

of diabetes. The first was in diabetic coma, which had a fatal outcome. The analysis of the urine collected on the second day of coma gave the following figures: Total nitrogen, 7.78 g.; colloidal nitrogen, 0.22 g. The colloidal nitrogen fraction was 2.87 per cent. of the total nitrogen, a normal relationship.

The second case was one of moderately severe diabetes, with a moderate degree of acetonuria and glycosuria. One analysis gave: Total nitrogen, 14.84 g.; colloidal nitrogen, 0.91 g. The colloidal nitrogen was 6.2 per cent. of the total nitrogen.

An analysis made ten days later on the urine of this patient showed: Total nitrogen, 17.9 g.; colloidal nitrogen, 0.43 g.; colloidal nitrogen = 2.4 per cent. of total nitrogen.

According to these figures, which agree with some reported by Wolf and Marriott, there appears to be no definite relationship between the severity of diabetes and the urinary colloidal nitrogen percentage. It is quite possible, however, that the colloidal substance may fail to be increased in the urine because of faulty kidney elimination and that the blood content may be considerably above the normal without the urine showing any evidence of this.

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A depressor substance in fecal extracts.

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In the course of a study on the relationship of certain symptoms to intestinal disturbances we prepared a ten per cent. watery extract of dried feces and injected 3 c.c. of this intravenously into a dog. The injection was followed by a sudden, sharp fall in blood pressure, with a return to normal level within five minutes. Subsequent injections into the same animal produced a similar fall only when the dose was markedly increased. Extracts of both dried and fresh feces from various individuals have been prepared and produce similar results on injection. The fall in pressure may reach seventy per cent. With the fall there is seen some quickening in heart rate and at times an irregularity in rhythm.

Oncometer registration of the kidney and leg volume shows a decided lessening in volume. The intestinal volume on the other hand shows usually a slight rise. A myocardiogram shows no weakening of cardiac contractions sufficient to explain the fall in pressure, which therefore seems due to a dilatation of the mesenteric vessels. A further analysis of the point of attack in this depressor action has not been made as yet.

Concerning the nature of the depressor substance, the following facts have been obtained. It is not destroyed by boiling; nor removed by heat and acetic acid; after burning the dried feces, an extract of the ash has no action; the freezing point determination of the ten per cent. extract gives a Δ of approximately 0.3° . The substance does not dialyze. It appears therefore to be of colloidal nature.

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The energy metabolism of normal and marasmic children with special reference to the specific gravity of the child's body.

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A study of six normal and two atrophic children was made with the respiration incubator. The child was weighed and the approximate specific gravity was determined by Pfaundler's method immediately afterwards. The child was then placed on a metabolism bed, was given a good feeding¹ and the bed was placed in the respiration chamber. The respiratory exchange was accurately determined in two consecutive periods of one hour each on each of several observation days. The urine was collected in 24 hour periods and the heat production was calculated from the oxygen absorption and the nitrogen in the urine after the method of Zuntz and Schumberg. The temperature of the incubator was kept at about 27° C. average, this having been found to be most

¹ The amount of this feeding for different cases was nearly the same reckoned in calories per kilogram of body weight.