in Group A. In order to increase the protection at the time it was most needed, the injections were made more frequently during the 3 days before the test with killed bacteria; at first 3 times daily and in the final 24 hours 5 times, the controls receiving saline injections of the same volumes and frequencies. Two weeks after adrenalectomy, each animal of both groups was given 1½ cc. of standard typhoid vaccine (one billion killed organisms per cc.) intraperitoneally. Subsequent to this the animals were injected with extract and saline respectively about every 2 hours for 10 hours. Six hours after the injection of bacteria all the animals in Group B (saline injected) were dead and none of those in Group A (cortin injected). Four of the rats in Group A subsequently died during that night. Ten of them (71%) survived indefinitely

The resistance of adrenalectomized rats to bacterial intoxication had been significantly increased by an extract of the adrenal cortex.

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Effect of Nutritional Anemia on Size of the Heart.

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During an investigation pertaining to the influence of certain foods on anemia in rats, it was observed that the hearts of those having low hemoglobin values were considerably larger than the hearts of normal animals. Thereupon the weights of the hearts of the experimental animals, computed on the percentage basis, were compared with those of normal animals as given by Donaldson. Successive biweekly hemoglobin determinations were made throughout the period of study, the last being taken just before the animals were killed. The results indicate that there is a close correlation between the size of the heart and the degree of anemia. The heart weights of animals with high hemoglobin values—from 11 gm. to 14 gm. per 100 cc. of blood (Newcomer method) are comparable to those given by Donaldson. When the hemoglobin values fell to 10 gm. the hearts were slightly hypertrophied; this became more marked as the degree of anemia increased. At the very low hemoglobin levels, from 2 gm. to 3 gm. per 100 cc., the heart weights averaged approximately 3 times that of normal animals.

TABLE I.

Relation of Heart Weight to Hemoglobin of Rats Receiving Milk Diets with the Addition of Various Substances Used in the Artificial Feeding Mixtures of Infants.

Diet	No. Animals	Time on diet	Body Weight aver.	Heart Weight		Hemoglobin per 100 cc. blood
				Exper. Animal	Normal Animal	
		weeks	gm.	gm.	gm.	gm.
Pasteurized milk	1	13	172	1.3	0.71	3.61
Milk-tomato juice	3	10	106	1.3	0.49	2.71
" -orange juice	3	10	86	1.14	0.42	2.34
" -wheat embryo extract	3	6	99	1.07	0.47	4.02
" -Dextri-Maltose No. 2	3	13	224	1.46	0.87	5.15
" -autolyzed yeast	3	12	186	1.04	0.77	6.87
" -Mellin's Food	2	18	279	0.97	1.04	11.90
" -corn syrup	3	17	243	1.10	0.90	10.33
" -Dextri-Maltose with Vitamin B	2	15	245	0.90	0.93	10.69
" -Vitavose	2	18	239	0.94	0.92	11.95
" -Malto-Dextrin with added Fe and Cu	2	12	198	0.77	0.79	12.70
" -egg yolk dried (2.8 gm.)	2	6	169	0.83	0.74	11.29
" -liver (0.4 per day)	2	6	150	0.64	0.64	11.48
" -liver *ad lib.*	2	6	199	0.78	0.80	14.60
" -Vitavose with added Fe and Cu	3	10	198	0.88	0.79	13.32