

75 (331)

On the pharmacology of the iodides.By **L. B. STOOKEY** and **VERA GARDNER.**

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In an earlier paper it was suggested by one of us that the internal secretion of the thyroids may influence metabolism in the manner of a kinase, namely, by activating some intracellular oxidases.

In view of a close parallelism existing between the iodine content of the thyroids and the physiological action of thyroid preparation it seemed possible that the administration of iodides might lead to an increased power to effect certain oxidative changes.

To test this hypothesis, the capacity of tissue taken from normal dogs to oxidize indol was compared with that of tissues taken from dogs treated with potassium iodide (0.1 gram per kilo daily) over variable periods. The dogs were bled from the carotids, the organs removed under the usual precautions, hashed, divided into convenient quantities and exposed to seven times their weight of 0.005 per cent. indol solution. Toluol was added to prevent bacterial action. The mixtures were kept at body temperature, and the amount of unoxidized indol was determined at varying intervals. The indol was estimated colorimetrically by means of the glyoxylic acid reaction. Results obtained in this manner were checked by Kjeldahl nitrogen determinations.

In all cases the administration of potassium iodide in the dog was found to lead to an *increased* power on the part of the liver, kidneys and spleen to oxidize indol.

While the influence of iodides upon intracellular oxidation might appear to be exerted through the thyroids, it is possible that a direct action without the intervention of the thyroids may take place. In this connection it is scarcely necessary to remark that the striking similarity between the action of iodides and that of thyreoglobulin was recognized long ago. Many symptoms of iodism are very similar to those of thyroidism, namely, tachycardia,

palpitation of the heart, muscular tremors, nervousness, sleepiness, and increased metabolism. A further study of the problem whether or not the increased oxidizing power of the different body cells following iodide administration is dependent upon the thyroids, is being made.

76 (332)

Glycogen formation from arabinose in chicks.

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It is well known that newly hatched chicks are practically free from glycogen. Fifteen chicks were fed arabinose over periods varying from several hours to two days, and their bodies examined for glycogen. In one case a trace of glycogen seemed to be present, but in all others negative results were obtained. However, these experiments are not looked upon as conclusive. Further studies are in progress.

77 (333)

Is oxalic acid a product of hepatic uricolysis in man?

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A liver obtained, shortly after death, from the accident ward of the City Hospital was hashed, divided into convenient portions and mixed with seven volumes of 0.1 per cent. solution of potassium urate. After varying periods, the mixtures were examined for oxalic acid.

In all cases the uric acid was found to be largely destroyed. In all cases perceptible traces of oxalic acid were shown to be present, yet the amounts isolated did not seem to be appreciably greater than those occurring in control experiments.

It does not seem, therefore, that oxalic acid is a product of hepatic uricolysis in man.