





the blood of experimental animals may be associated with impaired functioning of the pancreas and thyroid glands.

Bezrodnaya A., *Guzha P.* INVESTIGATION OF BEHAVIORAL RESPONSES OF EXPERIMENTAL ANIMALS UNDER THE INFLUENCE OF POLYPROPYLENE GLYCOL

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Introduction. In the various fields of bio-medical research, numerous behavioral tests are used to study the influence of environmental factors, pharmacological substances. Neuroethological test "Open field" is the most commonly used behavior test for studying the stress resistance of experimental animals. The "Open Field" facility is designed to study the behavior of warm-blooded animals (individual and typological features) and allows to assess: the motor research activity observed in animals in new places. Aim - to evaluate the individual-typological features of the behavior of white rats under the influence of polypropylene glycol in a subacute toxicological experiment.

Materials and methods. A subacute toxicological experiment was carried out on two groups of animals: control and experimental in the number of 10 white rats of the WAG population in each, at the age of 6-8 months of both sexes. Aqueous solutions of polypropylene glycol (PPG) were daily administered intragastrically 45 days at a dose of 1/10 DL50 with a metal probe. The control group of rats received the corresponding volumes of drinking water. Testing in the "open field" installation was carried out on the 1st, 14th and 45th days of the introduction of the xenobiotic. The influence of PPG on the coordination of movements was assessed, horizontal, vertical and research activity was recorded. The content and monitoring of animals was carried out in accordance with the provisions of the "General principles of animal experiments", agreed upon by the First National Congress on Bioethics (Kiev, 2001), "European Convention for the Protection of Vertebrates used for experimental and scientific purposes" (Strasbourg, 1986).

Results. The results of a study of "research" activity in animals in a subacute toxicological experiment showed its decrease. After the initial testing of the animals in the open field facility, horizontal motor activity (HMA), vertical motor activity (VMA), maximum number of intersections of squares and examination of holes in all animals were observed. In secondary testing of animals, there was a marked decrease in all types of research activity: HMA, VMA and intersections of squares decreased by 56%, 59% and 67%, respectively, compared with the control group of animals. Also, we observed long-term washing reactions (grooming) in 98% of animals and an increase in the indicators of







emotional status (diuresis and defecation) in 80% of animals. In the third testing of animals, there was a complete loss of "research activity", passivity and fading in 1 place in 98% of the experimental group.

Conclusion. In connection with the cumulation of the toxic effect of polypropylene glycol in animals in a subacute toxicological experiment, the research activity decreased from 14 days and its loss by the end of the experiment. The obtained results of studying the individual-typological features of the behavior of rats with the help of the test "Open field" testify to the stress-resistance of rats under the influence of the xenobiotic under study.

Bezrodnaya A., Nicholas B., Gabriel A. MORPHOLOGICAL CHANGES IN THE INTERNAL ORGANS OF WARM-BLOODED ANIMALS AFTER INFLUENCE OF POLYETHYLENE GLYCOL AND POLYPROPYLENE GLYCOL

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Introduction. In the modern world, polymers of toxic monomers of ethylene oxide and propylene oxide are widely used for the production of glycols, glycol ethers, nonionic surfactants, polyesters, which form the basis for the production of plastic materials, antifreezes, solvents, cosmetics and household chemicals. Aim - to evaluate the morphological changes in the internal organs of warmblooded animals under the influence of ethylene oxide and propylene oxide in a subacute toxicological experiment.

Materials and methods. In a subacute experiment, polyethylene glycol of molecular weight 400 (PEG-400) and polypropylene glycol of molecular weight 470 (PPG-470), synthesized by BARVA-Farm (Ivano-Frankovsk) were used. According to the study program, a subacute experiment was performed on white rats of the WAG population of both sexes (6-8 months) weighing 190-280 g and lasting 45 days. An aqueous solution of PEG-400 and PPG-470 was introduced into the stomach with a metal probe at a dose of 1/10 DL50 in the morning on an empty stomach in each group, there were 10 animals, both experimental and control. After euthanasia, the brain, liver, kidney was taken and fixed with 10% neutral formalin solution, carried out through a battery of spirits of increasing strength and filled in paraffin blocks. Micro-Med MC-2M was prepared with half-thin cuts (5-7 microns), stained with hematoxylin-eosin, and studied by light microscopy on a microscope Axiostar-plus (Zeiss, Germany).

Results. Glycols of ethylene oxide and propylene oxide when ingested orally enter the body as a protoplasmic poison. Morphological examination in the liver shows fatty degeneration. The