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## SALINE AEROSOL INFLUENCE ON BIOCHEMICAL PARAMETERS IN LABORATORY ANIMALS AND HUMAN SUBJECTS



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### Abstract

**Introduction.** The purpose of this study is to determine the effect of experimental halotherapy on blood biochemical parameters as well as on hydroelectrolytic balance in patients with bronchial asthma and Wistar white rats with induced pathology.

**Materials and Methods.** The study was conducted on a number of 20 Wistar adult rats sensitized with ovalbumin and 18 patients, assigned to the control batch and experimental groups. Subjects from the experimental groups underwent 21-day hallo therapy. Parameters of hydroelectrolytic balance were determined before and after the cure of halotherapy. Thus, the animals were kept for 24 hours in individual metabolic cages without food and free access to a saline solution. After 24 hours, the volume of water and the amount of sodium ingested and the volume of urine removed were measured.

**Results.** In the case of human subjects, the urine was collected on different days during the halotherapy session. Concentrations of sodium and potassium in the eliminated urine were determined by flamephotometry, and from these data the values of the renal elimination electrolytes were calculated, representing the mineralocorticoid response of the organism under the given experimental conditions. The biochemical parameters were determined before and after the cure of halotherapy.

**Conclusions.** On white Wistar rats the halotherapy resulting in the normalization of most parameters of the hydroelectrolytic balance, and on human subjects leads to a process of adaptation of the renal function during the first 8 to 10 days of exposure. Also, most of the studied biochemical parameters were in the range of normal values, with a slight downward trend relative to pre-treatment halotherapy.