nine. In two similar experiments with creatinine, there was apparently a slight increase in the creatine (total creatinine) concentration of the muscle, which we are not prepared to discuss at this time.

The possible influence of autolysis upon the content of muscle creatine and added creatine and creatinine is being investigated.

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The total non-protein nitrogen of the blood in nephritis and allied conditions.

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The following summary covers the results of our study of the non-protein nitrogen of the blood by Folin's methods in a series of fifty-nine hospital patients. Our main concern has been with nephritis but we have examined the blood in many other conditions as opportunity offered.

The patients group themselves into four divisions:

I. Those showing no disturbance of renal function (17 cases).
II. Those with marked cardio-vascular disease of some type, most of which showed urinary changes the result of renal congestion (11 cases).
III. Those showing nephritis (23 cases).
IV. Those in which certain features would lead one to suspect nephritis, but in which the existence of nephritis is not borne out by other findings (8 cases).

Our patients of Group I, suffering from a variety of acute and chronic diseases, but without evidence of disturbance of renal function, showed a total non-protein nitrogen in the blood varying from 16 to 43 milligrams per 100 c.c. From 50 to 60 per cent. of this was in the ammonia-urea fraction. In the patients with cardio-vascular disease with renal congestion, but without evidence of other renal lesion there was no increase of the non-protein nitrogen in the blood, nor alteration of the ammonia-urea percentage, although albuminuria, casts and some impairment of the phenolsulphonephthalein elimination were usually present.

In that type of chronic nephritis characterized by marked albuminuria, cylindruria and edema, there were similar findings. In that type of chronic nephritis associated with hypertension, the non-protein nitrogen was increased, ranging from 40 to 181 milligrams per 100 c.c., and the percentage of the ammonia-urea fraction was usually higher than in non-nephritic cases. The nitrogen values in these patients were subject to rapid fluctuations in the course of a few days and clinical improvement was associated with a fall in the non-protein nitrogen content. Uremia was almost always accompanied by some increase of the non-protein nitrogen in the blood but no constant relation could be established between the degree of the increase and the tendency to uremia.

We believe that this method of estimating the total non-protein nitrogen in the blood is a valuable aid in the clinical study of nephritis and that it can be carried out in any thoroughly equipped clinical laboratory. The error of the method is indicated by the duplicate analyses which were done in almost all cases and which showed an average discrepancy between duplicates of 1.6 milligrams per 100 c.c. of blood. The urea method was in our hands less reliable, and large and inexplicable discrepancies occurred at times in our urea duplicates rendering repetition necessary and causing us to attach less importance to the urea figures.

107 (803)

The toxicity of sodium tartrate with special reference to diet and tolerance.

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The toxicity of the sodium salts of dextro and levo tartaric acid was tested in experiments on frogs and rabbits. Both isomers were found equally toxic in these animals thus contradicting the earlier work of Chabrié[1] on the subject, who claimed that levo was more than twice as toxic as dextro tartaric acid. In experiments on rabbits, diet proved to be an important factor in the determination of resistance to this substance. Animals which were fed oats or oats

[1] *Compt. Rend. Acad. Sc.*, 1893, Vol. 116, p. 1410.