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The Effect of Pituitary Extract Upon the Absorption of Glucose and Iodide.

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In an earlier report¹ there was presented indirect evidence of a decreased rate of absorption of drugs from the alimentary tract in animals which had received subcutaneous injections of *Liquor Pituitarii*. In more recent experiments we have made use of the white rat, according to the method of Cori and Cori² to determine the rate of absorption of glucose and iodide. After preliminary trials, 4 series of 6 rats each were employed: (a) test animals, given 0.5 gm. glucose per 100 gm. body weight in water by stomach tube, preceded 5 minutes and 20 minutes by subcutaneous injections of 1/8 cc. *Liquor Pituitarii*; (b) controls, treated as in the preceding series, except that 0.85% NaCl, made acid with dilute HCl to the same pH as the *Liquor Pituitarii*, was used instead of the gland extract; (c) test animals given 0.5 gm. potassium iodide, per 100 gm. body weight, in water by stomach tube, preceded 5 minutes and 20 minutes by subcutaneous injections of 1/8 cc. *Liquor Pituitarii* and, (d) controls treated as in (c), but using acid-saline injections instead of pituitary extract.

The animals were killed exactly 2 hours after the administration of the glucose or iodide, the stomach and intestine removed, opened in distilled water, rinsed several times, and the washings analyzed for glucose or iodide to determine the amount unabsorbed.

Tables I and II give the results of the experiments.

¹ Thienes, C. H., and Hockett, A. J., *J. Pharm. Exp. Ther.*, 1928, 33.

² Cori, C. F., and Cori, G., *Proc. Soc. Exp. Biol. and Med.*, 1925, xxii, 495.

TABLE I.
Mg. Glucose Absorbed Hourly per 100 gm. Body Weight.

Controls	Test Rats Injected with Pituitary
190	140
222	169
200	94
262	143
192	135
195	91
184	96
Average	125

TABLE II—IODIDE ABSORPTION.
Mg. Potassium Iodide Absorbed Hourly per 100 gm. Body Weight.

Controls	Test Rats Injected with Pituitary
86	60
102	30
110	43
127	37
98	80
96	76
Average	54

Conclusions: Subcutaneous injections of *Liquor Pituitarii* in the white rat decreased the rate of absorption of glucose and of iodide from the gastrointestinal tract.

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The Effects of Low Glycogen Content Upon the Contraction Process in Isolated Skeletal Muscle.

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A large series of observations has been made to check the findings of Olmsted and Coulthard,¹ who report that gastrocnemius muscles in which little or no glycogen can be detected, taken from frogs rendered glycogen poor by means of insulin convulsions, contract upon electrical stimulation, and produce fatigue curves closely resembling the normal. They also report the increase in lactic acid content in such muscles upon fatiguing to be greater than can be accounted for by the disappearance of carbohydrate.

¹ Olmsted, J. M. D., and Coulthard, H. S., *Am. J. Phys.*, 1928, lxxxiv, 610.