

Experiment.	Without Prolification.	Basal Prolification.	Placental Prolification.	Basal and Placental Prolification.	Total Placental Prolification.	Total Fruits.	Percentage Placental Prolification.
1908	20,104	446	20,550	...
1909	116,821	4,622	30	..	30	121,473	.024
1911	30,105	873	9	..	9	30,987	.029
1912	10,487	441	1	..	1	10,929	.009
1913	123,216	4,458	17	3	20	127,694	.015
1914	180,516	7,143	144	6	150	187,809	.079
1915	67,686	938	23	9	32	68,656	.046
Total..	548,935	18,921	224	18	242	568,098	.042

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The antipyretic action of dextrose.

By HENRY G. BARBOUR.

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Dextrose (30 gms. in 250 c.c. water) given per os with acetyl salicylic acid (1 gm.) in a case of chronic tuberculosis was followed within 2½ hours by a fall in rectal temperature from 38.03° C. to 36.02° C. In numerous observations upon this and other "labile" individuals under like conditions acetyl salicylic acid (1 gm. with 250 c.c.) never has produced a fall of temperature exceeding 1.1° C. in the same length of time.

TABLE.

DEXTRORSE GIVEN BY MOUTH. HUMAN SUBJECTS.

Subject.	Date.	Dextrose, Gms.	H ₂ O, c.c.	A—S. A., Gms.	Rect. Temp. (° C.).		
					When Given.	2½ Hrs. Later.	Diff.
J. D. tbc.	4/22	30	250	1	38.0	36.0	-2.0
	5/10	50	250	0	37.3	36.5	-0.8
	5/14	75	250	0	37.7	36.8	-0.9
J. T. ac. art. rheum.	5/19	75	250	0	38.0	37.6	-0.4
M. M. D. normal.	5/12	50	250	1	37.0	36.6	-0.4
	5/15	100	250	0	37.1	37.1	0

¹ The expenses of this research are being defrayed from the Francis E. Loomis Research Fund of the Yale Medical School.

This observation has led to an investigation of the action of dextrose upon the heat regulation.

The preceding table shows the effects of dextrose given per os upon the temperature of three individuals, one of whom was in normal health. (Readings were taken at half hourly intervals but the curves are uniform enough for the first and last reading to suffice.)

Calorimetric Observations.—In each of the above experiments also the heat production has been determined by the indirect method, using the Benedict Respiration Chamber at the New Haven Hospital. As would be expected, the CO_2 excretion was constantly above the basal levels for the same individuals; but since the temperature falls, it is evident that dextrose effects a marked increase in heat eliminating processes. The respiratory quotients were also high; but the metabolism data are as yet insufficient to make comparisons between febrile and normal individuals.

Dextrose in Rabbits.—The antipyretic action of dextrose given per os has been confirmed in five rabbits with "peptone fever." An average temperature fall of 0.8° in one half hour was obtained. The former level was usually regained in about two hours.

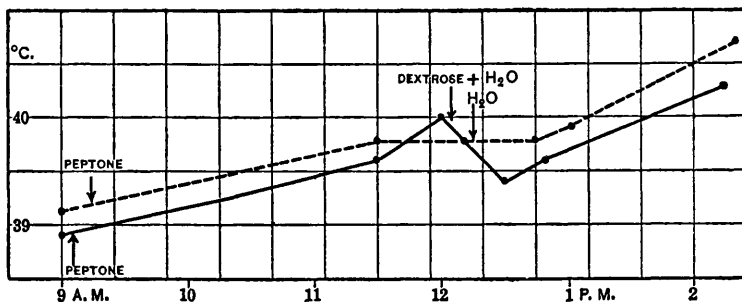


FIG. 1. Unbroken line: Temperature of 1,800-gm. rabbit. 9 c.c. of 20 per cent. "bactopeptone" (subcutaneously), followed in 3 hours by 18 gms. dextrose (by stomach tube) in 100 c.c. H_2O at 41°C . Broken line: Temperature of 1,730-gm. rabbit. $8\frac{1}{2}$ c.c. of 20 per cent. "bactopeptone" followed in 3 hours by 100 c.c. H_2O at 41°C .

The accompanying curve (Fig. 1) shows the temperature of an 1,800-gm. "peptone" rabbit given 18 gms. of dextrose by stomach tube in 100 c.c. of water heated to 41°C . The control

"peptone" rabbit (1,730 gms.) received only 100 c.c. of water (at 41° C.). The dextrose rabbit exhibited a loss of 0.6° C. in one half hour, the control rabbit no loss of temperature.

It is concluded that dextrose given by mouth under suitable conditions exhibits a decided antipyretic action, due to an increase in the heat elimination. The inference that the carbohydrate metabolism may play an important rôle in the action of antipyretic substances is being submitted to experimental inquiry.

77 (1452)

Concerning the effect of prostate feeding on tadpoles.

By **DAVID I. MACHT.**

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Gudernatsch was the first to call attention to the remarkable influence of the feeding of thyroid and thymus glands on frogs' larvæ. That observer noted that the thyroid causes a dwarfing or shrinkage of the growth and size of tadpoles, and at the same time very rapidly hastens their metamorphosis into frogs, while the thymus, on the other hand, causes giant tadpoles but inhibits their metamorphosis. Gudernatsch and other observers have also studied the effect of feeding of other organs and glands on the development of frogs' larvæ. As far as the present author has been able to ascertain, however, no experiments concerning the feeding of *prostate gland* to tadpoles are on record. The present author, in connection with a physiological and pharmacological study of prostatic extracts, conducted a series of experiments in feeding tadpoles with desiccated prostatic substance (Armour). The results are so interesting that it is deemed desirable to make a preliminary announcement on the subject in this place.

Prostate gland was fed to tadpoles of several species of frogs and it was noted that like the thyroid, the feeding of prostate substance tended to *hasten* the transformation of the larvæ into frogs. Such an effect was occasionally noted after administration of the gland substance for three or four days, and generally was distinctly noticeable after a period of from ten to fourteen days.