

CHANGES OF GLUCOSE, CARBOHYDRATES AND LIPIDS IN BLOOD OF DIFFERENT BREEDS OF DOGS

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Summary. Although the adult dogs are fed with the special feed mixture for grown-ups, the diseases of metabolism are not rare among them. The premonitory symptoms of metabolism diseases are determined only under hematological examination testing the activity of some enzymes, the concentrations of glucose (GL), triglycerides (TG) and cholesterol (CH) in the blood of the dogs. It was noticed that under metabolic diseases the disorders occurred in the pancreas and liver endocrine systems, heart and blood vessels or urinary systems as well. These disorders accelerate various origin tumors and stones development, condition the changes in the function of the endocrine system. There are some data collected about the metabolic diseases of different breeds of adult dogs depending on concentration of GL, TG and CH in the blood.

The aim of the work was to determine the concentration changes of glucose, triglycerides and cholesterol in the blood of the adult dogs and to determine the intensity of metabolism of carbohydrates and lipids of various manufacturers under the influence of dry feeding mixture. The research was conducted on 69 clinically healthy adult dogs of different breeds. The dogs according to their breeds and age were divided into analogous groups. The dogs of mixed breeds were used as a control group. The blood samples were taken before feeding the dogs and collected without any anticoagulants. For establishment of the concentration of GL, TG and CH in the dogs blood samples was used the reflex photometer Accutrend GCT (2001) putting the blood drop on the special test tapes. The concentration of GL in the blood samples of the trial group decreased in German shepherd dogs 34.8 % ($p < 0.001$), Rottweiler – 1.78 % and increased in Boxer – 26.5 %, Dalmatian and Pinchers – 4.7 %, ($p < 0.05$), in Terriers (Fox Terriers, Elder Terriers) – 14.8 %, Collies – 5.5 % ($p < 0.05$) to compare with the dogs of the control group. The concentration of TG in the blood samples of German shepherd dogs was 37.2 %, Rottweiler – 36.8 %, Dalmatian and Collies – 42.2 %, Terriers (Fox Terriers, Elder Terriers) – 50.7 % ($p < 0.01$), Pinchers – 20.3 % lower than in the blood samples of the control group. The concentration of CH of the blood samples of German shepherd dogs was 4.2 % ($p < 0.001$), Pinchers – 10.4 % ($P < 0.05$) lower, although Boxer – 11.0 %, Dalmatian – 4.6 % ($p < 0.01$), Terriers – 24.5 %, Rottweilers – 33.9 ($p < 0.001$) and Collies – 68.2 % ($p < 0.05$) was higher to compare with the blood samples concentrations of the mixed breeds dogs.

Keywords: Dogs, blood, metabolism, glucose, triglycerides, cholesterol.