that substances are formed which further phosphatase activity. However, the mechanism and significance of this apparent increase in phosphatase activity of preserved serum remain to be elucidated.

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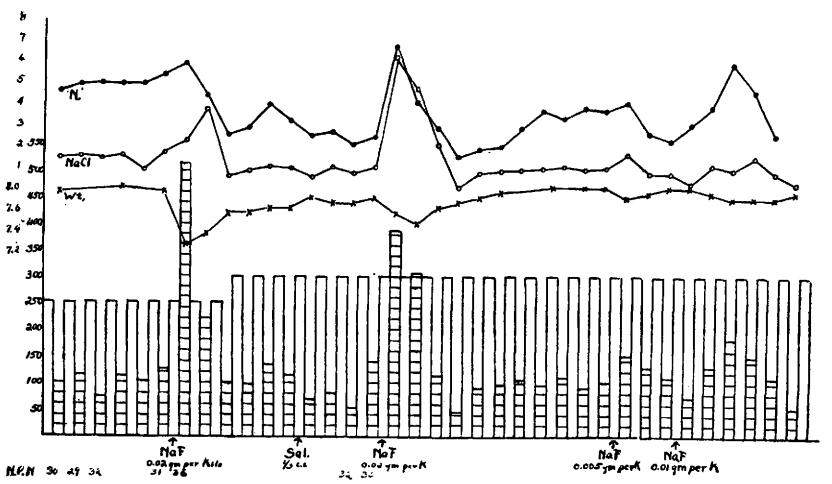
Diuretic Action of Sodium Fluoride.

LEO GOTTLIEB AND SAMUEL B. GRANT (Introduced by D. P. Barr).

From the Department of Medicine, Washington University, St. Louis.

During a study of the effect of sodium fluoride on the thyroid gland of dogs, we noted that the animals had a pronounced increase of urine output after intravenous injection of the drug. Goldenberg had similarly noted a diuresis in goiter patients treated with sodium fluoride[1]. The present study was undertaken to further investigate this diuretic action.

Dogs were placed in metabolism cages and given a weighed diet of Purina Dog Chow to fulfill the food requirements and to provide a constant ingestion of salt and protein. Water was given in sufficient, but constant, daily amounts. After a control period, during which the body weight, urine output, urine chlorides and total urine nitrogen were determined daily, sodium fluoride in 1% aqueous solution was injected intravenously. The effect is shown in the following charts. The experiment was repeated and confirmed in six different animals.



[1] Goldenberg, Leon, *Presse medicale*, 1930, **38**, 1751.

Single doses of 0.005 gm. to 0.020 gm. per kilo of body weight were followed by a pronounced diuresis. In addition to an increased water output, the urine chlorides and nitrogen were strikingly increased. The control urine was acid, but, after sodium fluoride, it was strongly alkaline to litmus and this alkalinity persisted for approximately one week after the injection. The non-protein nitrogen of the blood has not been fully studied, but in one animal the only change noted was an increase from an average of 31 mg.% to 36 mg. % during the diuresis. This is possibly due to dehydration and blood concentration. Examination of the urine, including a catheterized specimen, revealed no albumin, sugar, casts, leukocytes or erythrocytes. The kidneys of dogs that had received varying doses of NaF, including one animal that had been given 0.02 gm. per kilo of body weight daily for 41 days, showed no microscopic evidence of damage to either glomeruli or tubules. In the animal that had received daily doses for almost 6 weeks, the glomeruli were mildly hyperemic.

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Iodine Content of Certain Pathological Bloods in a Goiterous Region.

R. G. TURNER. (Assisted by Mina Z. Weeks.)

From the Department of Medical Research, Detroit College of Medicine and Surgery.

The conflicting findings of previous investigators as to what actually constitutes a normal iodine concentration in the blood and the various opinions regarding pathological iodine led us to study the iodine in diabetic patients, those suffering from thyroid disease, and of a number of pathological cases not directly associated with the endocrine system. Diabetic cases were considered because of the close similarity of this disease, experimentally and clinically, to hyperthyroidism.

The results of iodine estimation on 101 pathological bloods are presented as estimated by the author's method[1]. The investigation includes determinations on 13 diabetic in patients, 54 diabetic out patients, 15 hyperthyroid cases, 4 hypothyroid cases, and 15 miscellaneous cases. Of the diabetic in patients 46.1% are within the

[1] Turner, R. G., *J. Biol. Chem.*, 1930, **88**, 497.