

MEDICAL PROPHYLACTIC STATION ALGORITHMS OF PRACTICAL SKILLS

Microclimate research

1.Sanitary-hygienic study of air temperature

- Make a visual assessment of the room for open windows/doors, etc. (windows and doors must be tightly closed)
- Make measurement of the temperature using the thermometer at the following points diagonally of the room:
 - 0,5 m from the back of the outer walls
 - -0.25 m from the floor level
 - -0,5 m from the floor level
 - 1.5 m from the floor level
- Based on the results of measurements, calculate average room temperature.

2.Sanitary-hygienic study of the air velocity

- By holding the catathermometer vertically, lower its bottom reservoir down in hot water at the temperature of 50-60 °C until the colored alcohol fills 1/2 of the upper reservoir volume
- Wipe it dry
- Hang on a support in a place of observation
- Keep time with the stopwatch for a few minutes until the column with alcohol drops down from 38 to 35 °C
- Conduct a calculation of the cooling value of the catathermometer

3.Sanitary-hygienic study of air humidity in the premises

- Use a pipette to moisten the cotton gauze of the wet thermometer of the Assman psychrometer
- Set up the spring of aspirator
- Hang on a support in the place of humidity determination
- In 5 minutes take measurements of the dry and wet thermometers
- Determine the relative humidity using the table
- Provide a conclusion on the measurement results, provide recommendations for changing the humidity in the room in accordance with the standards. Identify possible disorders in the human body at low and high humidity.

4.Lighting assessment in the workplace using “Luxmeter”

- Place a photocell on the work surface (Important! Do not install the device near the conductive wires creating a powerful magnetic field);
- Check if the device's indicator is on the zero mark. (To do this, disconnect the photocell from the measuring device and, if necessary, adjust the position of the indicator to a zero position using a correction device located on the front of the body);
- Connect the photocell to the measuring unit, following the polarity indicated on the clips.

- The indoor measurement should begin with the right button pressed, which corresponds to the largest value of the measurement ranges, using a scale of 0-100.
- Measurement of natural lightning indoors should be carried out with the aid of absorber. On completing the work, the photocell must be disconnected from the galvanometer and closed with nozzle.

ORGANIZATIONS OF RATIONAL NUTRITION AND WATER SUPPLY

1. Water Sampling from the centralized source for bacteriological test (culturing)

- Assessment of sanitary state and conditions for sampling;
- Wash your hands with soap and water or treat them with disinfectant. ;
- Burning out the tap outlet with alcohol torch;
- Water running off from the tap at least for 10 minutes;
- Take a sample of water in a sterile bottle of 0.5 liter capacity, with a cotton-gauze stopper, covered with a paper hood (cup);
- Fill the bottle with about three -quarters, to leave the air space of 5-6 cm under the stopper;
- Any opening and closing of a sterile bottle should take place over the alcohol torch;
- Complete the form and send the sample to the laboratory no more than 2 years hours.

2. Carrying out organoleptic study of drinking water

Assess organoleptic indicators

- Transparency
- Taste
- Smell

Assess chemical and bacteriological indicators

- Dry residue
- Chlorides;
- Hardness;
- Nitrates
- Nitrites
- Colour;
- Ammonium
- Fluorine;
- Coli-titer
- General mikrobic number.

Assess the water quality by organoleptical, chemical and bacteriological indicators. Identify possible diseases in the human body if they will use to drinking purposes water that does not meet the standards.

3. Conducting laboratory analysis of milk on adulteration with starch

- Take a clean test tube
- Place it in the holder
- Pour 10-20 ml of milk into the test tube
- Add 2-3 drops of Lugol solution
- According to the staining results, determine the presence of starch in the milk

4. Conducting laboratory analysis of milk on adulteration with soda

- Take a clean test tube
- Place it in the holder
- Pour 10-20 ml of milk into the test tube
- Add 2-3 drops of rosolic acid solution
- According to the staining results, determine the presence of soda in the milk

Primary prevention of diseases and injuries

1. Assessment of physical development using method of signal deviations

- Compare individual metrics with standards based on your child's age and gender.
- According to the table determine the sigma
- Calculate deviations of individual metrics from table parameters
- Determine the signal deviation
- Represent graphically obtained results of physical development
- Provide a conclusion graphically obtained results of physical development
- average;
- below average;
- low;
- above average;
- high.
- Assess this children physical development:
- harmonic;
- disharmonic
- sharply disharmonic.

2. Determination of biodose.

- Biodose is determined under UV lamp irradiation (approximately 10 minutes after switching on).
- In this case, the lamp should be located strictly above the dosimeter at a certain distance from it.
- Sliding the latch with the holder (5) clockwise rotates the first opening and irradiates the skin beneath it for a minute (in a stopwatch).
- Then open the second compartment, and then every subsequent one for a minute.
- Thus, the skin area under the last sixth hole is also irradiated for a minute, and under the first - 6 minutes.
- In 6-8-24 an hours. After irradiation, skin examinations show the faintest but most clearly defined erythematous line redness.
- The calculation is made by the formula:

$$X=t(n-m+1)$$

X – Biodose

t – irradiation time(minutes)

n – number of irradiated compartment

m – number of erythematous line redness

Evaluation of the diet. Determining the body's needs for essential nutrients and vitamin supplements.

-Document to be used in assessing the diet of different age groups: "Norms of physiological needs of the population of Ukraine in basic nutrients and energy" [272-99. (hereinafter №272-99)

-Using the results of the assessment of diet or vitamin security provided in the problem, it is necessary to compare each of the data given in the problem with the norms given in the document №272-99

-To draw a conclusion about the compliance of the diet given in the problem with the standards of the document №272-99

-Provide recommendations for improving the diet in each case.

Prevention of occupational diseases (poisonings)

-Guided by the conditions of the task and using the Order of the Ministry of Health of Ukraine, the Ministry of Labor and Social Policy №374 / 68/338 of 29.12.2000 On approval of the Instruction on the use of the list of occupational diseases to establish the type of occupational disease (poisoning)

Preventive measures for noise sickness

-Introduction into the ear canals of various caps, cotton wool; anti-noise inserts like "Earplugs";

-use of IPZ (antiphons)

-production automation

-medical examination

-Passing preliminary and periodic medical examinations.

Preventive measures for Saturnism - chronic lead poisoning

-Use of personal protective equipment

-Arrangement of workplaces by local exhaust ventilation

-Sealing of the equipment

-Compliance with personal hygiene requirements

-Improving the system of periodic medical examinations.

Preventive measures for occupational cataracts

-Use of PPE of visual organs (shields, glasses)

-Use of sanitary facilities (water curtain)

-Use of sanitary means (automation)

-Medical examination

Preventive measures for mercurialism - chronic mercury poisoning

- Elimination of possible sources of mercury intoxication (proper storage of mercury and its compounds, complete exclusion of mercury or its replacement with less toxic compounds)
- Localization of sources of mercury vapor pollution of the production area and other premises, compliance with relevant safety standards (ventilation, sealing of equipment)
- Observance of rules of personal hygiene, regular demercurialization of premises where there are sources of mercury pollution
- Carrying out preliminary and periodic medical examinations of workers.

Preventive measures for pneumoconiosis

- Complex mechanization of production processes
- Organizations of effective industrial ventilation
- Preliminary and periodic medical examinations of persons working in occupational hazards
- Use of personal protective equipment: respirators, gas masks