

EFFECT OF DIPHENHYDRAMINE HYDROCHLORIDE ON SERUM
PROTEIN COMPOSITION IN DOGS WITH BLOOD TRANSFUSION
SHOCK (Short Communication)

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The object of this investigation was to study the composition of the blood proteins in dogs developing blood transfusion shock after a preliminary injection of diphenhydramine hydrochloride.

Experiments were carried out on 22 animals. Blood transfusion shock was produced by intravenous injection of rabbit's blood in a dose of 10 ml/kg body weight. The serum protein spectrum was studied by electrophoresis with the EFA-1 apparatus. The blood pressure and respiration also were recorded. The serum protein composition was investigated before shock developed, at the time of maximal fall of the blood pressure, and 30-45 min after injection of the rabbit's blood.

In the control animals (not receiving diphenhydramine hydrochloride) at the time of maximal fall of the blood pressure the concentration of albumins and α_1 - and α_2 -globulins fell while the concentration of γ -globulins rose. These changes were still present at the time of the subsequent investigations (after 30 and 45 min). The albumin-globulin ratio fell correspondingly (0.84 before shock, 0.11 45 min after injection of the blood).

Following the preliminary injection of diphenhydramine hydrochloride (15 mg/kg body weight intramuscularly) the changes described were less severe, and 45 min after the injection of blood there was a clear tendency for the normal ratio between the protein fractions to be restored (the difference from the control values was statistically significant).

It may accordingly be concluded that the action of diphenhydramine hydrochloride also extends to the mechanisms controlling the protein composition of the blood.