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 carciac 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 feeding[1] 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.

conducive to sleep under the circumstances. As a rule, the child slept perfectly the first hour and several times slept throughout both respiration periods.

A graphic record of the pulse was obtained from a blood pressure cuff on the thigh and a record of the respirations from a small pneumograph placed about the chest. The pressure in the cuff was kept well below the diastolic pressure and did not interfere either with the circulation in the leg or with the repose of the child. These recording devices served also to record grosser movements when the child moved any part of the body or cried.

Comparing only the best sleeping periods it was found that the metabolism in different children was much more nearly proportional to the weight than to the surface area and when the weight was first multiplied by the specific gravity the agreement was even better.

TABLE SHOWING ENERGY PRODUCTION PER HOUR.

Child No.	Age, Mos.	Weight, Gms.	Cal. per Kgm.	Sp. Gr. *d.*	Cal. per hr. / Wt. × *d.*	Cal. per Sq. M.
I. Normal boy	2	5,690	2.44	0.973	2.51	35.51
			2.52		2.59	36.58
II. Normal boy	2	4,634	2.44	1.034	2.31	32.53
		4,350	2.47	1.033	2.39	32.03
III. Under weight boy	3	4,115	2.61	1.006	2.60	34.57
		4,147	2.54	1.005	2.53	33.20
IV. Atrophic boy	3	2,462	2.97	1.108	2.68	32.41
			2.92		2.64	
		2,515	{ 2.94	1.118	2.63	32.51
			{ 2.94		2.64	
V. Normal girl	10½	9,465	2.64	1.026	2.57	45.37
VI. Normal boy	12	9,555	2.80	1.029	2.73	48.40

One atrophic child was in the last stages of marasmus when the observations were made and gave a much lower metabolism than the others. One normal child was very nervous and failed to sleep perfectly. These two are not included in the table.