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Metabolism studies in a case of hypopituitarism, with infantilism of the Lorain type.

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This report contains the results obtained on studying certain phases of metabolism in a case of a man aged 22, who presented the classical symptoms of infantilism of the Lorain type, with symptoms definitely pointing to a benign tumor, probably a cyst of the hypophysis.[1] The arrest of the body growth and of sexual development with the moderate adiposity stamped this case as a

TABLE I. (NITROGEN PARTITION.)

Urine.

Date.	Total Nitrogen.	Urea-Nitrogen.		Ammonia-Nitrogen.		Creatinine-Nitrogen.		Uric Acid-Nitrogen.		Undetermined-Nitrogen.	
		Gm.	Per Cent. of Total Nitrogen.	Gm.	Per Cent. of Total Nitrogen.	Gm.	Per Cent. of Total Nitrogen.	Gm.	Per Cent. of Total Nitrogen.	Gm.	Per Cent. of Total Nitrogen.
6/23	13.0	—	—	—	—	—	—	—	—	—	—
6/26	16.1	13.5	83.8	0.36	2.3	0.60	3.8	0.20	1.4	1.4	8.7
6/27	16.3	13.3	81.6	0.41	2.5	0.58	3.5	0.24	1.5	1.8	11.0
6/28	15.7	12.6	80.3	0.40	2.5	0.56	3.5	0.26	1.7	1.9	12.1
6/29	15.8	12.9	81.7	0.44	2.7	0.54	3.4	0.23	1.5	1.7	10.8
6/30	15.3	12.3	80.5	0.40	2.6	0.50	3.3	0.27	1.7	1.8	11.7
7/1	15.7	12.6	80.2	0.48	3.1	0.55	3.5	0.29	1.9	1.8	11.5

TABLE II. (SULPHUR PARTITION.)

Urine.

Date.	Total Sulphur Gm.	Total Sulphate Sulphur, Gm.	Ethereal Sulphate Sulphur, Gm.	Inorganic Sulphate Sulphur, Gm.	Neutral Sulphur Gm.	Sulphate-S / Total S / Per Cent.	Ethereal Sulfate-S / Total S / Per Cent.	Inorg. Sulf. S / Total S / Per Cent.	Neut. S, / Total S. / Per Cent.
6/23	0.57	0.45	0.04	0.41	0.12	78.6	6.8	71.8	21.3
6/26	0.41	0.30	0.03	0.27	0.11	72.5	7.2	65.3	27.4
6/27	0.80	0.66	0.06	0.60	0.14	82.4	7.1	75.3	17.5
6/28	0.90	0.69	0.04	0.65	0.21	76.7	4.3	72.4	23.3
6/29	0.90	0.69	0.05	0.64	0.21	76.7	5.5	71.1	23.3
6/30	0.87	0.53	0.05	0.48	0.34	61.7	6.4	55.3	38.3
7/1	0.96	0.66	0.04	0.63	0.30	69.2	4.0	65.2	30.8

[1] At operation a cyst of the hypophysis was found.

typical example of the Froehlich typus or the so-called dystrophia adiposo-genitalis of Bartels.

The patient was placed on the high protein diet of Folin and the following tables contain the data obtained in this study. The *high undetermined nitrogen* and *neutral sulphur* of the urine, can readily be noted, while the absorption of fat and protein was normal.

TABLE III.

Summary of data pertaining to total nitrogen and fat metabolism.

Date.	Total Nitrogen.			Feces.			Fat.	
	Ingested, Grams.	Excreted, Grams.	Balance, Grams.	Fat, Grams.	Total Nitrogen.		Ingested, Grams.	Percentage of Fat Absorbed.
					Found, Grams.	Per Cent. of Total N Ingested.		
6/26	18.2	17.9	+0.3	2.2	1.8	9.9	140	98.4
6/27	18.6	18.1	+0.5	2.2	1.8	9.7	140	98.4
6/28	18.3	17.5	+0.8	2.2	1.8	9.9	140	98.4
6/29	18.1	17.9	+0.2	1.8	2.1	11.6	146	98.8
6/30	17.6	17.4	+0.2	1.8	2.1	11.9	146	98.8
7/1	17.8	17.8	0	1.8	2.1	11.9	146	98.8
Total	108.6	106.6	+2.0	12.00	11.70	—	858	—
Average	18.1	17.7+	+0.33	2.00	1.95	10.8	143	98.6

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The relation of pancreatic extract to the sugar of the blood.

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In January, 1912, I reported a preparation of pancreas which when injected intravenously into dogs that had been rendered diabetic by pancreatectomy, lowered both the output of sugar and the D/N ratio. This preparation seemed to offer a ready means of attack for several of the problems bearing on the relation of the pancreas to sugar metabolism. Possibly the simplest of these is the relation between the amount of sugar present in the blood and the abundance of the pancreatic hormone present, and this is a preliminary report of my work on this subject.

Cats were killed and their blood was collected. The protein was removed and the blood was decolorized by a modification of the phosphotungstic acid method reported by Oppler. In deter-