ANALYSIS OF FEEDING REGIMENS OF VARIOUS LABORATORY ANIMALS.

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Annotation

Scientific research is of great importance for the development of science and bringing research to new heights. Laboratory tests are of great importance for organizing such scientific research at a high level, reliably, accurately, correctly and completely. For this, a comfortable laboratory with all the necessary conditions and equipped with new technologies is needed. Most laboratory research cannot be done without laboratory animals. Proper feeding of laboratory animals is of great importance for the reliable and effective conduct of scientific and laboratory research. Proper feeding and keeping of laboratory animals requires close attention to the food they are given. Proper feeding of animals requires certain knowledge and skills.

Keywords: *diet, ingredient, inbred, pure line, protein, carbohydrate.*

Laboratory animals are animals used for scientific purposes in biology, medicine, veterinary medicine and agriculture. Laboratory animals are selected based on the intended purpose of the experiment. In addition to ensuring the reliability of the research being conducted, the biological characteristics of the animal to be taken, the possibilities of its reproduction and maintenance, and ethical aspects are also taken into account. All animals from simple unicellular organisms to mammals can be used as laboratory animals. Frogs, mice (70% of all laboratory

animals), rats, guinea pigs, dogs, cats, rabbits, monkeys; from invertebrates - most insects (for example, Drosophila), worms, mites are considered traditional laboratory animals. Sometimes experiments are also conducted with birds, turtles, fish and other animals. In experiments, specially bred inbred and pure lines of laboratory animals and germ-free animals (gnotobiots) are widely used. Laboratory animals are kept in vivariums

One of the main issues in the problem of rational feeding of laboratory animals is to clearly determine what they should be. Different types of laboratory animals require specific types of feed and the qualitative and quantitative composition of their feed. The nutrition of animals in laboratory conditions is determined by the different types of feed and additives given to them during the day. Compared to animals living in freedom, laboratory animals have a limited range of food consumption. That is, they have a certain feeding regime at a certain time and quantity.

Animals differ in their nutritional needs depending on the type of animal. Although the nutritional needs of rats and mice are similar to each other in terms of food products, they differ in the amount and method of feeding. Therefore, each species has its own unique feeding regime. Nutritional needs also differ depending on the period of life of the animal. Growth, pregnancy, lactation, and even suboptimal temperatures lead to increased feeding of animals. If they have certain infections and diseases, on the contrary, food consumption decreases or they may selectively eat or completely refuse food. Poor nutrition causes health problems in animals. Inadequate nutrition slows down the growth of young animals, leads to weight loss in adults and a decrease in their resistance to diseases. However, moderate restriction of total feed intake is not only not harmful, but also helps to improve the productivity and health of animals, and increase their resistance to certain infections. A healthy diet also prolongs the life of animals. Well-fed animals are more susceptible to various diseases than animals whose diet is slightly

restricted. Improper feeding disrupts the balance of animal metabolism. It is necessary to pay attention to the presence of proteins, carbohydrates, fats, fiber and other additives, vitamins, mineral salts in animal feed. However, poor-quality nutrition may not immediately lead to death or serious illness. A moderate deficiency of vitamin E in animal feed may not be detected even during the second or third generation. However, it subsequently reduces the productivity of animals. A relative deficiency of proteins and an excess of carbohydrates leads to obesity in animals. This does not pose a serious risk of disease, but it can subsequently reduce their ability to reproduce. Reproduction, especially in fertile animals such as mice and rats, creates a very high demand for feed. Feed, which is sufficient to maintain health, normal growth and average fertility, may sometimes not be enough in conditions of intensive reproduction. The need for food can vary not only among different species of animals, but also among animals of the same species and even among animals of the same breed living in different environmental conditions. The diet of laboratory mammals should include grains, leaves and grasses of cereals and legumes, milk and dairy products, oilseeds, fish, meat, bones, yeast, various extracts, vitamins, mineral salts and water. The main need for calories is met by cereals and legumes, additional sources of protein are milk, fish and meat. When choosing feed components, attention should also be paid to their compatibility. Some ingredients in the diet react with each other when mixed.

Another method of feeding animals is to feed them with a mixture of powdered ingredients. This ready-made mixture is added to water and turns into a paste. But such feed is useful for feeding animals in separate cages and with feeding bowls. If such feed is not stored in special feeding bowls, it is constantly contaminated with feces. In addition, the paste is an excellent medium for bacteria and fungi, and there is a high probability of rapid spoilage.

Laboratory animals can be fed in the form of powder or flour, for which it is necessary to install appropriate feeding devices to prevent contamination and loss

through spillage and scattering. This method is convenient for feeding chickens, as well as rats. Another promising method is to press the feed into briquettes of various sizes. Briquetted feeds are the most convenient type of feed offered for most laboratory animals. Dry pastes can also be used for feeding animals.

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