and in adequate dose, to maintain pregnancy in rabbits, spayed at the 18th hour after mating, until full term.

Experience obtained during the course of this work enables us to state certain precautions which must be used in similar experiments. We find that the crude extract does not always maintain its potency longer than one week when kept in the oily state, and therefore we now keep our stock of extract dissolved in 95% ethyl alcohol, distilling off weekly a supply for immediate use. The dosage necessary to insure implantation and maintenance of pregnancy is larger than that required to produce progestational proliferation according to our standard test of potency. Usually 0.1 cc. of the crude extract daily for 5 days, or a total of 0.5 cc., contains one rabbit unit; but to insure maintenance of pregnancy 0.5 cc. should be given daily. In all cases in which pregnancy terminates prematurely, the extract used should be tested for potency on another rabbit.

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Influence of Tyramine on the Number of Red Corpuscles in the Circulating Blood.

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Rabbits were given tyramine subcutaneously in single doses of various sizes, in hourly doses and in daily doses. With but few exceptions the effect was to increase the number of red corpuscles per cubic millimeter in the circulating blood. The hydrochloride was used. This was dissolved in 0.9% sodium chloride solution in such proportion that 1 cc. contained the dose per kilo of body weight, and the solution warmed to body temperature before injection.

Single doses of from 0.1 mgm. to 20.0 mgm. per kilo of body weight were used. The average results of these are given in Table 1. A dose of 0.5 mgm. per kilo caused an increase in the red blood corpuscle count of 18.46% and was selected as an average effective dose.

Each of 4 rabbits was given 0.5 mgm. per kilo of body weight and the dose repeated at intervals of one hour until 4 doses had been given. The results are summarized in Table II.

TABLE I.

Dose in mgm. per kilo.	Number of observations	Initial count	Maximal count	Maximum in	Percentage increase	Exceptions
0.1	4	6,033,000	6,253,000	30 min.	3.64	
0.2	5	5,247,000	5,493,000	30 "	4.68	Decrease in one
0.3	5	6,064,000	6,204,000	48 "	2.30	Decrease in two
0.4	5	5,778,000	6,501,000	30 "	12.51	Decrease in one
0.5	5	5,568,000	6,596,000	48 "	18.46	
0.6	5	6,475,000	7,377,000	42 "	13.93	
0.8	5	6,232,000	7,510,000	42 "	20.50	
1.0	7	6,085,000	6,670,000	47 "	9.61	Decrease in one No change in one
2.0	4	5,626,000	6,682,000	30 "	18.77	
5.0	4	5,870,000	6,793,000	30 "	15.72	
10.0	3	5,262,000	7,078,000	30 "	34.51	
20.0	2	6,500,000	8,920,000	60 "	37.23	

TABLE II.

Dose: 0.5 mgm. per kilo of body weight.

Rabbit number	Initial count	One hour after one dose	One hour after 2 doses	One hour after 3 doses	One hour after 4 doses	2 hours after 4 doses	3 hours after 4 doses
51	6,026,000	7,184,000	7,968,000	8,300,000	6,760,000	8,026,000	6,864,000
52	5,540,000	6,340,000	6,020,000	6,240,000	6,160,000	7,448,000	5,820,000
54	5,220,000	5,840,000	5,920,000	6,320,000	6,120,000	5,900,000	5,460,000
59	5,520,000	6,064,000	6,208,000	6,720,000	6,140,000	7,600,000	7,410,000
Average	5,576,000	6,357,000	6,529,000	6,895,000	6,295,000	7,243,000	6,388,500
Percentage increase		14.00	17.09	23.65	12.89	29.89	14.56

Twelve rabbits, 15 weeks old, were divided into 3 groups of 4 each. Two groups received tyramine and the third served as a control. The tyramine was given daily for 2 weeks, then 3 times a week for 2 weeks, then daily for 2 weeks, and finally 3 times a week for 2 weeks. The dose for one group was 0.5 mgm. of the hydrochloride per kilo of body weight and for the other 5.0 mgm. per kilo. At the same time the control rabbits were given a subcutaneous injection of an equal quantity of 0.9% sodium chloride solution. Living conditions were the same for all. The red corpuscles were counted twice each week and the body weight was noted once a week. The accompanying figure shows the results obtained.

At the end of 8 weeks 2 rabbits from each group were killed by chloroform and sections of the bone marrow made. These were prepared and studied by the departments of pathology and histology. They reported that the 2 rabbits from the 5.0 mgm. group showed very active proliferation of red corpuscles, the 2 from the control group and one from the 0.5 mgm. group showed moderate activity, and the remaining one from the 0.5 mgm. group showed the least.

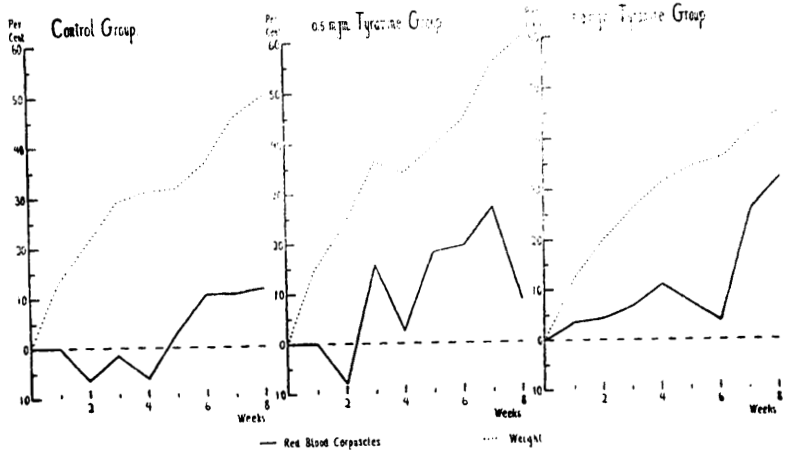

FIG. 1.

Conclusions: 1. The subcutaneous administration of tyramine hydrochloride to rabbits in amounts from 0.1 mgm. to 20.0 mgm. per kilo of body weight was followed by an increase in the number of red corpuscles per cubic millimeter in the circulating blood. 2. The repeated subcutaneous administration of a fixed amount of tyramine hydrochloride to rabbits was accompanied by a progressive increase in the number of red corpuscles per cubic millimeter in the circulating blood. The results in these experiments resemble those obtained when a secretin preparation was administered to rabbits (Downs and Eddy[1, 2]).

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Amylase Studies in Dogs Sera Following Ligation of the Pancreatic Ducts.

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Numerous investigators have studied the amylase concentration in normal dog's blood stream using various methods. The methods most commonly used are: the starch iodide of Wohlgemuth; the change from starch to sugar as indicated by copper reduction; the

[1] Downs, A. W., and Eddy, N. B., *Am. J. Physiol.*, xliii, 415.
[2] Downs, A. W., and Eddy, N. B., *Am. J. Physiol.*, xlvi, 209.