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The State of the Prisoners ' Hunting Assessment Determines Their Health as a Factor

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Abstract: The article examines the issues of assessing the nutritional status of prisoners and its significance from a scientific and analytical perspective. It proves that nutrition is one of the important factors determining the health of a person, including a person in a penal institution, and that proper nutrition in accordance with the procedure established by regulatory documents is one of the important measures aimed at preventing the spread of infectious diseases not only among prisoners, but also among the entire population.

Keywords: nutrition, penal institution, convicts, women's colony, animal protein, vegetable protein, vitamins, daily ration.

Nutrition is one of the most important factors determining the health of a person, including a person in a penal institution. Reducing the incidence of tuberculosis and other infectious diseases among prisoners is aimed, first of all, at preventing the spread of infectious diseases among the entire population [1]. Uzbekistan Republic Ministers The Court 's decision of March 16 , 2021 , in the case of " Uzbekistan Republic Internal works of the ministry the punishment execution verb institutions , investigative prisons , etc storage rooms and in special pharmacies being preserved persons provision norms confirmation Proper nutrition among convicts within the framework of the average daily nutrition norm established in accordance with Resolution No. 143 of the President of the Republic of Uzbekistan dated November 10, 2020 , can be established only when the administration of correctional institutions and medical staff regularly assess the actual nutritional status [2]. Such measures are provided for in the Decree of the President of the Republic of Uzbekistan “On the good morning hunting season provision additional information measures on ” also corresponds to the decision of P Q - 4887 .

Proper nutrition is nutrition that ensures good human development and vital functions, helps strengthen health and reduce disease.

[1] Resolution No. 143 of the Cabinet of Ministers of the Republic of Uzbekistan dated March 16, 2021 “On approval of the norms for ensuring the security of persons detained in penal institutions, pre-trial detention centers, temporary detention centers and special reception centers of the Ministry of Internal Affairs of the Republic of Uzbekistan”.

[2]Resolution of the President of the Republic of Uzbekistan No. PP-4887 dated November 10, 2020 "On additional measures to ensure healthy nutrition of the population."

the UN/ WHO, an eating disorder is a pathological condition that results from a relative or absolute deficiency or excess of one or more essential nutrients. Four main eating disorders are distinguished:

1) *Malnutrition* is a condition caused by not eating enough food for a long time. The terms "lack of energy" and "wasting" serve as synonyms of the term "overeating". The term "starvation" refers to the state of almost complete lack of food. In this case, severe malnutrition, weakness and emaciation develop rapidly;

2) *a specific (defined) form of deficiency* is a pathological condition that occurs due to a relative or absolute deficiency of one or another type of nutrient;

3) *binge eating* – a pathological condition associated with consuming an excessive amount of food (calories) over a long period of time;

4) *Imbalance* – a pathological condition caused by a complete lack of any of the necessary nutrients or, if they are not present, by an incorrect ratio of them in the diet.

To study the state of nutrition, it is recommended to use various research methods, depending on the goal set. All of these methods differ in terms of representativeness, accuracy and reliability of the results obtained. These methods are united by a common goal - to determine the average per capita consumption of food products by various population groups per unit of time (day, month, year). In statistical departments, planning bodies use balance and budget methods to study the socio-economic foundations of population nutrition.

Balance calculation method . The main purpose is to take into account the consumption of food products in the entire GEM and to implement it in accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated March 16, 2021 “ Uzbekistan Republic Internal works of the ministry the punishment execution verb institutions , investigative prisons , etc storage rooms and in special pharmacies being preserved persons provision norms confirmation to evaluate compliance with the daily average nutrition norm established in accordance with Decision No. 143 .

To achieve this goal, statistical reporting materials are used, taking into account the arrival and consumption of food products. The main data here are data on the purchase (production) and sale of food products in the food and beverage industry. Based on the collected materials, the average consumption of products per capita in a certain period of time is determined.

The positive side of the method is that it consists of a description of the general composition of the consumption of food products in a group assortment and the possibility of determining the norms of consumption in the future. The disadvantage of the method is the limitation of the ability to assess the chemical composition of the diet and the distance from the description given to physical development and health.

Polling method . Its main purpose is to study the nutrition of certain categories of prisoners. The positive side of the method includes the speed of obtaining results, the large possibility of data analysis and comparison, and a sufficiently high level of accuracy in determining the chemical composition of the ration. However, this method is labor intensive.

Weighing method. Designed to study the nutrition of certain groups (for example, those receiving complementary foods). The positive side of the method is that it provides the most accurate results and takes into account individual nutrition. The negative side of the method is that due to the small sample size, it is not sufficiently representative, it requires a lot of work, and the participation of outsiders (researchers) can affect the nature of nutrition.

Index method . Expressed by mathematical formulas Using the correlation of anthropometric indicators. These indicators are very convenient and acceptable for assessing the nutrition of prisoners during their stay in the correctional institution.

Currently, the only method used to assess the obesity status of adults in the international

nutritional status comparison is the "BMI index" (WHO). It is expressed by the following formula:

$$X = \frac{масса\ в\ кг}{рост\ в\ м^2}$$

in this case, the assessment of hunting condition is carried out on the following scale :

X< 18.5 – malnutrition ;

X=18.5 – 24.9 – eating in moderation ;

X=25 – 29 , 9 – complete ;

X>30 – obesity .

It is also recommended to use the Quetelet index (weight - height index) , which is obtained by dividing weight (in *g*) by height (in *cm*) . This averages 325–375 *g/cm* for women . is equal . If it is lower than that, the level of nutrition is low, on the contrary, if it is higher, it means excess nutrition .

Brock-Brugsh index (the relationship between weight (*g*) and height (cm -*L*) : 155 – 165 *cm* when g=L-100 ; 166 – 175 *cm* when g=L-105; 176 *cm* and above g=L-110.

Questionnaire a - survey method i . Learn to eat real food This method, which is one of the hygienic methods , is more developed and widely used in WHO practice. Compared to other methods , it stands out for its speed of obtaining results, its wide range of analysis and comparison capabilities, and its sufficiently high accuracy in determining the chemical composition of the diet , the energy value of food, and the eating pattern. Relatively simple , moderate effort . It is intended to study the nutrition of separate groups of the population, as well as individual (individual) nutrition .

As is known, collecting objective data requires certain organizational work . It is necessary to begin the work with a study of the categories being investigated. The head of the investigation must adhere to a program developed in advance and the details of which have been discussed with all participants. The success of the work largely depends on the ability to establish communication with people. Before starting the investigation, it is necessary to conduct explanatory work on the possibilities of the event being held in the team. In order to increase the reliability of the data obtained, a certain selection system is used. It is advisable that the group being investigated be homogeneous in terms of age, gender, physical development, and health.

The representativeness of the questionnaire method is ensured by determining the required sample size, together with the appropriate sampling system. The sample size depends on the number of required indicators, the average permissible errors, the average size, measurement errors, and the required level of reliability. The typical sampling method is used to select representatives from the sample. Typical sampling is organized as follows: the group of individuals being studied is divided into groups of the same type. A certain number of individuals are selected from each of these groups. The composition of the selected individuals should correspond to the composition of all groups. The nutritional status of a given population group is examined in 2–3 groups that do not differ in their structure from each other and from the entire composition.

The following formula is used to calculate the selection amount:

$$P = \frac{t^2 \delta^2 x N}{\Delta N + t^2 \delta^2} \quad (1)$$

Here, P is the required sample size (number of individuals being tested), t is the error rate, δ is the variance or standard deviation, Δ is the measure of the errors that can occur in the sample, and N is the size of the main component (number of individuals in the tested group).

The main characteristics characterizing the nutritional status of individual groups should be the amount of animal protein in the daily diet , as well as its caloric content. In this regard, it is these indicators that should be used when determining the sample size. Experience in studying the actual nutrition of the population shows that the most acceptable 15 *e*variation index (δ) for animal protein is ± , and for caloric content - ± 500 *kcal* .

In other cases, the value of the studied characteristic can be given as the expected accuracy. The average value does not differ from the main average value by more than ± 4, that is, Δ = 4, and at t = 2 ± 2%, we assume that the average probability of error of representativeness is 0.954. Expressing the obtained values in the following formulas,

$$P = \frac{2^2 x\ 15^2 x\ N}{4^2 N + 2^2 x\ 15^2} \quad (2)$$

we will have the necessary amount of choice .

Calculation example : N It is necessary to check the nutritional status of 250 convicts in J I EM. Formula a (2) , we determine that there are 56 people .

formula (3) should be used to determine the amount of selection, which is part of the required amount of the main content :

$$P = \frac{t^2 x\ P(100-P)}{B^2} \quad (3)$$

where R is portion size expressed in percent, V – margin of error in selection , t – the fold of the mean error.

Calculation example : If 9 If a prisoner is lagging behind in terms of weight, the following is necessary to check the actual nutrition :

$$P = \frac{2^2\ 9(100-9)}{4} = 819\ individuals$$

The quality of nutrition is significantly affected by the seasons. In order to exclude the influence of seasonal factors, it is necessary to study nutrition in two periods: winter-spring and summer-autumn, especially in the months that are most characteristic of these seasons. The duration of the study of the nutrition of the subjects under study should be at least 7 days in each period of the year. This period should also include weekends, since this period clearly reflects the pattern of the usual intake of food products. When describing nutrition in the winter-spring period, it is recommended to use a diet for one week in January-February and April-May, and when describing nutrition in the summer-autumn period, it is recommended to use a diet for one week in July-August and October-November.

When studying the nutrition of prisoners in the correctional institution, it is recommended to select the entire menu of the study at once, as this allows for a discussion of the variety of food. The basis of this method is the collection of data on a specially designed questionnaire. In this case, their daily filling (in the morning for the previous day) and the introduction of necessary changes are strictly monitored. Together with the questionnaire , each subject is given information about the amount of food products consumed in the most commonly consumed measuring volume and the amount of 1 food product. The active survey method, which replaced

the passive questionnaire method, provides reliable materials for obtaining information about the qualitative and quantitative characteristics of real nutrition and is thus close to the survey-weighing method.

The questionnaire consists of several sections: the passport part, food, information on daily energy consumption and a summary of the subject's nutritional status.

The passport section contains the subject's last name, first name and patronymic; age; gender; nationality; profession; presence of harmful occupational factors; work experience. The "Nutrition Information" section provides information on the diet for 7 consecutive days, including weekends (frequency of meals; duration of the interval between them; specific features of the regimen, for example, eating during the night shift), as well as information on the consumption of individual foods and products, indicating the type and name of the product. After each day, an individual survey is conducted on the actual diet for the previous day and appropriate changes are made to the questionnaire.

In order to increase the accuracy of the quantitative characteristics of nutrition, food products are measured using measuring elements. From volumetric measures, it is recommended to measure in parts or grams using a spoon (tablespoon, teaspoon), a plate (deep, small), a glass (200 grams, narrow, with rim). The most accurate results can be obtained only by adding weighing elements on a scale and laboratory control of the correspondence of the actual nutrition to the data obtained. Laboratory studies are carried out by specialists, if necessary, to verify the data obtained during the questionnaire-survey method.

Due to the short duration of the study of the actual nutritional status (7 days for each season of the year), it is advisable to conduct the analysis of nutrition on any arbitrarily selected day of the month in which the study is conducted. In this case, it is necessary to observe a number of conditions: 1) the date of sampling for analysis should not be known in advance; 2) it is important to take the entire composition of the daily diet (breakfast, lunch, dinner) for analysis. To determine the average chemical composition of separately consumed foods, it is necessary to analyze the food ration samples separately ; 3) samples are taken when the food is served on trays. It is necessary to take two servings of each food and prepare an average sample for analysis . Meat and fish bones, fruit pits are removed . The average sample is in the form of a cream It is thoroughly homogenized (first with a meat grinder , then with a homogenizer) until the consistency is smooth . the homogenate is dried at a temperature not higher than 100-105 ^{0}C until it becomes dry. The total weight of dry matter in the diet is determined by multiplying the dry residue by the homogenate obtained . After that, the sample is ready for research .

When reporting breastfeeding in a women's colony, it should be indicated whether it is ongoing or stopped at a certain age; whether it is complete or partial, for example, only at night or once a day . The amount of milk is determined by weighing the breast before and after breastfeeding and summing the amount of milk during the day .

The correct introduction of complementary food is determined by comparing the obtained data with the comparisons given about the individual food products recommended for children and the estimated amount of complementary food .

Diet component biological value about protein utilization coefficient i (OFK) at some level it is possible to think. It is the amount of protein consumed in a certain period of time per body weight1 *ƨ* represents an additional dimension.

The OF K is calculated by the following formula :

g of body weight per day

Protein consumed per day *g*

In natural feeding, the average AFC size is: for children in the first quarter of life - 2.8; for the second quarter - 1.7.

One The calculation of the chemical composition of the daily diet *of children aged 18 years* is carried out according to the generally accepted scheme, based on the average amount of food actually consumed by the child (average daily data for 7 days of the month in completely healthy conditions) per kg of body weight . It is important to determine the most necessary amino acids in the diet .

As mandatory indicators characterizing the chemical composition of the diet , nutrients whose need is regulated by the physiological norm are : proteins and the total amount of animal protein , fats, the total amount of vegetable fat, unsaturated fatty acid , V_1 , V_2 , V 6 , V_{12} , RR vitamins , folate , C, A, E and D; minerals - calcium, phosphorus, magnesium, iron . Of the unsaturated fatty acids , first of all, the fat content in the diet to assess biological maturity It is necessary to determine the composition of linoleic acid . The norm of need for linoleic acid is 4-6 times the total caloric value of fats for all population groups, including children, pregnant and lactating women. is % .

Based on the data obtained by the researchers, the average daily food intake for each subject is calculated, and based on them, the average daily food intake for the entire group of subjects is calculated. Then the calculation of the chemical composition and caloric content of the consumed food products is carried out and the laboratory corrections will be made according to the information about the results of the analysis . It is recommended to use the table of data on the chemical composition of food products for calculation . In the table of information on the chemical composition of food products Its edible portion is given, so the waste rate must be taken into account when calculating. When determining the energy value of food the following energy value coefficients of the main group of nutrients should be used : 4.0 *kcal/g* (16.7 *kj*) for proteins and digestible carbohydrates , 9.0 *kcal/g* (37.7 *kj)* for fats .

Based on the obtained data, the balance of nutrition is analyzed according to the following main indicators : the ratio between the total amount of proteins, fats and carbohydrates , the ratio between the total amount of animal protein and plant proteins ; Calci y and phosphorus , calcium and the ratio between the total amount of magni y . Proteins, fats and carbohydrates 100 per day The energy value in percent of the calories consumed is determined as % , and the calorie content of a particular food item in percent of the daily intake is determined as % .

are compared with the accepted norm of physiological needs of people for food products and energy . When determining the structure of the daily time budget, the exact measurement of the time spent on activities is carried out according to the scheme given in the questionnaire: one day for each subject and 2–3 days for the study of individual nutrition. The application and the corresponding application form will have the same number, in which the last name, first name, patronymic, and date of verification will be repeated. The daily time budget should be studied using the method of accurate measurement of the time spent on activities during the period of production activity.

When studying the working time budget, it is possible to use the data of the labor norm determination department, taking into account the average standard of rest time for those engaged in production. It is convenient to use the “Uniform Tariff Qualification Directory of Jobs and Occupations of Workers” to determine the type of labor operation performed and the work process. Operations that are not reflected in the directory, but are performed by workers in the work process, are also studied. Certain labor operations that take little time to perform and are fully or partially separated from other operations are also studied as a single operation.

daily energy expenditure is calculated in 70 *кг*kilocalories and kilojoules (1 *Kcal* = 4.184 *kJ) and is calculated per body weight* for men or women 60 *кг*. Taking into account deviations from the average daily time budget, 5–10% is added to the calculated value for daily energy expenditure. Daily energy expenditure is compared with the actual use of energy from food.

Questionnaire a - survey method innig social - hygienic significance will increase with the availability of information on the health status of prisoners. The main task of studying the health status of prisoners related to their diet is to timely identify conditions that indicate diseases caused by malnutrition in order to prevent the occurrence and development of alimentary diseases.

In conclusion, it should be noted that the methodology recommended by the WHO and adopted by the Expert Committee is a standard guide for the presentation and interpretation of results for the purpose of planning and conducting nutritional status surveys, as well as for the purpose of some level of integration and comparison of studies conducted at different times in different regions and institutions. This methodology is suitable for field tests and does not require special laboratory equipment, although some simple biochemical tests are provided for control measurements.