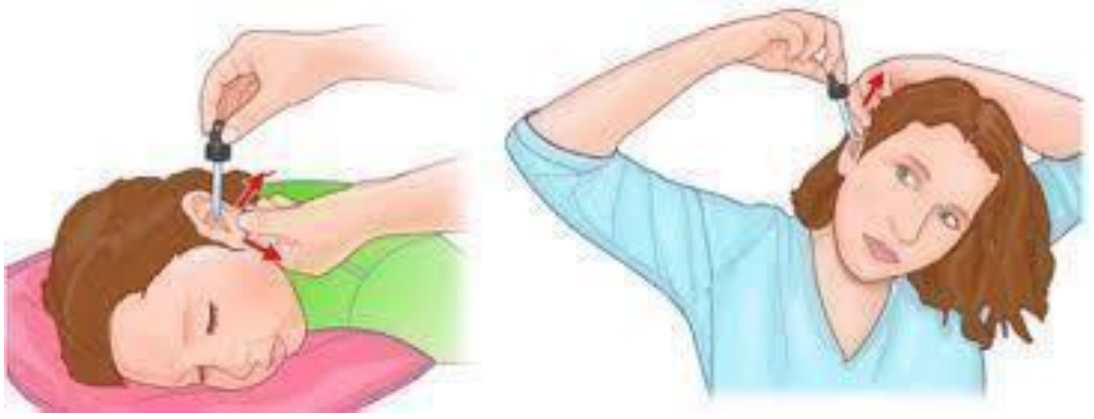


Fig. 19. Instillation of drops into the ear in a lying or sitting position.

Rice. 20. Instilling drops into the ear while sitting.

*Target:*medicinal.

Indications: pain, inflammation.

*Equipment:*medicine in pharmaceutical packaging, sterile pipettes, tray; tray for waste material, cotton balls, rubber gloves, water bath, cotton buds (turundas).

Preparation for the procedure:

1. Prepare all necessary equipment.
2. Read the name of the drug.
3. Provide the patient with the necessary information about the drug and explain the procedure.
4. Warm the medicinal solution to body temperature in a water bath by placing the bottle in a container of hot water.
5. Wash your hands, put on gloves.

Progress of manipulation.

1. Sit the patient on the couch (chair), tilting his head to the healthy side, or help the patient lie on his side.
2. If there is discharge from the ear, clean the ear canal with cotton swabs (turundas).
3. Dump the turundas into a tray with a disinfectant solution.
4. Take 5-6 drops of the medicine into a pipette, place one drop on the back of your hand (to control the temperature of the medicine).
5. Pull the auricle back and up with your left hand, and hold the pipette with your right hand and count 2-3 drops into the ear (Fig. 19).
6. Insert a cotton swab into the patient's outer ear.
7. Ask the patient to remain in this position for 10 to 15 minutes.
8. Help the patient sit up if lying down.
9. Ask the patient how he is feeling.

End of the procedure.

1. Place the pipette in the tray with the disinfectant solution.
2. Remove gloves, wash and dry your hands.

Medical documentation.

1. Specify the drug that was injected into the ear.

2. Describe the patient's reaction to the administered drug.

A set of medicinal substance from an ampoule or bottle.

*Target:*medicinal.

*Equipment:*boxes with medicinal substances in ampoules or vials (Fig. 21), sterile syringe, sterile needles, sterile cotton balls.

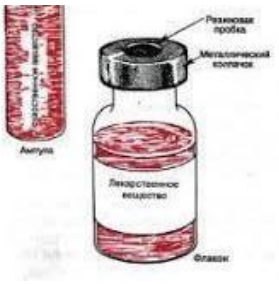


Fig.21.Medicines in ampoule and bottle.

Preparation for the procedure:

1. Prepare all necessary equipment.
2. Check the tightness of the syringe and needle packaging.
3. Read the name of the drug.
4. Wash your hands, put on gloves.

Movemanipulation.

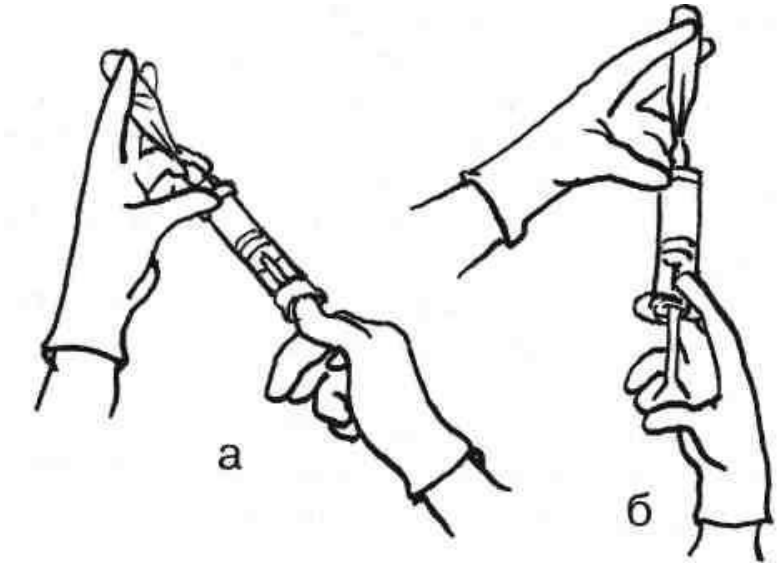
1. Collect a sterile syringets,attach the needle.
2. Carefully read out loud the name of the medicinal substance and expiration date on the box, open the package, compare the amount of solution inSunex ampoules or contents of vials,color, transparency.
3. Take one ampoule or bottle, read aloud the name of the drug, its dose, make sure the solution in the ampoule is transparent by applying it to the sleeve of your gown.
4. Take the ampoule in your left hand, and with your right hand shake the solution from the narrow part of the ampoule

down, hitting the narrow part of the ampoule (Fig.22).

Fig.22.Removing the solution from the narrow part of the ampoule.

5. Using a sterile cotton ball soaked in alcohol, treat with alcohol and break off the narrow end of the ampoule into a sterile ball or treat the rubber stopper on the bottle with a sterile cotton ball.

6. Take the ampoule (or bottle) in your left hand between the second and third fingers, like "cigarette", neck down – vertically. Syringe - in the right hand: the second finger on the needle cannula, the rest on the cylinder and carefully, without touching the edges of the ampoule, insert the syringe needle into it (Fig. 23 a, b).



Rice. 23.A set of the drug from an ampoule into a syringe.

7. Take the bottle in your left hand between the second and third fingers and insert a needle into the rubber stopper to inject solvent into the bottle (Fig. 24).

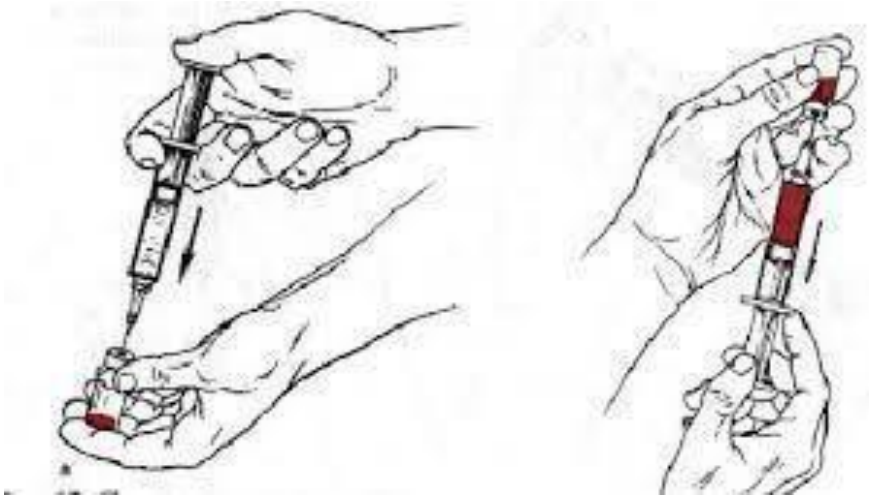


Fig.24.Introduction and collection of the drug from the bottle.

8. Place the first, fourth, fifth fingers of your left hand on the syringe barrel, and pull back with your rightplunger, draw the required amount of medicine. Follow,so that the end of the needle is always in the solution.

9. Without removing needle from an empty ampoule (or vial), release the air from the syringe. When removing air from the syringe, you must not release the medicinal solution into the room, since the aerosol in the surrounding air poses a health hazard to the nurse.

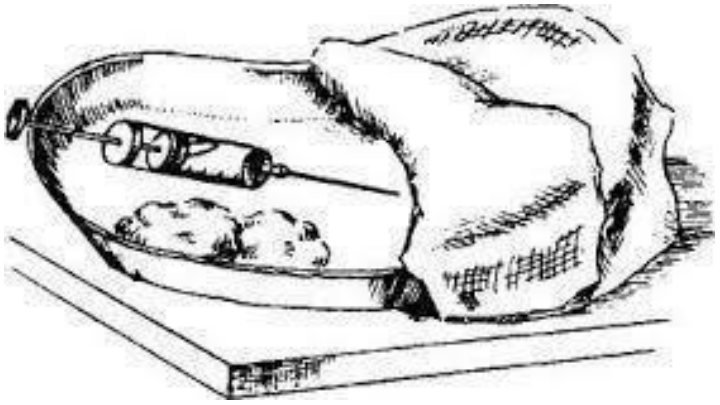
10. Remove the needle used to draw the solution, put on a new injection needle.

11. Check the needle for patency by placing the syringe vertically at eye level, then remove the protective cap from the needle.

Note.*If the injection is to be given in the ward, without removing the protective cap from the needle, place the syringe and cotton balls in a syringe bag or sterile tray*(Fig.25).

Technique for performing subcutaneouss injections.

*Target:*administration of drugs for therapeutic purposes. Medicines are administered subcutaneously and must be slowly and gradually absorbed into the blood. An example of a subcutaneous injection is the administration of insulin and heparin. The drug substance is injected directly into the subcutaneous fat (Fig. 26).



Rice. 25.Sterile tray with syringe.

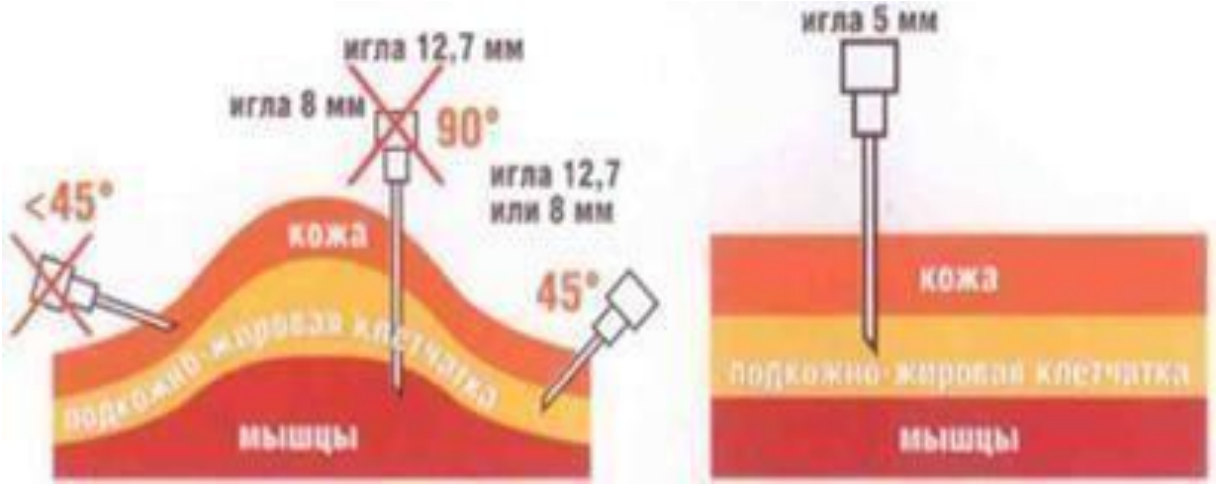


Fig.26.Introduction of drugs into subcutaneous fat.

Subcutaneous injection sites:***outer surface of the shoulder, anterior outer surface of the thigh, subscapular region, anterior abdominal wall (Fig. 27).***

*Equipment:*syringe with a capacity of 2 - 1 ml for single use, a 20 mm needle with a cross-section of 0.4 mm; a sterile tray, covered with a sterile napkin folded in 4 layers, with sterile cotton balls under the first layer, tweezers under the second layer; 70% ethyl alcohol; ampoule with medicine; latex gloves; container with disinfectant solution.

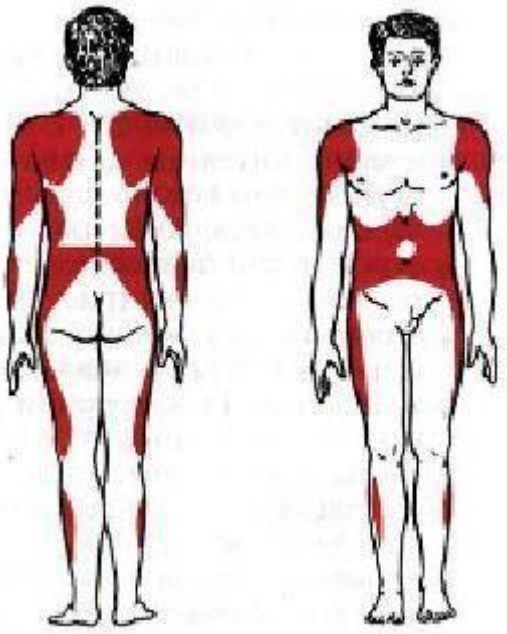


Рис. 15. Области выполнения подкожных инъекций.

Rice. 27.Areas for subcutaneous injections.

Preparation for the procedure:

1. Study the appointment sheet, find out the ward and initials of the patient.

2. Explain to the patient the purpose and course of the procedure, clarify information about the drug, and obtain consent for the procedure.

3. Put on a mask, prepare your hands for the procedure, put on gloves.

4. Treat the neck of the ampoule with a swab moistened with alcohol twice.

5. Draw the medicine into the syringe in the required dose, release air into the ampoule, remove the needle and throw it into a container with a disinfectant solution.

6. Insert the hypodermic needle, release the air, and place the cap on the needle.

Movemanipulation.

1. Takesyringe in the right hand: the second finger is on the cannula, the remaining fingers are on the cylinder.

2. Use your left hand to palpate the injection site so as not to introduce the medicine into the infiltrate.

3. Hold the syringe in your right hand, the needle cut in one planewith divisions, inTyellPalec nand the cannula needle, osthatlinennand a cylinder. LeVWith your hand, treat the skin with a cotton ball moistened with alcohol.

Note.*First, a large area is treated, approximately 10x10 cm, then 5x5 cm - the injection site.*

Hold the ball under the fifth finger of your left hand.

4. With the first and second fingers of your left hand from above, grab the fold of skin at the injection site (Fig. 28)

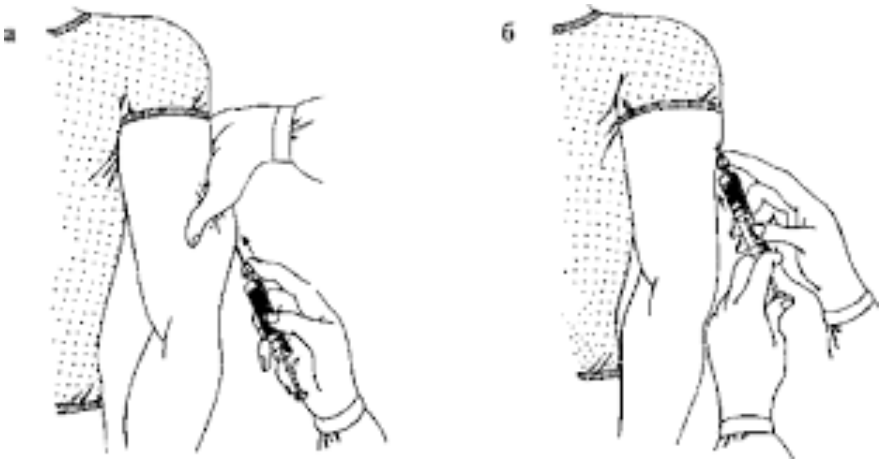


Fig.28.Subcutaneous injection.

5. Insert the needle into the base of the fold at an angle of 450 to the skin, with the bevel of the needle up, to a depth of 2/3 of the needle, holding the cannula with the second finger of the right needle. Place your left hand on the syringe piston and inject the medicine: the first finger is on the piston, the second and third are on the cylinder. Inject the medicine slowly and not completely. Ask the patient how he is feeling. At the slightest deterioration in the patient's condition, the administration of the medicine is stopped, and the patient must be given emergency assistance.
6. At the end To administer the drug, place a ball moistened with alcohol on the puncture site, press it with the index finger of your left hand and quickly remove the needle, holding it by the cannula.

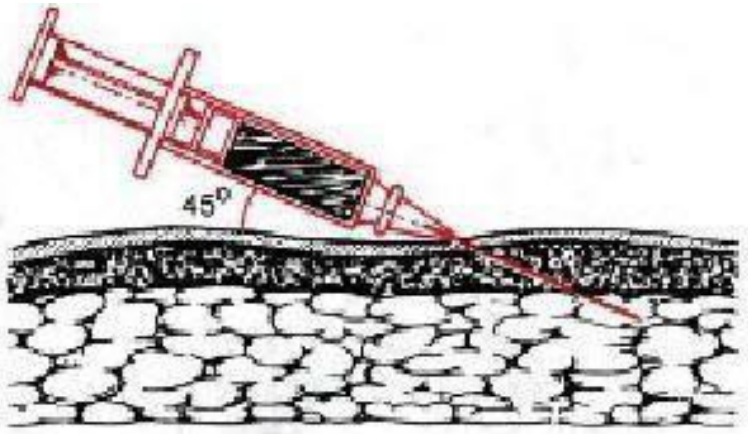


Рис. 14. Подкожная инъекция: положение иглы.

Fig.29.Hypodermic injection needle position.

7. Ask the patient to hold the ball for 5 minutes., Not rubbing the injection site!

Note.*When the needle length is 1.25 cm or less (in insulin syringes), it is inserted at an angle of 900.*

End of the procedure.

1. Place a cotton ball in a 3% chloramine solution for 1 hour, a disassembled syringe and a needle in container No. 1 to remove blood residues And medicines.
2. Remove gloves and place in disinfectant solution. Wash and dry your hands.
3. Help the patient take a comfortable position, assess the patient's response to the procedure.
4. Make a note of the procedure performed on the appointment sheet.

Test questions for topic No. 9.

1. What are the rules for prescribing drugs in medical institutions?
2. How and where medications are stored in hospital departments.
3. What methods of administering medications do you know?
4. How external administration of drugs is carried out.

5. What devices for inhalation administration of drugs do you know? What are their advantages?

6. What are the advantages and disadvantages of parenteral administration of drugs?

7. What complications may arise during parenteral administration of drugs.

8. What rules do you need to know when administering drugs parenterally?

9. How to provide emergency care for anaphylactic shock.

10. Standard procedure for instilling drops into the ear.

11. The standard procedure is a collection of a medicinal substance from an ampoule or vial.

12. Standard procedure for administering a subcutaneous drug.

Topic No. 10.

ResuscitationEvents.

a) Signs of clinical, biological death. b) Artificial ventilation.
c) Indirect cardiac massage in adults and the elderly.

The student must have an understanding of:

1. Signs of clinical, biological death.
2. Conditions and methods of artificial pulmonary ventilation.
3. Conditions and methods of performing indirect cardiac massage.
4. Rules for handling corpses.

The student must have the following skills:

1. Determining the presence of airway obstruction.
2. Definitions of cardiac arrest.
3. Definitions of the state of clinical death.
4. Carrying out artificial respiration.
5. Performing indirect cardiac massage.
6. Statements of biological death.

A branch of clinical medicine that studies various aspects of revitalizing the body and develops methods of treatment and prevention of termite

nal conditions, is resuscitation. Resuscitation measures are carried out for many diseases and conditions: sudden cessation of cardiac activity (acute myocardial infarction, electrical trauma, etc.), acute respiratory arrest (foreign body in the trachea, drowning, etc.), poisoning with various poisons , severe injuries, blood loss, acute liver

And renal failure, etc.

Resuscitation of patients is not carried out when more than 8 minutes have passed since clinical death, if there is irreversible damage to vital organs, if all compensatory reserves of the body have been exhausted.

States bordering between life and death are called ***terminal.*** Dying is not only a qualitative leap - a transition from life to death, but also a more or less long process, going through a number of successive stages (Fig. 1). When dying, the functions of organs and systems are switched off in a certain sequence. Given that changes incompatible with life develop gradually, there are scientific grounds for intervening in this process in order to combat unnecessary death. The last stages of life – the stages of dying – are:

Rice. 1.

- ❖ preagonal state;
- ❖ terminal pause;

- ❖ agony;
- ❖ clinical death.

Preagonal state.It is characterized by depressed consciousness, the skin becomes pale or cyanotic, but eye reflexes are preserved. The following are disrupted: gas exchange in the lungs (the appearance of hypoxia and Cheyne-Stokes respiration); blood circulation - blood pressure decreases to 60 mmHg. and lower, the pulse is threadlike or not palpable, tachypnea and tachycardia are replaced by bradypnea and bradycardia, a lack of circulating blood volume develops; acid-base state - metabolic acidosis develops; electrolyte balance – hyperkalemia. As a result, cerebral disorders begin to be registered: progressive suppression of the electrical activity of the brain and brain stem reflexes occurs. The preagonal state can last for several hours, and sometimes even days. The preagonal period ends with a terminal pause. (Fig.2).

Fig.2.

Terminal pause.It is characterized by a sudden cessation of breathing, a sharp depression of cardiac activity, extinction of the bioelectrical activity of the brain, and extinction of corneal and other reflexes.

The duration of the terminal pause is 5-10 seconds to 4 minutes.

Agony.It is characterized by residual manifestations of the functional abilities of a living organism with the aggravation of those disorders that began in the preagonal phase.During agony, sudden activation of brain stem centers can sometimes be observed, which leads to a short-term increase in blood pressure, restoration of sinus rhythm, increased breathing, electrical activity of the brain, and consciousness is restored even briefly. During the agonal period, there is a sharp pallor of the skin, acrocyanosis, and blood pressure begins to drop to critical levels - 20 - 40 mm. rt. Art., cardiac activity slows down, the pulse in the peripheral vessels is not palpable, heart sounds become muffled, breathing is inadequate, rare, convulsive (the rhythm is disturbed). Pain sensitivity disappears, reflexes are lost, pupils dilate, involuntary urination and defecation occur, and body temperature decreases. Facial features become sharper - the face of Hippocrates(Fig. 3). Agony ends in complete oppression of all vital important functions. And clinical death occurs.

Fig.3.The patient is in an agonal state.

Clinical death.A reversible stage of dying lasting 5-6 minutes, during which external manifestations of the body's vital activity disappear, but irreversible changes in organs and tissues have not yet occurred. A set of measures to restore the life activity of the target

consistentprecisely during this period, since a longer time calls into question the effectiveness of cerebral resuscitation.

The cerebral cortex, as the most sensitive organ, may be so damaged that it will never function normally again. In a word, the death of the cortex (decortication) will occur, as a result of which its connection with other brain structures will be disconnected and “the person will turn into a vegetable.”

The duration of the period of clinical death is limited by the resistance to hypoxia of the cerebral cortex cells. Under normothermic conditions, the time interval does not exceed 5 minutes. The duration of clinical death, in addition to the timing of the absence of blood circulation, is significantly influenced by the nature and duration of the previous period of dying (pre-agony, agony). If the patient is in conditions of severe hypotension for a long time (for example, as a result of blood loss or heart failure), then revival, even a few seconds after circulatory arrest, may be impossible, since all compensatory possibilities are already exhausted by this time. Conversely, with sudden cardiac arrest in a healthy person (electrical injury), the duration of clinical death increases. “Between life and death there is a peculiar “transitional state, which is not yet death, but ***can no longer be called life"***(V.A. Negovsky) (Fig. 4).

To establish the fact of clinical death, the presence of three signs is sufficient:

A. **Lack of consciousness.** Loss of consciousness occurs 10-15 seconds after circulatory arrest. Maintaining consciousness excludes circulatory arrest (Fig. 5).

Fig.4.

Fig.5.Assessment of consciousness.

***B.*Absence of pulse in the carotid arteries.**This showsabout the cessation of blood circulation in the body.

***IN.*Absence of breathing or presence of agonal breathing.**Stopping breathing is indicated by the absence of respiratory excursion of the chest and abdominal wall. The agonal type of breathing is characterized by periodic convulsive contractions of the respiratory muscles. However, in this case, the muscles of inhalation and exhalation contract simultaneously, so ventilation of the lungs does not occur. If at this moment not

start artificial respiration, then agonal breathing will turn into apnea in a few seconds.

G. **Dilation of the pupils with their loss of reaction to light** an additional sign of the onset of clinical death. This symptom appears 45-60 seconds after the cessation of blood circulation through the brain.

Fig.6

To begin basic cardiopulmonary resuscitation, the presence of three main signs of clinical death is sufficient (Fig.6).

Resuscitation assistance must begin immediately. It is performed in case of clinical death. Primary resuscitation measures are actions taken to remove the patient from acute conditions that directly threaten his life. Cardiopulmonary resuscitation is part of primary resuscitation measures and includes a set of sequential active actions to restore impaired respiratory and circulatory functions. When performing cardiopulmonaryresuscitation must be followed strictly importance. To remember the sequence of primary resuscitation

For all events, ABC is used - Safar's rule. The classic sequence of resuscitation measures was formulated by P. Safar (“Cardiopulmonary and cerebral resuscitation”, Peter Safar, Nicholas J. Beecher, 1997) (Fig. 7).

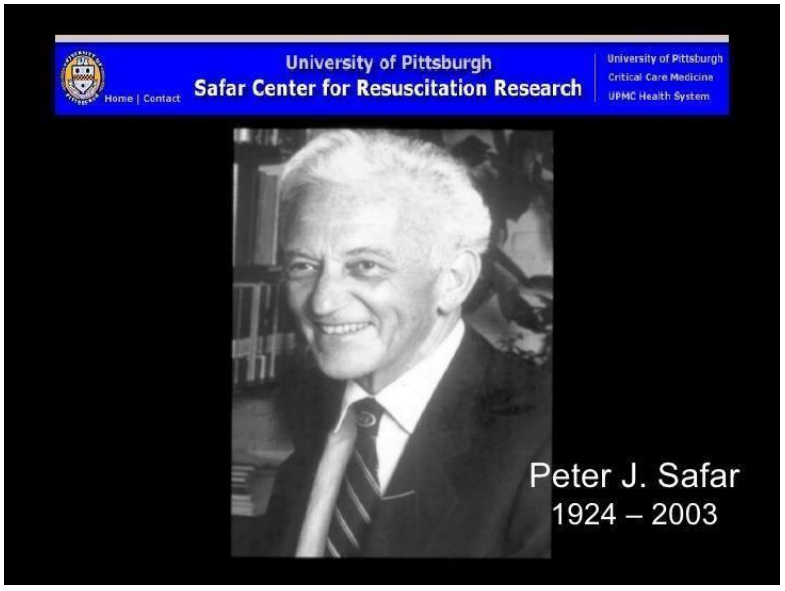


Fig.7

A. (Airway) Restoration and maintenance of airway patency.

B. (Breathing) Artificial ventilation.

S. (Circulation) Cardiac resuscitation - indirect cardiac massage.

Recommendations for CPR are refined and optimized once every five years, based on generalized international experience. Currently, the 2010 CPR protocol establishes the priority of restoring an effective level of blood circulation and timely defibrillation. Therefore, the procedure for providing resuscitation care has undergone significant changes, the most important of which is the change in CPR steps from “A-B-C” to the “C-A-B” sequence (Fig. 8).

C - (circulation) – closed cardiac massage.

A - (airways) - ensuring airway patency. B - (breathing) - artificial ventilation.

Fig.8.

At the first opportunity, it is recommended to carry out defibrillation as early as possible, both in a hospital and outside a medical institution, and to transform the "C-A-B" algorithm into "DC-A-B", where D is (defibrillatio). Timely defibrillation in combination with high-quality CPR is a necessary condition for increasing the survival rate in cases of sudden cardiac arrest (Fig. 9). Therefore, every effort must be made to reduce the interval between cardiac arrest and defibrillation.

Fig.9.Carrying out cardiac defibrillation.

New recommendations attach great importance to the earliest and technically correct performance of chest compressions and suggest that when resuscitating adults, place hands on the geometric center of the chest, the depth of compression should be 5 cm, pendulum-like movements (not jerks) Fig. 10 , 11, 12 with a frequency of 100 per minute. The ratio of the frequency of chest compressions and mechanical ventilation is 30:2, while during resuscitationactivities can be neglected artificially breathing, giving preference to properly performed closed heart massage.

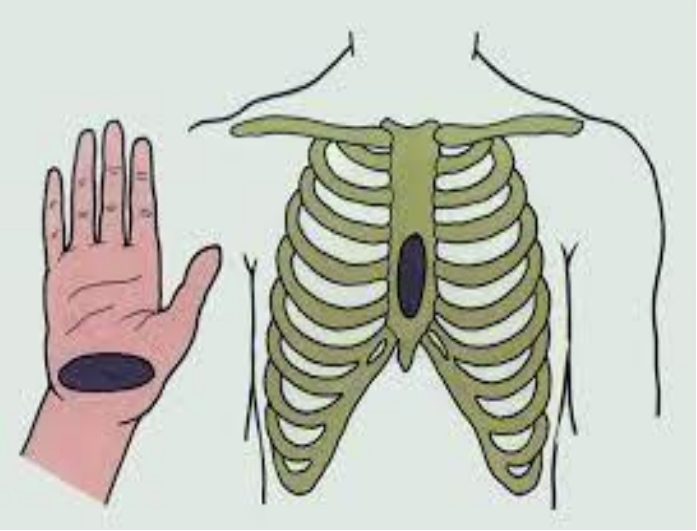


Fig. 10. Places of correct contact between the arm and the chest.

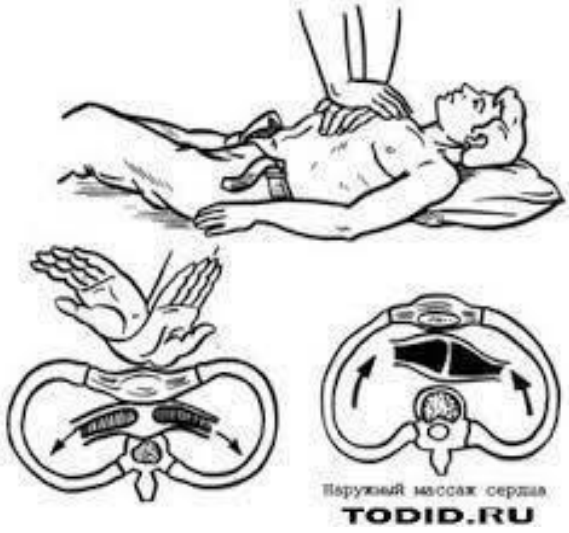


Fig. 11.Chest compression.

Fig. 12.Chest compressioncells are held at outstretched arms

A - (airways)- ensuring airway patency.

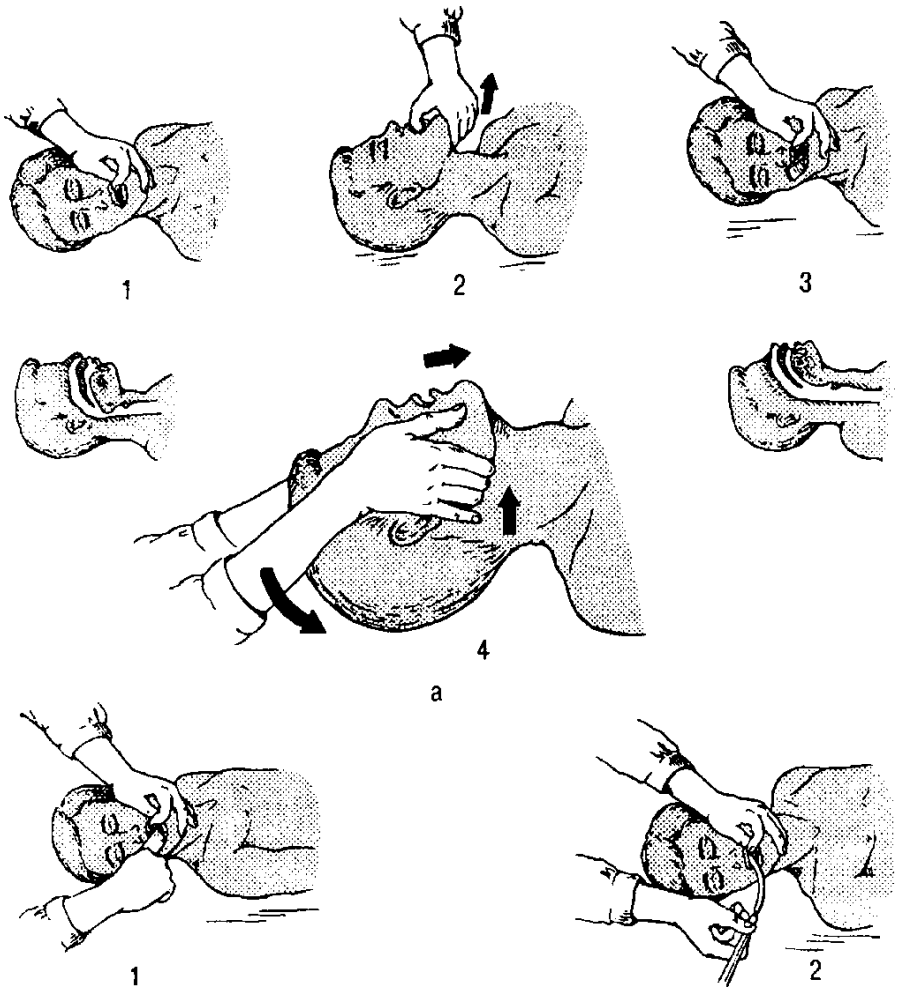
1. Tilt the patient's head back. Place the palm of one hand under the neck, with the other hand placed on the forehead, tilt the patient's head back. The axis of rotation passes through the atlantooccipital joint.

Throwing back the head is contraindicated if a cervical spine injury is suspected.

2. Bring the lower jaw forward. To do this, the person behind the head covers the head with both hands, the palms of the hands press the patient's ears, the end phalanges of the fingers fix the lower jaw at its corners. Move the lower jaw forward and upward (Fig. 13).

Removal of the lower jaw is mandatory! Regardless of the type of artificial ventilation (mouth to mouth or mouth to nose).

1) Wrap your finger in gauze or a handkerchief. Open the patient's mouth, remove foreign bodies and mechanically clean the mouth and throat (Fig. 14):



Rice. 13.Ensuring airway patency.

2) insert the thumb of one hand into the patient's mouth and press the tongue to the bottom of the mouth and pull back the lower jaw;
3) hold the index finger of the other hand along the inner surface of the cheek deep into the throat to the base of the tongue;
4) Bend your finger in a hook to clean the oral cavity.

Rice. 14.Mechanical removal of foreign bodies from oral cavity.

Artificial respirationis the replacement of air in the patient's lungs, carried out artificially, in order to maintain gas exchange when natural exchange is impossible or insufficient. It is first necessary to ensure patency of the airway, which is achieved by tilting the patient's head back with the lower jaw moving forward as much as possible. The patient is laid horizontally on his back, neck, chest, the patient's stomach is freed from clothing. When using the "mouth to nose" method, the person providing assistance closes the patient's mouth and, after a deep inhalation, exhales vigorously, wrapping his lips around the patient's nose (Fig. 15, 16, 17). The criteria for correct artificial respiration are the excursion of the chest at the moment of artificial inhalation and passive exhalation. Artificial respiration can also be performed using an Ambu bag (Fig. 18). Artificial respiration is carried out at a frequency of 12-18 per minute.

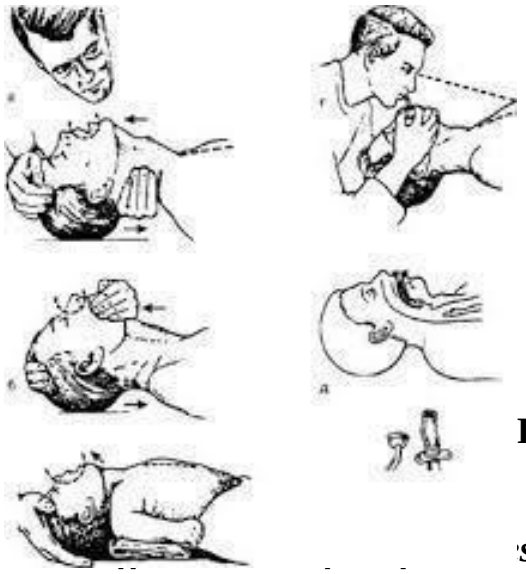


Fig. 15.Pulmonary ventilation "from mouth to nose".

spiration and blood circulationis assessed according to the following indicators:

- Constriction of the pupils.

- Appearance of adnexal pulsation on the carotid (femoral) arteries.
- Change in skin color (gradual disappearance of cyanosis and pallor).

Fig. 16.Pulmonary ventilation "mouth to mouth".

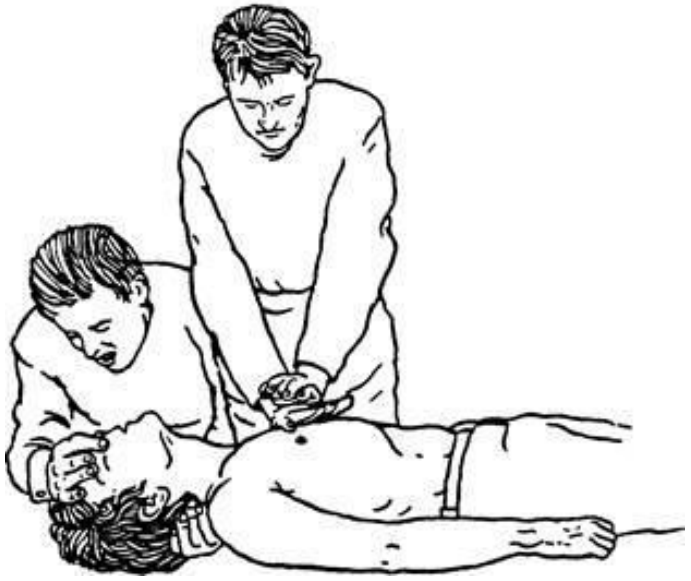


Fig. 17.Cardiopulmonary resuscitation for two people.

Contraindications for carrying outcardiopulmonary resuscitation:

✓ biological, social or clinical death resulting from incurable diseases with a long course;

- ✓ more than 25 minutes have passed since circulatory arrest under normothermia conditions;

Fig. 18.Ambu bags.

- ✓ the patient legally recorded his reasoned refusal of cardiopulmonary resuscitation in advance.

Metabolic disorders during circulatory and respiratory arrest, as well as during emergency resuscitation measures, lead to insufficiency of the functions of various organs (brain, heart, lungs, liver, kidneys), which develop after stabilization of the parameters of the main vital systems. This set of changes in the body is called "***post-resuscitation diseases.***"

Biological deathoccurs after clinical death in cases where cardiopulmonary resuscitation is not performed or resuscitation measures are stopped. Biological death is a necrotic process of all tissues, starting with neurons of the brain, necrosis of which occurs within 1 hour after circulatory arrest, and then the heart, kidneys, lungs, liver, necrosis of which occurs within 2 hours

after circulatory arrest. Skin necrosis occurs only after a few hours or even days.

Reliable signs of the onset of biological death are postmortem changes:

1. **Decrease in body temperature (to ambient level).**
2. **Cadaveric spots.**
3. **Rigor mortis.**

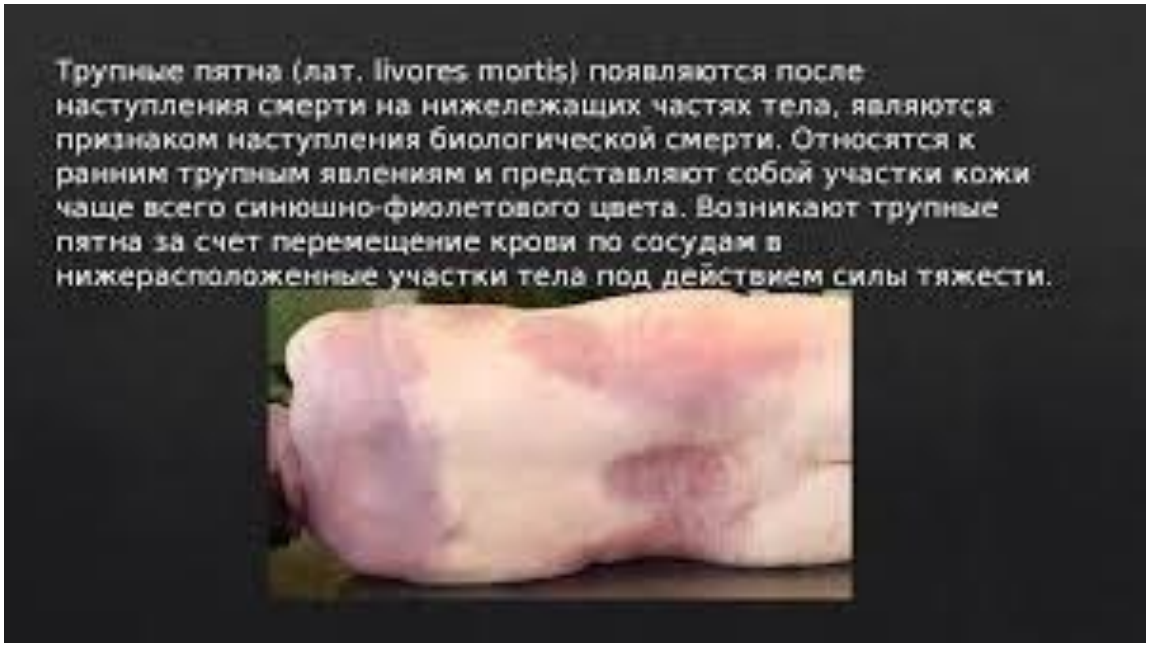


Fig. 19.Cadaveric spots.

*Cadaveric spots (Fig. 19) - a peculiar coloring of the skin*due to the flow and accumulation of blood in lower areas of the body. They begin to form 2-4 hours after the cessation of cardiac activity. The degree of their severity depends on the rate of death of the organism.

Typically, cadaveric spots are blue-violet or purple-violet in color. The initial stage of the formation of cadaveric spots is postmortem hypostasis (up to 14 hours). When pressing on a cadaveric spot in the hypo-stage

stasis, it disappears and is restored again after removing the load after a few seconds. Formed cadaveric spots (after 14 hours) do not disappear with pressure.

Rigor mortis (Fig. 20) –a kind of compaction and shortening of skeletal muscles, creating an obstacle to passive movement in the joints. Rigor mortis manifests itself 2-4 hours after the cessation of blood circulation, reaches a maximum at the end of 1 day and spontaneously resolves on 3-4 days.

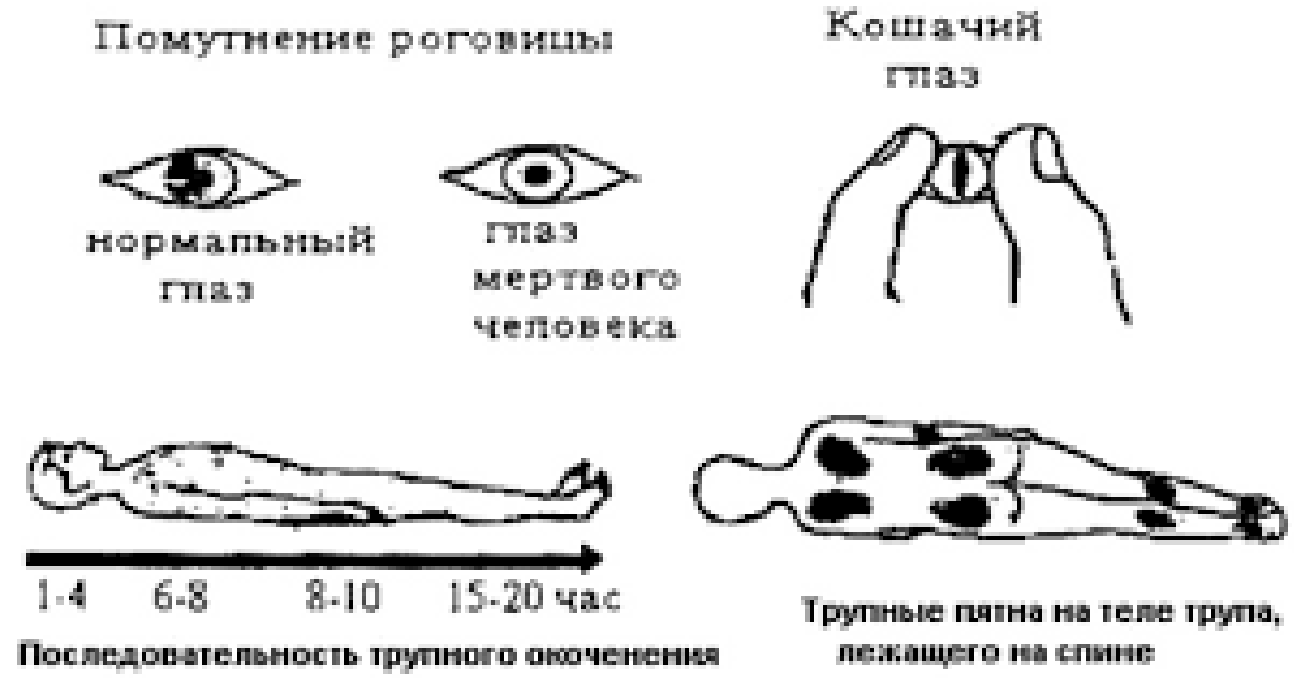


Fig.20.Signs of biological death.

Rice. 21.Eye signsbiological death: “herring shine” of the cornea, "cat's eye"

Practical skills.

Artificial ventilation (Fig. 22).

Rice. 22

1. When performing mouth-to-mouth artificial respiration to ensure patency of the airway, tilt the patient’s head back, tightly pinch his nose, after a deep breath, the resuscitator, tightly clasping the patient’s lips with his lips, must forcefully blow air into his airway. . After removing the mouth, a passive exhalation occurs; the next inhalation is taken after the patient’s chest drops to its original position.

2. When it is not possible to open the patient’s mouth or ventilation of the lungs through the mouth is impossible for some reason, use the “mouth-to-nose” method of artificial respiration: tilt the patient’s head back, close the patient’s mouth as tightly as possible, blow in air forcefully into the patient's airway through the nose

Indirect cardiac massage.

Indications:clinical death.

Required conditions:follow the sequence of cardiopulmonary resuscitation: restore airway patency, then indirect cardiac massage should be combined with mechanical ventilation, the push is performed during

the patient's exhalation time.

Progress of manipulation.

1. Place the patient on a hard surface.
2. Unbutton tight clothing.
3. Kneel to the side of the victim, near the chest.
4. Place one hand with the proximal part of the palm on the lower third of the sternum, the other on its dorsal surface.
5. Ensure maximum extension in the wrist joints in the form of a “butterfly”.
6. Straighten your arms at the elbow joints.

Fig.23.Indirect cardiac massage.

1. Press on the lower third of the sternum so that the sternum moves inward by 3.8-5 cm.
2. Maintain a constant up-down rhythm without pauses between compressions.

3. Combine 15 compressions for 9-11 seconds with two inhalations into the victim if resuscitation is carried out by one person.
4. Combine 4-5 compressions with one inhalation into the victim if resuscitation is carried out by two people.
5. Monitor the effectiveness of chest compressions after 1-2 minutes, determining the pulse in the carotid artery and the pupillary reaction, until a pulse appears and breathing occurs, or until biological death occurs.
6. If there is a pulse and breathing, keep the victim's airway open until admission to the intensive care unit.

A doctor or paramedic, when deciding whether to stop or refuse cardiopulmonary resuscitation and declare the death of a patient (Fig. 24), must act within the framework of the law. The main legal documents are:

1. "Fundamentals of the legislation of the Russian Federation on the protection of citizens' health." Adopted on July 22, 1993 by resolution of the Supreme Council of the Russian Federation No. 5489-1
   Art.32. Consent to medical intervention Article 33
   Refusal of medical intervention.
   Art. 45. Prohibition of euthanasia.
   Art.46. Determination of the moment of death: death is certified by a medical professional (doctor or paramedic). The criteria and procedure for determining the death of a person and terminating resuscitation measures are established by regulations approved by the Ministry of Health of the Russian Federation.
2. Temporary instructions for ascertaining death. Appendix to the order of the Ministry of Health of the Russian Federation dated August 10, 1993. No. 189.

3. Draft "Regulations on the criteria and procedure for determining the moment of death of a person and cessation of resuscitation measures." (Contained in a letter from the Ministry of Health of the Russian Federation).

Rice. 24.The corpse of a patient being sent to the morgue.

Test questions for lesson No. 10.

1. Diagnosis of clinical death.
2. Ascertainment of biological death.
3. Artificial techniquemouth-to-mouth breathing.
4. Artificial techniquemouth-to-nose breathing.
5. Indirect cardiac massage technique.
6. Legal documents regulating resuscitation measures.

Test questions.

1. The work of the reception department should take place in the following sequence:

A.Registration of patients, sanitary and hygienic treatment, medical examination.

B.Registration of patients, medical examination, sanitary and hygienic treatment.

IN. Sanitary and hygienic treatment, medical examination, registration of patients.

2. The sanitary inspection room of the reception department consists of the following rooms:

A. Observation room.

B. Changing room.

IN. Bath-shower room and room where patients dress.

G. All of the above.

3. Sanitary and hygienic treatment of the patient includes:

A. Pest control.

B. A hygienic bath, shower or wiping of the patient. B. Dressing the patient in clean hospital linen and clothes. D. None of the above.

4. The water temperature for a hygienic bath should be:

A. 27-29oC.

B. 40-43oC.

IN. Approach body temperature (34-36oC) or be higher (37-39oC).

5. If pediculosis is detected in the scalp of a patient in the emergency department of a hospital, the actions of medical personnel are as follows:

A. Deny the patient hospitalization.

B. Clean the patient withsoap in the bathroom.

IN. Treat your hair with soap “K” and comb out with a thick comb.

G. Treat the scalp with pediculocides.

6. A patient sent for hospitalization was found to have body lice in the emergency department. Necessary:

A. Send clothes to disinfestation.

B.Deny the patient hospitalization.

IN.Wash the patient again with soap in the bath, send clothes and linen to the disinsection chamber.

G.Despite the patient's protests, carry outshaving the head.

7. The therapeutic and protective regime includes:

A.Ensuring a regimen that spares the patient’s psyche.

B.Strict adherence to internal regulations.

IN.Providing a regime of rational physical activity.

G.Alllisted.

8. The duties of the junior nurse of the department include:

A.Only cleaning of wards, corridors and utility rooms.

B.Only morning toilet for seriously ill patients.

IN.Only feeding seriously ill patients.

G.None of the above.

9. During quiet time it is allowed:

A.Clean the room.

B.Watch TVin the ward or in the hall.

IN.Relatives visit the sick.

G.None of the above.

10. Measuring the patient’s height should be carried out under the following conditions:

A.In shoes and headdress

B.With shoes, but withoutheaddress.

IN.Invite the patient to take off his shoes and stand on the stadiometer platform.

G.Invite the patient to stand against the wall, pressing his heels.

11. What types of transportation of patients to the department exist:

A.On foot.

B.On a wheelchair.

IN.On a stretcher.

G. All of the above.

12. The method of transporting the patient is determined.

A. The length of his stay in the hospital.

B. The nature of the disease.

IN. The severity of the condition.

G. The purpose of transportation.

13. To transport a patient on a recumbent gurney it is necessary:

A. Two paramedics.

B. Three or more health workers.

IN. One health worker.

G. All wrong.

14. The patient's linen is changed:

A. At least once a week.

B. At least onceonce every two weeks.

IN. Every three days.

G. As it gets dirty.

15. Washing a patient in a hospital should be carried out:

A. Every day.

B. At least onceonce a week.

IN. Once every 10 days.

G. 1 time per month.

16. When changing the patient's clothes:

A. Clothes are removed first from the diseased limb, then from the healthy one.

B. Clothes are removed first from the healthy limb,and then with the patient.

IN. The order in which clothing is removed from the limbs does not matter.

G. Everything is wrong.

17. The appearance of bedsores is evidence of:

A. Incorrectly prescribed treatment by a doctor.

B. Insufficient patient care. B. Poor nutrition of the patient. D. None of the above.

18. Rubber boat is applied:

A. For weakened patients.

B. Atpresence of bedsores.

IN. For fecal and urinary incontinence.

G. In all of the above cases.

19. To treat the nasal cavity use:

A. Dry turundas.

B. Turundas moistened with furatsilin solution.

IN. Turunda moistened with Vaseline oil.

G. Tweezers.

20. When treating the eyes:

A. They use different tampons.

B. Movements are made from the sidesto the center.

IN. Tampons must be sterile.

G. Use swabs moistened with a 2% solution of boric acid.

21. What should be the ratio of proteins, fats and carbohydrates in the diet of patients?

A. This ratio is determined by the proportion 1:1:4.

B. It is necessary to increase the protein content in the diet.

IN. The ratio of proteins, fats and carbohydrates should be determined by the nature of the disease.

22. Is it rational to increase the energy value of the diet by increasing its protein content?

A. Yes, because 1 g of protein provides the body with 4.1 kcal.

B. No, because 1 g of protein gives significantlyless energy than 1 g of fat.

IN. No, because proteins should be used primarily as plastic materials.

23. In what cases are artificial nutrition of patients through a nasogastric tube used?

A. For burns, inoperable tumors of the esophagus and pharynx.

B. After operationson the esophagus.

IN. For swallowing disorders.

G. In an unconscious state.

24. For urolithiasis, depending on the chemical composition of the stones, diet No. is prescribed:

A. 6 or 14.

B. 5 or 12.

IN. 7 or 11.

G. 10.

25. What can be given through a tube?

A. Soup.

B. Broth.

V.Sok.

G. Cream.

D. Products on the table 0.

26. Temperature stimuli reflexively affect:

A. Reduced blood clotting.

B. The width of the lumen of blood vessels, the sensitivity of the body,muscle tone.

IN.Smooth muscles of internal organs, the central nervous system, providing a calming effect.

G.Bowel function.

27. Active ingredient of mustard plasters:

A.Turpentines. B.

Hot water. V.

Ichthyol.

G.Allyl oil.

30. Frequency of 10-minute breaks when using an ice pack:

A.Every 30 minutes.

B.At every patient request.

IN.Every 5 minutes.

G.Each hour.

31. How many layers are there in a warming wet compress?

A.One layer.

B.4 layers.

IN.The bigger, the better.

G.3 layers.

32. Indications for applying a wet warming compress.

A.Infiltrates.

B.Joint pain.

IN.Skin diseases, fever (2nd period).

G.Stomach ache.

33. The wet cold compress is changed through:

A.2-3 min.

B.Once it's dry.

IN.As it warms up.

G.After 10 - 20 minutes,with an interval of 5 minutes.

34. Contraindications to applying a wet warming compress.

A.Infiltrates.

B.Stomach ache.

IN.Skin diseases, fever (2nd period).

G.Bruiseson the first day.

35. Indications for the use of an ice pack.

A.Pain in the liver, kidneys.

B.Severe headaches. B.

Internal bleeding. D. Bruises

on the first day.

36. Indications for use of the heating pad:

A.Abscesses after injections.

B. Internal bleeding. B. Chills.

G.Infiltrates after injections.

37. Water, what temperature is indicated when performing a cleansing enema.

A.Hot.

B.Cool.

IN.Body temperature.

G.Optionalsick.

38. How long does it take to have a bowel movement after using an oil enema?

A.After 15 – 20 minutes.

B.In 2-3 hours.

IN.After 10 – 12 hours.

G.In one day.

39. The introduction of a gas outlet tube is indicated for:

A.Flatulence.

B.Delaystool for more than three days.

IN.Acute intestinal obstruction.

G.Postoperative intestinal paresis.

40. Position of the patient when inserting a gas tube:

A.On the left side.

B. On the right

side. B. On the

back.

G.On the stomach.

41. The gas outlet tube is inserted to the depth:

A.3-4 cm.

B.5 – 6 cm.

IN.20 – 30
cm.

G.10 – 12
cm.

42. Name the types of enemas:

A.Cleansing.

B.Drip.

IN.Food.

G.Siphon.

43. Oil enemas are used:

A.For feeding.

B.For persistent constipation.

IN.For anal fissures.

G.For colon tumors.

44. To take a throat swab, use:

A.Sterile glass rod.

B. A cotton swab wrapped around tweezers.

IN. Sterile swab.

G. Tweezers.

45. The following is sent for general sputum analysis:

A. Daily sputum.

B. Sputum collected duringthree days.

IN. Fresh morning sputum collected in a clean spittoon.

G. Evening sputum.

46. The following is sent for microbiological analysis of sputum:

A. Daily sputum.

B. Fresh morning sputum collected in a cupPetri dish with nutrient medium.

IN. Evening sputum.

G. Fresh morning sputum collectedinto a clean spittoon.

47. How is urine collected for research using the Nechiporenko method?

A. Urine obtained in the middle of urination.

B. During the day everythree hours, three o'clock.

IN. Once every 3 hours.

G. 1/50 of the daily allowanceurine

48. How is urine collected for the Kakovsky-Addis study?

A. The average portion of urine obtained during catheterization.

B. During the day

IN. Urine obtained in the middle of urination.

G. Urine obtained inend of urination.

49. Examination of feces for occult blood is carried out for all diseases except:

A. Gastric ulcer. B. Stomach and

intestinal cancer. B.

Hemorrhoids.

G.Duodenal ulcer.

50. Preparing the patient for x-ray examination of the esophagus, stomach, duodenum:

A.In the evening and in the morning - a cleansing enema.

B.In the evening, cleansing enema.

IN.In the morning - on an empty stomach.

G.In the morning– siphon enema.

51. What is the name of the X-ray contrast study of the kidneys and urinary tract?

A.Irrigoscopy.

B.Chromocystoscopy. B.

Excretory urography. G.

Tomography.

52. What should precede artificial respiration?

A.Direct cardiac massage.

B.Indirect massagehearts.

IN.Restoration of airway patency.

G.Disinfection of the patient's oral cavity.

53. Why is it necessary to tilt the patient's head back when performing artificial respiration?

A.For the convenience of the resuscitator.

B.To create a good seal between the resuscitator's mouthand the patient's mouth (nose).

IN.To ensure airway patency.

G.In order to create the bestconditions for blood circulation.

54. In what position should the resuscitator’s hands be when performing chest compressions?

A.Maximum extension in the wrist and elbow joints.

B.Slightlybent at the elbow and wrist joints.

IN. Slightly bent at the wrist joints and maximally extended at the elbows.

G. Grasp the chest on both sidescell.

55. How to check the correctness of artificial respiration?

A. During artificial respiration, a pulse should appear.

B. During artificial inhalation, the chest should expand, and during passive exhalation, it should collapse.

IN. During artificial inhalation, puffing of the cheeks is observed.

G. During artificial respiration, cyanosis of the skin should remain.

56. In what cases is direct cardiac massage used?

A. If indirect cardiac massage is ineffective.

B. If cardiac arrest occurs during chest surgery.

IN. With appropriate preparedness of resuscitators.

G. atavailability of instruments to open the chest.

Answers to test tasks.

1.B; 2. G; 3.A, B, C; 4.B; 5.B; 6. B; 7.G; 8.A, B, C;9.G;10.V; 11.G; 12.V; 13.A; 14.A,G; 15.B; 16.B; 17.B;18.G;19.V; 20.A, B, C, D; 21.A; 22.B; 23 V, G; 24.A; 25.B, C, D; 26. B, V; 27.G; 28.A; 29.G; 30.A, B; 31.A, G; 32.B, V, G; 33.B, C, D; 34.V,G; 35.B; 36.B; 37.B; 38.B; 39.B; 40.A, B, D; 41.B; 42.B; 43.B; 44V; 45.A; 46.B; 47.B; 48V; 49.B; 50.V; 51.B; 52.B; 53.B.

Answers to situational problems.

Situational task No. 1

A 60-year-old patient with community-acquired lower lobe pneumonia is on bed rest for a week in the pulmonology department.

lenition.

1. How to arrange patient care?
2. What are the main indicatorsneed to be monitored?

Situational task No. 2

Patient, 19 years old. Parents suffer from pulmonary tuberculosis. Over the past three years, the patient has developed weakness, low-grade fever, and a cough with a small amount of sputum.

1. What research should be performed on the patient?
2. What method is used to collect sputum to detect Mycobacterium tuberculosis?

Situational task No. 3

A patient was admitted to the emergency department with suspected gastrointestinal bleeding (3 hours ago there was vomiting of "coffee grounds" type contents). Feels subjectively satisfactory and can move independently.

1.How to transport a patient to the department?

Situational task No. 4

A patient approached the nurse on duty with complaints of pain in the epigastric region and vomiting of a black mass.

1.Tactics of the nurse?

Situational task No. 5

A tourist was bitten by a tarantula. At the site of the bite there was intense pain, skin hyperemia, severe swelling and paresthesia.

1. What first aid is needed in this case?

Situational task No. 6.

The young man's blood was taken from a vein for analysis. Suddenly he turned pale, covered in cold, sticky sweat, lost consciousness and fell out of his chair.

1. Explain the patient's condition.
2. What is first aid?

Situational task No. 7

An 18-year-old patient briefly lost consciousness while taking blood from a vein at a medical and obstetric station; pale skin and increased sweating were noted. Blood pressure 80/60 mm Hg. Pulse 60 beats/min. In a horizontal position, the patient's consciousness and blood pressure quickly and completely recovered.

1. Identify the patient's emergency condition.

2. Draw up an algorithm for diagnostic and therapeutic measures to provide emergency care.

Situational task No. 8

Patient E., 43 years old, admitted to the clinic with pathology of the gastrointestinal tract, was prescribed an FGDS. On the morning of the study, the patient reported that he took the pills and washed them down with tea.

1.What should the nurse do in this situation?

Standards of responses to situational tasks.

Task No.1. *Answer: 1.*Patients with lung diseases should be in bright, spacious, well-ventilated rooms with a centralized oxygen supply. It is necessary to monitor the daily morning toilet and prevent bedsores. 2. Establish control and measurement of daily sputum production and calculation of respiratory rate.

Problem No. 2*Answer;*1. The patient needs to examine the sputum for mycobacterium tuberculosis. 2. Sputum is collected over three days and enriched by flotation.

Problem No. 3*Answer:*The patient must be transported only on a gurney.

Task No. 4*Answer:*It is necessary to lay the patient down with the head end elevated, apply cold to the epigastric region, allow him to swallow pieces of ice, and give him 10% calcium chloride 20.0 ml to drink. Call a doctor.

Problem #5*Answer:*It is necessary to apply cold to the bite site in order to cause vasospasm and prevent the poison from penetrating into the blood.

Problem No. 6*Answer:*The patient fainted. It is necessary to place the patient on his back with the leg end of the body raised. Unfasten the collar of your clothes, give a flow of fresh air, inhale ammonia.

Problem No. 7*Answer:* 1. Fainting. 2. Measure blood pressure and pulse. Lying position. If hypotension persists for more than 3 minutes. – adrenaline 0.3 ml intravenously.

Problem No. 8*Answer:*The patient needsreschedule the study for another day.

Recommended reading:

Main literature:

1. General patient care in a therapeutic clinic. Oslopov V.N., Moscow, 2009.

2. General patient care in a therapeutic clinic. Oslopov V.N., M. "GEOTAR – Media", 2006.

3. General nursing care. Turkina N.V., Filenko A.B., Moscow, 2007.

Additionalliterature:

1. Methodological recommendations for practical classes and independent work of students in general patient care. Totrov I.N., Khetagurova Z.V. Medoeva A.A. et al., Vladikavkaz, 2003.

2. Basic nursing procedures. Tobler R. M. "Medicine", 2004.

3. Routes of drug administration: Textbook. allowance / E.Yu. Shkatova, N.V. Khataguri. – 3rd edition, corrected and supplemented. – Rostov n/d: Phoenix, 2007. – 96 p. – (Medicine for you).

4. Test control on general care of therapeutic patients. Totrov I.N., Khetagurova Z.V., Ambalova S.A., Gabaraeva L.N. and others, Vladikavkaz, 2007

5. Electoral librarySOGMA