Topic 2.2 Protection of the public and rescuers in an emergency

Electronic training manual for students of the 5th and 6th year in the discipline "Emergency Medicine"

Questions

1. Protection measures, principles and methods of protecting the population and rescuers
2. Alert Evacuation of the population
3. Medical personal protective equipment
4. Content, tasks and main methods of medical and psychological protection of the population and persons involved in its rescue

Question 1. Protection measures, principles and methods of protecting the population and rescuers

The effectiveness of the protection of the population and rescuers in emergency situations is achieved by using various organizational, engineering and special (including medical) measures, taking into account the characteristics of the impact of the damaging factor of emergency situations. At the same time, medical protection measures are carried out in almost all emergency situations.

Protection of the population in emergencies is a set of measures aimed at preventing or limiting the loss of the population and the threat to its life and health from the damaging factors of emergencies.

Medical protection - a set of measures carried out (organized) by the QMS and MS GO to prevent or minimize the impact of damaging factors on the population and rescuers. Medical protection is an integral part of health care provision

Protection is achieved by carrying out the following activities before and after the occurrence of an emergency:

- forecasting possible emergencies and the consequences of their occurrence for the population; forecasting possible emergencies and the consequences of their occurrence for the population;
- continuous monitoring and control of the state of the environment;
- notification (warning) of the population about the threat of occurrence and the fact of emergency situations;
- evacuation of people from dangerous zones and areas;
- engineering, medical, radiation and chemical protection;
- application of special regimes for the protection of the population in the contaminated (contaminated) territory;
- prompt and reliable informing the population about the state of its protection against emergencies, the measures taken to ensure safety, predicted and emerging emergencies, the procedure for action;
- preparation for actions in emergency situations of the population, leaders of all levels, personnel of enterprises, organizations and institutions, as well as management bodies and forces of the RSChS;
- carrying out emergency rescue and other urgent work in areas of emergency situations and foci of destruction;
- providing protection from the damaging factors of emergencies of food and water;
- creation of financial and material resources in case of emergencies

Medical protection measures include

- training the population and rescuers in the rules of protection against dangers caused by emergencies, including first aid methods and measures to prevent infectious diseases
- moral and psychological preparation of the population and rescuers in order to form psychological resilience and readiness for active action in the aftermath of emergencies, preventing panic, which often exacerbates the consequences of emergencies
- the use of protective structures as a means of collective protection of the population, including for the deployment and operation of medical institutions in conditions of radioactive, chemical contamination of the territory, etc.
- use of personal protective equipment for respiratory organs, skin integuments from contamination with RV, CV and BS
- compliance with the relevant regimes of anti-radiation and anti-chemical protection, rules of conduct
- carrying out sanitary-hygienic and anti-epidemic measures when living (staying) in a territory contaminated with radioactive and chemical substances, or in foci of infectious diseases that pose a danger of infecting the population and rescuers during emergency response
- carrying out medical protection measures that are an integral part of the medical and sanitary provision of the population and personnel involved in the elimination of the consequences of emergencies

Basic principles, methods and measures to protect the population in emergency situations and rescuers

The basis of the organization of the protection of the population in emergencies is the principle of universality

No less significant is the principle of differentiated holding of events in the regions of the country, taking into account their characteristics according to the predicted situation.

The most important principle of protecting the population is the early implementation of measures.

The principle of the complexity of civil defense activities

Protection of the population from the damaging factors of natural disasters and man-made disasters (including socio-political ones) is achieved in the following ways:

- sheltering the population in protective structures sheltering the population in protective structures
- dispersal, evacuation (resettlement) of the population from zones (regions) of possible cataclysms
- the use by all groups of the population of personal protective equipment, including medical.

Question 2. Alert

- Informing the population about emergencies is bringing to the public through the media about predicted and emerging emergencies, measures taken to ensure the safety of the population and territories, methods and methods of protection.
- Notification of the population about emergencies is the communication to the population of warning signals and emergency information about the dangers arising from the threat of the occurrence or occurrence of emergencies, as well as during the conduct of hostilities or as a result of these actions, about the rules of behavior of the population and the need to take measures to protect.
- RSChS warning system - organizational and technical association of forces, means of communication and warning, broadcasting networks, public communication network channels that provide information and warning signals to the authorities, RSChS forces and the population.
- The integrated system of emergency notification of the population about the threat of the occurrence or occurrence of emergencies (CSEON) is an element of the public notification system about emergencies, which is a complex of software and hardware tools for warning and monitoring systems for hazardous natural phenomena and man-made processes, which ensures that warning signals and emergency information are brought to the attention of management bodies of the RSChS and to the population in automatic and (or) automated mode.
- Specialized technical means of alerting and informing the population in crowded places are specially designed technical devices that receive, process and transmit audio and (or) audiovisual, as well as other messages about the threat of occurrence, about the occurrence of emergencies and the rules of behavior of the population.

- The zone of emergency notification of the population (EPON) is a territory at risk of rapidly developing emergencies that pose a direct threat to the life and health of people located on it.
- Warning signals - special signals designed to alert the public.
- OKSION is an organizational and technical system that combines hardware and software tools for processing, transmitting and displaying audio and video information in order to train the population in the field of civil defense, emergency protection, fire safety, water safety and public order protection, timely warning and promptly informing citizens about emergencies and the threat of terrorist acts, monitoring the situation and the state of law and order in crowded places based on the use of modern technical means and technologies.

Authorities are obliged to promptly and reliably inform the population through the media, including using specialized technical means of informing and alerting the population in places of mass stay of people and through other channels about the state of protection of the population and territories from emergencies, as well as about the measures taken to ensure their safety, about predicted and emerging emergencies, about methods and methods of protection. Collection, processing, exchange and issuance of information in the field of protection of the population and territories from emergencies, including the organization of explanatory and preventive work among the population in order to prevent the occurrence of emergencies in water bodies. Organization of notification of the population about emergencies, including emergency notification of the population.

Notification of the population about the occurrence of emergencies must meet the following basic requirements:

✓be timely to give the population time to prepare for defense

✓to exclude the occurrence of panic, to promote a clear and organized conduct of events

✓carried out only when the nature of the hazard is reliably established carried out only when the nature of the hazard is reliably established

✓concern only that part of the population that may be exposed to damaging factors in a given emergency

✓carried out centrally (by higher executive authorities or commissions for emergency situations at all levels).

OKSION

The purpose of creating OKSION is to prepare the population in the field of civil defense, protection from emergencies, ensuring fire safety and protecting public order, promptly informing and timely notification of citizens about emergencies and the threat of terrorist acts, monitoring the situation and the state of law and order in places of mass stay of people based on the use of modern technical means and technologies.

ОКСИОН, СЗИОНТ, БЕЗОПАСНЫЙ ГОРОД

ОКСИОН, СЗИОНТ, БЕЗОПАСНЫЙ ГОРОД

Общероссийская комплексная система информирования и оповещения населения (ОКСИОН)

Цель создания ОКСИОН:

Совершенствование информирования и оповещения населения об угрозе возникновения кризисных ситуаций, повышение эффективности подготовки граждан в области ГО, защиты от ЧС, обеспечения пожарной безопасности и охраны общественного порядка на основе использования современных технологий

Задачи ОКСИОН:

- Сокращение сроков гарантированного оповещения
- Повышение оперативности информирования населения о ЧС и мероприятиях ГО
- Повышение уровня подготовленности населения в области ГО и безопасности жизнедеятельности
- Повышение уровня культуры безопасности жизнедеятельности
- Увеличение действенности информационного воздействия с целью скорейшей реабилитации пострадавшего населения
- Повышение эффективности мониторинга обстановки в местах массового пребывания людей путем профилактического видеонаблюдения

Notification of the population about the occurrence of emergencies must meet the following basic requirements:

- ✓ **be timely to give the population time to prepare for defense;**
- ✓ **to exclude the occurrence of panic, to promote a clear and organized conduct of events;**
- ✓ **carried out only when the nature of the hazard is reliably established;**
- ✓ **concern only that part of the population that may be exposed to damaging factors in a given emergency;**
- ✓ **carried out centrally (by higher executive authorities or commissions for emergency situations at all levels).**

As part of OKSION, the following technical means of informing are used:

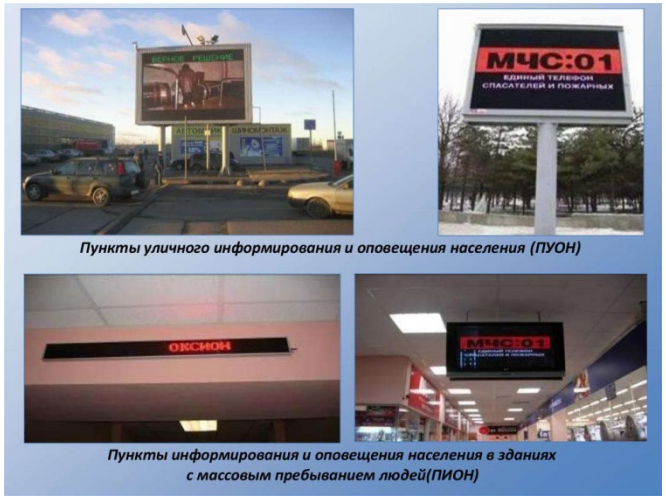
- **outdoor (located outdoors) ground free-standing LED panels on their own support (L-shaped or U-shaped) screen size from 12 to 60 sq. m. and power consumption up to 30 kW;**
- **outdoor (located outdoors), placed on buildings and structures, LED panels with a screen size of up to 12 sq. m;**
- **indoor (located indoors) hinged television plasma panels (hereinafter referred to as plasma panels);**
- **indoor television projection screens;**
- **radio broadcasting networks of passenger transport;**
- **informational posters on the fences of construction sites, ground passenger transport vehicles and stopping pavilions;**
- **street information signs, stands, signboards, posters, banners;**
- **other modern technical means;**
- **ticker devices.**

The following places (sites) are recommended for placement of technical information media:

- main exits, entrances to the city, intersection of the main city highways;
- airports;
- railway stations;
- hypermarkets (shopping centers) with a total area of more than 10 thousand square meters. m;
- metro stations;
- central squares of cities;
- city stadiums;
- city markets;
- city bus stations;
- city beaches;
- city parks;
- passenger transport);
- fencing of construction sites, vehicles of ground passenger transport and stopping pavilions;
- other places of mass stay of people.

Technical media is not recommended to be installed:

- their placement and operation may cause damage to the natural complex;
- they may have a similarity in appearance, image, sound effect with the technical means of organizing traffic;
- they can reduce traffic safety, worsen their visibility, interfere with the passage of pedestrians, reduce the dimensions of engineering structures, create the impression that pedestrians, vehicles, animals, and other objects are on the road;
- on the same support with road signs, traffic lights and in alignment with them;
- on emergency-dangerous sections of roads, at railway crossings, in tunnels and closer than 50 m from them in the direction of travel;
- in the form of free-standing structures above the roadway;
- on road barriers and guides;
- at a distance of less than 100 m from the technical means of information to direction indicators;
- closer than 5 m from the edge of the technical media to the edge of the carriageway.



Пункты уличного информирования и оповещения населения (ПУОН)

Пункты информирования и оповещения населения в зданиях с массовым пребыванием людей(ПИОН)

PUON, PION, PIOT

Points of street information, notification and observation - PUON, located in places of mass stay of people, which include the following means of informing and alerting the population and collecting information:

- **LED panels;**
- **CCTV Cameras**
- **means of emergency communication with the call center operator**

Points of informing and warning in buildings with mass stay of people (PION) located in premises with mass stay of people and having plasma screens in their composition. PION may also include text displays of the "creeping line" type.

Points of informing and alerting the population on vehicles (PIOT), located, for example, in train cars, subways, trolleybuses, etc., which may include screens and text displays such as a "creeping line".

City public warning system

The main task of the city population warning system is to ensure the delivery of information and warning signals:

-to the population located in the city;
-Department of Civil Defense of the city;
-executive authorities of the city;
-duty-dispatching services;
-duty-dispatching services of POO;
-duty services of socially significant facilities.

The public warning system of the city is represented by:

-electric siren warning network;
-radio broadcasting network of the city (wire broadcasting network);
-VHF-FM network (broadcasting);
-TV broadcasting network (audio channels);
-cable TV network of the city;
-mobile radiotelephone network;
-telephone network of the city;
-OXION elements.

Algorithm of the public warning system:

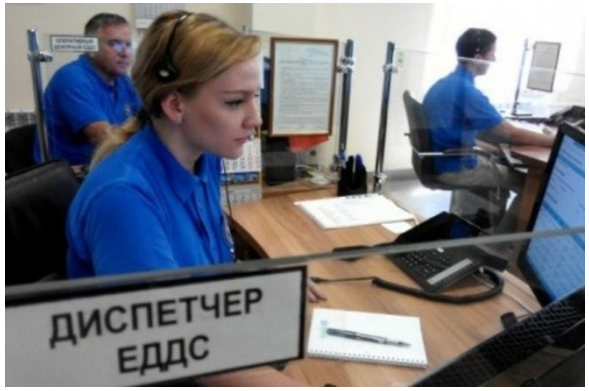
1.The sirens installed on residential and administrative buildings turn on. This signal means "Attention everyone!".
2.After that, through loudspeakers and radio points installed on the streets, in residential buildings and at city facilities, citizens are informed about what needs to be done in this situation.
3.In areas of the city where stationary loudspeakers and radio points have not yet been installed, vehicles equipped with loudspeaker communication systems (GGS) are used.
4.After the signal "Attention everyone!" information on further actions in emergency situations will also be broadcast by representatives of the Ministry of Emergency Situations on the city TV channel.
5.Information about the notification will be broadcast both on the OXION television panels installed in places of mass stay of people, and on the information television screens of vehicles.
6.Citizens will be informed about the danger and by mobile communication - with the help of SMS.
7.If the “alarm” sirens start to work, you need to quickly turn on the TV or radio.

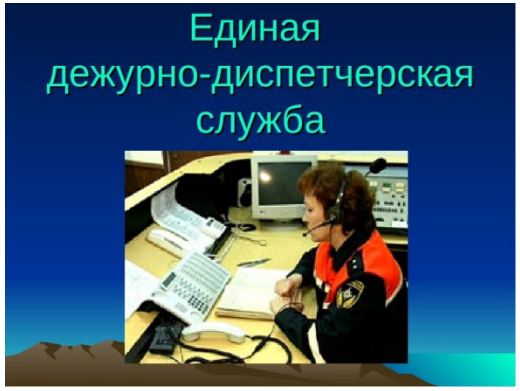
Unified duty dispatch service of the district (EDDS)

EDDS is the body of daily operational dispatch control of the link of the urban subsystem of the RSChS and GO.

The main tasks of EDDS:

- **receiving warning signals from higher authorities and bringing them to the leadership of the district;**
- **reception and processing of messages about emergencies, analysis and assessment of the reliability of received messages;**
- **ensuring operational management and management of fire and rescue units - when responding to reports of fires, as well as emergency rescue teams and constant readiness forces - when responding to emergencies;**
- **preliminary assessment (monitoring), preparation of joint actions of DDS and emergency services;**
- **ensuring the proper functioning and development of the communication system, elements of information technology;**
- **informing the DDS of enterprises and organizations and involved services;**
- **preparation of draft reports (reports) on the threat or occurrence of emergencies.**





Local warning systems for potentially dangerous objects

The creation of LSO is determined by the requirements of the Decree Pr. RF dated March 1, 1993 No 178 "On the creation of local warning systems in areas where potentially dangerous objects are located.«

Such objects include, first of all, nuclear power plants, chemically and radiation hazardous enterprises, hydroelectric facilities with a pressure dam, the possible destruction of which may form a zone of catastrophic flooding, fire, explosion and other objects.

SALW is brought directly to the zone of hazardous production and the population that enters such zones in case of accidents at potentially hazardous facilities. It is created, improved and maintained in constant readiness by the owner of the POO or a person authorized to perform on behalf of the owner the actions necessary to manage the property.

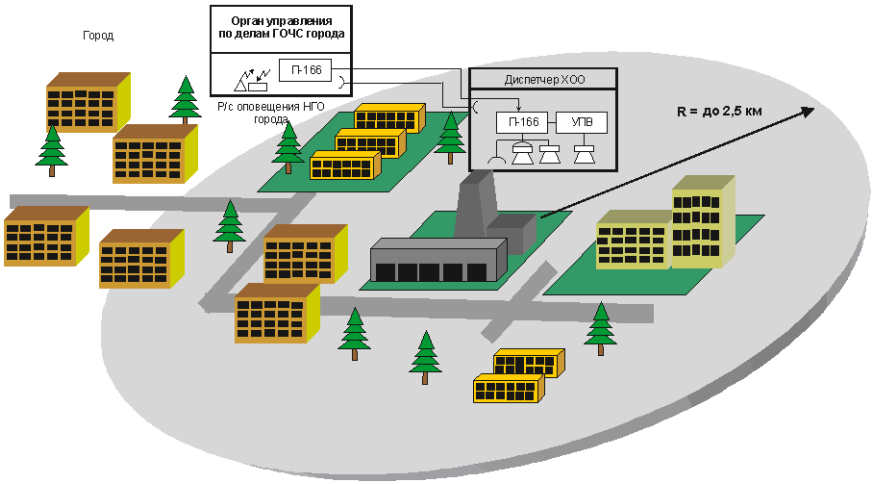
It is an organizational and technical association of the on-call service of the POO, technical means of warning, broadcasting networks and communication lines.

In accordance with federal legislation, the zones of operation of small arms and light weapons in the areas of deployment are determined:

- ✓ **radiation hazardous objects - within a radius of 5 km;**
- ✓ **chemically hazardous facilities - within a radius of up to 2.5 km;**
- ✓ **hydrotechnical facilities (downstream, in flood zones) - at a distance of up to 6 km from the facilities.**

Tasks of LSO:

- **bringing information about emergencies to the city's civil defense authorities; heads and DDS of organizations located in the LSO coverage area;**
- **bringing information about emergencies to the population living in the zone of action of small arms and light weapons;**
- **receiving notification commands from the city population notification system and launching notification means;**
- **circular (general or selective) notification of officials on all types of telephone communications;запуск (общий или выборочный) электросирен;**
- **interception (general or selective) of the programs of the radio broadcasting node of the enterprise and the city radio broadcasting network for transmitting information to the personnel of the enterprise and the population of adjacent territories;**
- **recording of negotiations from dispatching communication channels;**
- **remote testing of the operability of equipment, communication channels and control systems.**



Question 3. Evacuation of the population

Evacuation **- a set of measures for the organized removal (withdrawal) from large cities and other pre-designated settlements of workers and employees of economic facilities, transferring their activities to a suburban area or stopping it for wartime, disabled and unemployed in the production of the population from the zone of possible cataclysms. It is made for a long period with the possible return of people to their places of former residence. The evacuated population lives permanently in the countryside until further notice.**

Dispersal **- a set of measures for the organized removal from large cities and other pre-designated settlements and placement in the countryside of workers and employees of economic facilities that continue to work in wartime in these cities and settlements. Workers and employees dispersed in the suburban area enter the city (settlements) in shifts to work at their enterprises, and at the end of work they return to the suburban area for rest.**

Resettlement **- the organized removal of the disabled and not employed in the production of the population from areas contaminated with radioactive substances and dangerous for living, to safe places for permanent residence.**

Evacuation is not subject to:

- **persons liable for military service with a mobile prescription;**
- **non-transportable patients and attendants.**

Depending on the scale, features of the occurrence and development of emergencies, as well as the specific conditions of the current situation, it is possible to carry out the following types of evacuation of the population:

- **general evacuation; partial evacuation;**
- **evacuation of the population from the border areas.**

Each object of the economy is determined in advance by the production base and allocated a location in the suburban area.

General evacuation - carried out in relation to all categories of the population, with the exception of; non-transportable patients and their staff, as well as citizens subject to conscription for military service for mobilization.

***Partial evacuation* - carried out without violating the current transport schedules. At the same time, the disabled and not employed in production population are evacuated (persons studying in boarding schools and educational institutions of primary, secondary and higher vocational education, together with teachers and service personnel and members of their families. Pupils of orphanages, departmental kindergartens, pensioners in homes for the disabled and veterans, together with the attendants and members of their families). Material and cultural values subject to priority evacuation.**

To determine the order of withdrawal (removal) of the evacuated population and clear planning of its placement in the suburban area, the entire evacuation population is divided into 3 groups:

1st group (dispersed population) **- workers and employees of facilities that continue their production activities in wartime in areas of possible severe destruction of categorized cities, as well as ensuring their livelihoods;**

2nd group (evacuated able-bodied population) **- workers and employees of facilities that stop their activities in wartime in categorized cities or transfer them to a suburban area;**

3rd group - the rest of the evacuated population **- the main part of the population assigned to this group is a contingent that can be taken out in advance (before the start of general evacuation activities) for partial evacuation.**

Evacuation authorities

1. **evacuation commissions (EC);**
2. **prefabricated evacuation points (BOT);**
3. **intermediate points of evacuation (PPE);**
4. **evacuation commissions (EPK);**
5. **reception evacuation points (PEP);**
6. **operational groups (OG) for organizing the export of the evacuated population;**
7. **control groups on pedestrian evacuation routes;**
8. **administration of points of embarkation (disembarkation) of the population on transport (from transport).**

Question 4. Medical personal protective equipment (MSPE)

Medical protective equipment should be understood as medicines and medical equipment intended to carry out measures to protect the population and rescuers from the effects of adverse emergency factors.

MCPE are designed to prevent and assist the population and rescuers who have been injured (those in the zone) from the damaging factors of emergency situations of a radiation, chemical or biological (bacteriological) nature.

There are no universal ISIS. In each specific case, it is necessary to find the most effective means that could prevent or reduce the impact of the damaging factor.

The main requirements for the MCPE of the population and rescuers in emergencies:

- the possibility of their early application;
- simple methods of application and the possibility of storage by the population and rescuers;
- the effectiveness of the protective action;
- exclusion of adverse consequences of use by the population and rescuers;
- favorable economic characteristics (low cost of production, sufficiently long shelf life, the possibility of subsequent use in healthcare practice when refreshing stocks, the possibility of production to fully provide the population and rescuers with them).

According to their purpose, MCIS are divided into:

- **used in radiation accidents;**
- **used in chemical accidents and household poisoning with various toxic substances;**
- **used for the prevention of infectious diseases and the weakening of the damaging effects of toxins on the body;**
- **providing the most effective conduction of PSO in order to remove RV, OB and BS from human skin.**

Medical means of anti-radiation protection

1 group Means for the prevention of radiation injuries during external exposure	**Cystamine. Indralin. Currently, a new anti-radiation drug, indomethafen, has been developed.**
2 group Means of preventing or attenuating the primary general reaction of the body to radiation	**Dimetkarb (includes 0.04 g of the antiemetic dimetpramnd and 0.002 g of the psychostimulant sydnocarb). Etaperazine. Aeron. Dimetpramide. Diethylperazine. Raglan. Cerucal. Currently, an effective antiemetic is being produced - Latran (0.008 g).**
3 group Means of Prevention of Radiation Injuries in the Incorporation of Radionuclides	**Adsorbents. They do not have a polyvalent effect, therefore, adsobar, polysurmin, highly oxidized cellulose, and algisorb are used to remove strontium and barium isotopes; in case of plutonium incorporation - inhalation of the drug pentacin; in case of contact with radioactive iodine - preparations of stable iodine; to prevent the absorption of cesium isotopes, ferrocene, bentonite clay, vermiculite, Prussian blue are most effective.**

Cation and anion exchange resins, emetics, gastric lavage, expectorants (with inhaled RS), complexones (drugs that accelerate the excretion of RS from the body: salts of citric, lactic, acetic acids) can be administered orally.

Complexones are used inhalation in the form of aerosols and form complex compounds with radioisotopes in the lungs, which are then absorbed into the blood and excreted in the urine.

Along with complexones, unitiol is used to remove uranium and polonium salts from the body.

Many drugs are not only means of medical protection, but to a greater extent - means of providing medical care and treating radiation injuries, namely:

- **adaptogens (increase the overall resistance of the body) - preparations of eleutherococcus, ginseng, Chinese magnolia vine; dibazole; bee venom (polypeptide from bee venom - mellitin); snake poison; shellfish extracts (mussels);**
- **hematopoietic stimulants - pentoxyl, hemostimulin, etc.;**
- **stimulants of the central nervous system - endopam, bemegrid, other antipsychotics, tranquilizers, antidepressants, psychotropic drugs;**
- **antihemorrhagic agents - serotonin, mexamine, cystamine (in combination with other drugs), batilol, tezan liniment (for topical radiation burns of the skin), etc.**

Antidotes

Medical means of chemical protection capable of neutralizing the poison in the body by physical or chemical interaction with it or providing antagonism with the poison when acting on enzymes and receptors.

The most important condition for obtaining the maximum therapeutic effect of antidotes is their earliest use.

There are no universal antidotes.

There are antidotes for organophosphorus toxic substances (OPS): anticholinergics - atropine, athens, budaksim, taren, aprofen and others, cholinesterase reactivators - dipyroxime, isonitrosine, toxogonine, etc.

Antidotes for cyanides are amyl nitrite, propyl nitrite, sodium thiosulfate, anticyan.

For lewisite and other arsenic-containing poisons, unithiol or BAL serves as an antidote.

For BZ poisoning, triftazin, galantamine, bugafen are used.

The antidote for lesions by irritating substances (adamsite, chloracetophenone CS, CR) is ficilin, as well as an anti-smoke mixture.

In an emergency of a chemical nature antidotes should be applied immediately after exposure to RH.

Prophylactic antidotes for FOV (P-10M) and carbon monoxide (amizil) should be used immediately before entering the accident site. The most effective antidotes can be with their intramuscular, subcutaneous, intravenous administration. Obviously, with a mass defeat of the population, and even more so in a very limited time frame, this is extremely difficult to do.

Antibacterial agents

They are divided into means of emergency non-specific and specific prevention.

Non-specific prophylaxis includes antibiotics and broad-spectrum sulfonamides, as well as interferons.

To the means of specific prevention - antibiotics of a narrow spectrum of action, serum, vaccines, toxoids, bacteriophages.

Personnel MSIZ

First aid kit individual (AI-1, AI-1M, AI-2, AI-4)

The individual first-aid kit is designed to prevent or reduce the effect of various damaging factors, as well as to prevent the development of shock in case of traumatic injuries.

The contents of the first-aid kit are a syringe-tube and medicine cases of different shape and color, placed in a plastic case and held by the internal partitions of the case. Each medicine is located in a strictly defined place, which allows you to quickly find the necessary remedy. In the cold season, the first-aid kit is recommended to be stored in a breast pocket to prevent freezing of liquid dosage forms.

The medicines contained in the first-aid kit are used, depending on the situation, both at the direction of a medical worker (commander, head of work), and independently in accordance with the instructions included in the first-aid kit, which the population and rescuers get acquainted with during the training process.

It is necessary to strictly observe the established dosages of drugs in order to avoid a decrease in their effectiveness or, conversely, the manifestation of the negative effects of an overdose.

In nest No. 1 of the first-aid kit there is a syringe tube with 2% solution of promedol. It is used to prevent shock in severe pain caused by fractures, extensive wounds, crushed tissues and burns. When using a syringe tube, you must:

The syringe tube after the introduction of its contents to the patient must be attached to a bandage or clothing in a conspicuous place.

In nest No. 2 there is a round red pencil case with a prophylactic antidote for FOV - taren (6 tab.). One tablet is taken on command. If signs of poisoning appear, you must take another pill yourself. The drug can be taken again no earlier than 5-6 hours later.

In nest No. 3 there is a long round pencil case without coloring with antibacterial agent No. 2. There are 15 tabs in the pencil case. sulfadimethoxine. It is taken in the event of gastrointestinal disorders after irradiation, with injuries and burns in order to prevent infection. On the 1st day, 7 tablets are taken, on the next two days - 4 tablets each. in a day.

In nest No. 4, there are two pink octagonal pencil cases containing radioprotective agent No. 1 - cystamine (6 tablets each). 30-60 minutes before entering the contaminated area, you should take 6 tablets. If necessary, re-admission is allowed after 4-5 hours.

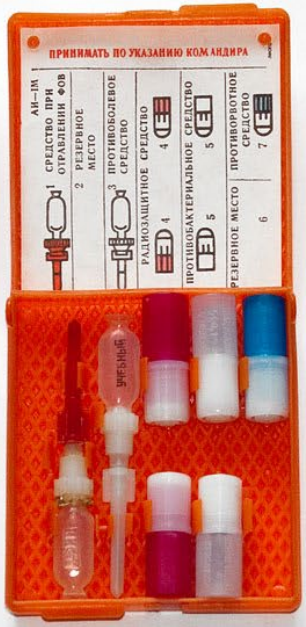
In nest No. 5 there are two tetrahedral canisters without coloring with antibacterial agent No. 1, 5 tab. in everyone. Chlortetracycline is used as a means of emergency non-specific prevention of infectious diseases. The drug is taken with the threat of bacterial infection, as well as with extensive wounds and burns in order to prevent purulent complications. The first dose is 5 tablets, again (after 6 hours) another 5. Biseptol or septrin can be used, as well as ampicillin, kefzol, cefobid, tsifran.

In nest No. 6 there is a white four-sided pencil case containing radioprotective agent No. 2 - potassium iodide (10 tab. 0.25 g each). Adults and children from two years of age and older take the drug at 0.125 g, that is, 1/2 tab. once a day for 7 days from the moment of radioactive fallout (children under two years old take 0.04 g per day) after meals, drinking kissel, tea or water. For pregnant women, the intake of potassium iodide (0.125 g each) must be combined with the simultaneous administration of potassium perchlorate - 0.75 g (3 tablets, 0.25 g each).

In slot No. 7 there is a round blue case containing one of the antiemetics - latran, dimetpramide or etaperazine (5 tab.). The drug is taken in 1 tab. immediately after irradiation, as well as with the appearance of nausea, vomiting both after irradiation and after concussion, with concussion. With continued nausea, etaperazine should be taken repeatedly, 1 tab. after 3-4 hours

Children under 8 years of age, when taking all drugs from AI-2, are given 1/4 tab. (except for potassium iodide), from 8 to 15 years - 1/2 tab. The exception is an antibacterial agent, which is used in full dose in children over 8 years of age. up to two years - do not apply.

In an individual first-aid kit there are no general calming agents and agents that weaken the feeling of fear. In emergencies, as practice has shown, these funds are necessary.



«УТВЕРЖДАЮ»
Начальник Управления по внедрению новых лекарственных средств и медицинской техники Минздрава СССР
Э. А. БАБАЯН
30 декабря 1983 г.

ИНСТРУКЦИЯ
ПО ПОЛЬЗОВАНИЮ АПТЕЧКОЙ ИНДИВИДУАЛЬНОЙ АИ-П

Противоболевое средство в шприц-тюбике, гнездо № 1 — не вложено. Инструкция по пользованию шприц-тюбиком вложена в ящик.

Средство при отравлении ФОВ, гнездо № 2, пенал красного цвета. Принимать по одной таблетке по сигналу гражданской обороны. При нарастании признаков отравления принять еще одну таблетку. Детям до 8 лет на один прием дают ¼ таблетки, а от 8 до 15 лет — ½ таблетки.

Противобактериальное средство № 2, гнездо № 3, большой пенал бесцветный. Принимать после облучения при возникновении кишечно-кишечных расстройств по 7 таблеток в один прием в первые сутки, по 4 таблетки в последующие двое суток. Детям до 8 лет в первые сутки на один прием дают 2 таблетки, а от 8 до 15 лет 3,5 таблетки. В последующие двое суток детям до 8 лет дают 1 таблетку по время, а от 8 до 15 лет 2 таблетки.

Радиозащитное средство № 1, гнездо № 4, два пенала малинового цвета. Принимать при угрозе облучения 6 таблеток, запивая водой. При новой угрозе облучения через 4–5 часов принять еще 6 таблеток. Детям до 8 лет на один прием дают 1,5 таблетки, а от 8 до 15 лет — 3 таблетки. (См. на об.)

ИНСТРУКЦИЯ
ПО ПОЛЬЗОВАНИЮ АПТЕЧКОЙ ИНДИВИДУАЛЬНОЙ

Применять по указанию командира (старшего)

ИНСТРУКЦИЯ
ПО ПОЛЬЗОВАНИЮ АПТЕЧКОЙ ИНДИВИДУАЛЬНОЙ

Применять по указанию командира (старшего)

ИНСТРУКЦИЯ
ПО ПОЛЬЗОВАНИЮ АПТЕЧКОЙ ИНДИВИДУАЛЬНОЙ

ИНСТРУКЦИЯ
по пользованию аптечкой индивидуальной

Противоболевое средство, гнездо № 1, шприц-тюбик с неокрашенным колпачком. Применять при переломах, обширных ранах и ожогах.

Правила пользования шприц-тюбиком.

Извлечь из аптечки шприц-тюбик и, держа его в одной руке, другой взяться за ребристый ободок. Вращательным движением, энергично продвинуть ободок до упора, повернув корпус обратно в исходное положение; повернуть его вторично до упора, после чего снять колпачек, защищающий иглу. Не касаясь иглы руками, вколоть ее в мягкие ткани бедра в верхней трети снаружи (можно через одежду).

Сильно сжимая пальцами тюбик, выдавить содержимое и извлечь иглу, не разжимая пальцев.

First aid kit individual AI-4

The AI-4 first-aid kit is designed to replace the AI-2 first-aid kit that does not meet modern requirements.

The first-aid kit AI-4 contains the entire range of drugs necessary to protect the population. AI-4 is equipped with modern, more effective pharmaceuticals. In general, the AI-4 first aid kit most closely matches the realities of today and can be successfully and effectively used both in reserve and for equipping active rescue units.

The first-aid kit AI-2 looks like and differs only in composition. There are three sets in total. The only difference in them is the amount of protective equipment.

Equipment No. 1	Equipment No. 2	Equipment No. 3
Pain reliever Remedy for poisoning AHOV Remedy for FOV poisoning Radioprotective agent No. 1 Radioprotective agent No. 2 Antibacterial agent No. 1 Antibacterial agent No. 2 Antiemetic Reserve antidote FOV	Pain reliever Remedy for poisoning AHOV Radioprotective agent No. 1 Radioprotective agent No. 2 Antibacterial agent No. 1 Antibacterial agent No. 2 Antiemetic Reserve antidote FOV	Pain reliever Remedy for poisoning AHOV Radioprotective agent No. 2 Antibacterial agent No. 1 Antibacterial agent No. 2 Reserve antidote FOV

The production and use of AI-2 is prohibited by order of the Ministry of Health and Social Development of the Russian Federation dated April 10, 2012 No. 335 "On the recognition of Order of the Ministry of Health of the USSR dated August 18, 1988 N 660 "On approval of the composition of AI-II" as invalid on the territory of the Russian Federation.

By order of Rosstandart dated May 17, 2012 No. 67-st, from July 1, 2012, the use of GOST 23267-78 “Individual first-aid kits. Specifications".

The letter of Roszdravnadzor of the Russian Federation dated July 28, 2014 No. 01i-1108/14 “On the use of individual first-aid kits of the type AI-2, AI-4” indicates the inadmissibility of using and acquiring AI-2 and AI-4.

Currently, instead of AI-2 and AI-4, it has been adopted for equipping KIMGZ.

KIMGZ - 147

Designed to provide first aid in the event of an emergency in the lesions, in order to prevent or minimize the effects of exposure to damaging factors of a chemical, radiation and biological nature.

KIMGZ 147 is provided with:

- **the personnel of the civil defense forces and the population in order to independently fulfill the appointments of medical workers for the prevention (prevention or reduction of the severity of consequences) of injuries in peacetime and wartime;**
- **personnel of the formations in order to carry out measures to provide first aid to the victims.**

Состав КИМГЗ

To stow the attachments of the KIMGZ first aid kit, a bag is used, which consists of a valve, a main cover into which a lining pocket is inserted, where there are four compartments for special packing (hemostatic, disinfecting wipes, dressing bag, hemostatic tourniquet, oral air duct), as well as an additional detachable patch pocket - an insert with horizontal compartments for inserting antidotes.

The medical bag of the KIMGZ first-aid kit has a rectangular shape, the waist belt is a lock with plastic carabiners, which provides for adjustment according to the waist. The valve of the bag completely closes and protects the liner pocket from damage and mechanical influences; it is equipped with a fastener on a contact tape.

In 2013, KIMGZ is completed with different compositions.

For employees of the enterprise for use in civil time

№	Name
1	Device for carrying out artificial respiration. "Mouth-Device-Mouth" 1 pc.
2	Sterile medical dressing package 1 pc.
3	Antiseptic napkin made of non-woven material with hydrogen peroxide 1 pc.
4	Hemostatic tourniquet with dosed compression 1 pc.
5	Sterile hydrogel anti-burn dressing agent with cooling and analgesic effect (at least 20 cm x 24 cm) 1 pc.
6	Adhesive plaster roll (not less than 2 cm x 5 m) 1 pc.
7	Non-sterile medical gloves, examination 1 pair.
8	Medical non-sterile 3-ply mask with elastic bands or ties 1 pc.
9	Antiseptic napkin from non-woven material alcohol 1 pc.
10	Ketorolac 10mg tablets. or a solution of 30 mg / ml, 1 ml in an ampoule 1 tab. / amp.

For emergency rescue teams at enterprises

Added 4 more titles

1	Sterile hemostatic dressing with aminocaproic acid (at least 6 cm x 10 cm)	Individually sealed packing
2	Sterile hemostatic dressing agent based on zeolites or calcium and sodium aluminosilicates or calcium hydrosilicate (not less than 50 g)	Plastic bag
3	Sterile hydrogel dressing for infected wounds with antimicrobial and analgesic action (at least 20 g)	Antimicrobial agent. Tuba.
4	Napkin from nonwoven fabric with am solutionмиака	Respiratory stimulant. Individual sealed packaging.

Depending on the type of emergency situation, different investments are possible in KMIGZ:

1. KIMGZ - FEST - 147, the main composition - 9 investments, which are provided to the personnel of the formations in the implementation of activities to provide primary health care and first aid to victims
2. KIMGZ - FEST - 147, the main composition - 9 investments + Ketorolac, which is provided to the personnel of the formations in the implementation of measures to provide primary health care and first aid to victims
3. KIMGZ - FEST - 147, 14 investments, which provide the personnel of the formations in the implementation of activities to provide primary health care and first aid to victims

4. KIMGZ - FEST, which provides personnel of formations performing tasks in areas: X-147 of possible chemical contamination (contamination); P-147 possible fires; R-147 possible radioactive contamination (contamination); B-147 possible biological contamination (infection)

5. K-147 for conducting a counter-terrorist operation and in wartime

6. KIMGZ - FEST, which provides for the population (adults and children over the age of 12) living or staying in the areas:
RD-147 possible radioactive contamination (contamination);
BD-147 possible biological contamination (infection)

7. KIMGZ - FEST, which provides for the population (children under the age of 12) living or staying in the areas:
RD1-147 possible radioactive contamination (contamination);
BD1-147 possible biological contamination (infection)

The complete set of KIMGZ complies with the order of the Ministry of Health of the Russian Federation of February 15, 2013. No. 70n "On approval of the requirements for completing with medicines and medical devices a set of individual medical civil protection for the provision of primary health care and first aid" and order of the Ministry of the Russian Federation for Civil Defense, Emergencies and Disaster Relief dated January 23, 2014 No. 23 "On Amendments to the Order of the Russian Emergencies Ministry of November 1, 2006 No. 633 and the invalidation of the Order of the Russian Emergencies Ministry of May 25, 2007 No. 289".

Individual anti-chemical package

The IPP-8 contains one glass vial with a degassing liquid, four gauze pads and instructions packed in a cellophane hermetic film. The liquid of the package does not have a disinfectant effect.

When processing the skin of the face, care must be taken to ensure that the liquid of the package does not get into the eyes. If this happens, it is necessary to rinse the eyes with water or 0.25-0.5% solution of chloramine.

In IPP-10, the protective degassing liquid is in a metal container. It is processed by pouring it into the palm and rubbing it over the face, neck, hands, both before exposure to RH (entry into the contaminated area) and after working in the outbreak. The liquid of the package also has a disinfecting effect.

Treatment of skin and clothes with IPP liquid is carried out immediately after contact with AOHV and RH. Treatment within 5 minutes of exposure can completely prevent damage.

IPP-11 is a sealed bag containing wipes moistened with the same liquid. Its use allows you to more purposefully and economically spend the tool.

In the absence of IPP CSO, it is possible to produce 5% ammonia solution, 1.0% chloramine solution, chlorine-lime milk and other means

Individual dressing package

Individual dressing package (PPI, PPM) is intended for applying a primary aseptic dressing to a wound, burn surface. It contains a sterile dressing, which is enclosed in two shells: the outer one is made of rubberized fabric (with a description of the method of opening and use printed on it) and the inner one is made of paper.

The shells ensure the sterility of the dressing material, protect it from mechanical damage, dampness and contamination. The material in the bag consists of a gauze bandage 10 cm wide and 7 m long and two equal-sized cotton-gauze pads 17x32 cm in size. One of the pads is sewn to the bandage, the other is movably connected to it and can move freely along the length of the bandage.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Тел/факс 8 (49446) 2-87-06
ПАКЕТ ПЕРЕВЯЗОЧНЫЙ
медицинский индивидуальный
СТЕРИЛЬНЫЙ
ГОСТ 1179-93 СРОК ГОДНОСТИ 5 лет
КОЛИЧЕСТВО 1 ШТ


ПАКЕТ ПЕРЕВЯЗОЧНЫЙ ИНДИВИДУАЛЬНЫЙ
МАРКИ ППИ АВ-3 ТУ 9393-001-17777359-98
Стерильно
Вид бинта: эластичный
Количество подушечек: 1
Номер серии (партии): 05
Дата изготовления: 0507
Срок годности 5 лет
Способ вскрытия и применения:
1. Разорвать наружную оболочку по надрезу.
2. Снять внутреннюю оболочку.


ИНДИВИДУАЛЬНЫЙ ПЕРЕВЯЗОЧНЫЙ ПАКЕТ
КАК ВСКРЫТЬ ИНДИВИДУАЛЬНЫЙ ПЕРЕВЯЗОЧНЫЙ ПАКЕТ
ВНЕШНИЙ ВИД ПАКЕТОВ
Выдернуть нитку, скрепляющую клеенчатый чехол.
Вынуть пакет в прорезиненной оболочке (из клеенчатого чехла)
Развернуть по надрезу прорезиненную оболочку пакета.
Вынуть пакет из прорезиненной оболочки.
Вынуть бумажку, завернутую в бумажку, из складок бумажной обертки.
Развернуть бумажную обертку и взять одной рукой (кистку бинта, а другой — конец бинта.

As MCIS from the adverse effects of elevated temperature during ACP, drugs are used - thermoprotectors.

Known drugs that increase the body's passive resistance to high ambient temperatures. However, the most effective drugs used by participants in the liquidation of emergencies in conditions of elevated temperature are those that could provide for a sufficient time the maintenance of the required level of performance, the prevention of severe outcomes of hyperthermia.

Preferred thermoprotectors in conditions of limited evaporative heat transfer, as well as when it is necessary to perform significant amounts of physical work, are drugs with moderate hypothermic and cardiostimulating effects, which have antihypoxic activity вemitil, bromantane, and especially their combination meet these requirements.

Domestic and foreign researchers are actively searching for drugs that increase the body's cold resistance - frigoprotectors.

Currently, three main ways of pharmacological correction of conditions associated with hypothermia have been outlined.

The first and most common is associated with increased heat production due to the calorigenic effect of catecholamines: sydnocarb with glutamic acid.

The second is aimed at the regulation of energy supply systems yakton (succinic salt of tonibral acid).

The third is to reduce energy consumption and the subjective feeling of cold through the use of drugs that significantly reduce muscle activity and block the body's sensitivity to hypothermia: a combination of diazepam with sodium hydroxybutyrate.

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Currently, studies are underway to find the possibility of using pharmacological agents to prevent the adverse effects of noise on the human body.

According to studies, drugs that increase a person's resistance to the effects of impulse noise and maintain working capacity are olifen, bemitil and cavinton.

Question 5. Content, tasks and main methods of medical and psychological protection of the population and persons involved in his salvation

The experience of participation in rescue work, the provision of medical care, as well as the study of the nature of the mental response of the population to an earthquake made it possible to develop and propose the basic principles for organizing psychological and psychiatric assistance to victims, both during earthquakes and other types of emergencies.

At present, there is no doubt that a mental shock disorganizes the behavior of people who have fallen into an emergency zone and causes panic. As a result of a traumatic event, the victims experience various kinds of mental reactions, which exacerbates sanitary losses during emergencies.

Principles of organization of psychological and psychiatric assistance to the population in emergencies

1. The service of psychological and psychiatric assistance should be organized on the model of the QMS of the Russian Federation. At all levels, the forces and means of psychological and psychiatric care services should be created on the basis of medical healthcare institutions.

2. A three-stage system for organizing psychological and psychiatric care for victims of emergencies - by analogy with the principle of emergency medical care.

3. Medical sorting should become one of the fundamental principles for providing emergency psychiatric care to victims of emergencies.

4. Timeliness, continuity and effectiveness of the provision of psychological and psychiatric care.

5. Legal responsibility and legal protection of specialists, psychologists and psychiatrists involved in the organization and provision of psychological and psychiatric assistance to victims of emergencies.

6. Preparing the population for possible disasters and training them to act in emergency situations. For these purposes, it is necessary, among other things, to systematically use the media. Training of special contingents in order to increase resistance to traumatic mental stress, including methods of drug and non-drug psychoprophylaxis, intensive and short-term psychotherapy methods.

Stages of organization of psychiatric care victims in the emergency zone

The first stage of psychological and psychiatric assistance begins in the subacute period of the development of an emergency, when, at the direction of the appropriate center for psychiatry of disasters, an emergency psychiatric care team leaves for the scene of an emergency and proceeds to provide psychological and psychiatric assistance.

At this stage, the brigade that arrived in the emergency area is engaged in:

- identification of victims who are in an acute psychotic state;
- relief of the consequences of acute stress reactions, especially those mental disorders that are accompanied by changes in consciousness and clear signs of life-threatening behavior;
- carrying out measures to prevent panic reactions and aggressive forms of behavior.

Along with the solution of these tasks, the members of the brigade at this stage participate in the provision of first aid and medical care.

The second stage in the form of qualified medical care should be carried out in medical hospitals deployed in the area immediately adjacent to the epicenter of the emergency. At this stage, the tasks of the disaster psychiatry service are as follows:

- **carrying out qualified sorting;**
- **provision of qualified psychiatric care;**
- **выявление, подготовка и организация медицинской эвакуации пострадавших с психическими расстройствами;**
- **advisory assistance to neurosurgeons, traumatologists and other specialists in assessing the mental state of the victims and differentiated prescription of psychopharmacological drugs for them.**

Qualified sorting is a key element of this type of care, as it is fundamental for effective treatment, rehabilitation and prevention of mental consequences.

The third stage begins from the moment the victim is evacuated to a specialized psychiatric institution, where he should be provided with specialized psychological and psychiatric care. It consists in carrying out the following measures for the victim of a psychiatric profile:

- **complete clinical examination;**
- **psychological examination;**
- **establishing a diagnosis;**
- **examination using paraclinical research methods;**
- **specialized treatment until complete recovery;**
- **carrying out rehabilitation measures;**
- **carrying out social and labor adaptation.**

Questions for self-control of knowledge acquisition

1. Define the concepts: "protection of the population in emergencies", "medical protection"
2. Activities of the complex for the protection of the population and rescuers
3. Activities of the complex of medical protection of the population and rescuers
4. Basic principles, methods and measures to protect the population in emergency situations and rescuers
5. Definition of the following concepts: “Informing the population”, “notifying the population”, “system of warning the population”, “complex system of emergency notification of the population KSEON”, “zone of emergency notification of the population”, “warning signals”, “OKSION”
6. OXION. The goals of creating OXION. Tasks of OXION.
7. Composition of OXION
8. Characteristics of places for placement of technical media
9. PUON, PION, PIOT
10. Public address system of the city. Her tasks. What is the system of warning the population of the city
11. The algorithm of the public warning system
12. Unified duty and dispatch service of the EDDS district. Her tasks.
13. Local warning systems for potentially dangerous objects. Their tasks
14. Define the terms: "evacuation", "resettlement", "dispersal".
15. Types of evacuation
16. Three populations designated for evacuation
17. Basic requirements for personal medical protective equipment (MSPE)

18. ISIS classification
19. Medical means of anti-radiation protection. Their classification
20. Brief description of antidotes
21. Staff MCIZ: individual first-aid kit AI_2. Its purpose and composition
22. Service MSIZ: individual first-aid kit AI-4. Its purpose and composition
23. KIMGZ - 147. Its purpose and composition
24. Individual anti-chemical packages IPP-8, IPP-10, IPP-11. purpose
25. Individual dressing package. purpose
26. Thermal protectors and frigoprotectors. Their brief description
27. Principles of organization of psychological and psychiatric assistance to the population in emergencies
28. Stages of organizing psychiatric care for victims in the emergency zone