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The rate of growth in the dog.

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Observations have been made on twenty-one litters. As soon after birth as possible, when the amniotic fluid had been dried off, each individual was weighed and at the same time it was ear-marked and the sex determined. For the first three or four weeks the weights were taken daily, at the same hour (4 to 5 p.m.), and later every third day. From the figures obtained curves were plotted showing graphically the absolute weight increments and the rate of growth. The figures for the number of young, the proportion of the sexes, the birth mortality, and the body weights when born, are given in the following table.

No. of Litter.	Number Born.					Average Weight at Birth.	
	Alive.		Dead.		Total.		
	♂	♀	♂	♀		♂	♀
1	4	4	—	—	8	294	289
2	4	2	1	—	7	278	280
3	—	4	—	—	4	—	271
4	4	4	—	—	8	270	266
5	6	5	1	—	12	279	274
6	4	4	—	—	8	280	268
7	3	4	—	—	7	298	294
8	1	7	—	—	8	255	286
9	1	2	—	—	3	354	288
10	4	—	—	—	4	309	—
11	2	3	—	—	5	255	245
12	3	3	—	—	6	278	297
13	3	5	—	—	8	310	310
14	4	4	—	—	8	269	218
15	3	2	1	—	6	242	253
16	1	—	—	1	2	318	—
17	4	6	—	1	11	305	294
18	1	1	—	—	2	365	297
19	—	3	—	—	3	—	299
20	5	2	1	—	8	344	322
21	1	4	1	—	6	238	241
	58	69	5	2	134	292	279

The number of young in a litter varies from 2 to 12, families of 8 occurring most frequently. The proportion of the sexes is in favor of the female, the ratio being 100 males to 119 females.

This does not agree with the statistics for the human subject nor with Minot's results in the guinea-pig, but, of course, the number of individuals so far examined by me is too small to draw any general conclusion from. The birth mortality is highest in the males, as is also the average body weight when born.

Minot found that in male guinea-pigs, as in newborn children, there is an actual loss of weight for the first 3 or 4 days after birth. Such, however, is not the case in the dog. In almost all the litters there is some gain in 24 hours, and this is very decided at the end of the second day. There is a post-natal retardation of growth but it is of relatively short duration.

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The influence of experimental cretinism upon nitrogenous metabolism in the sheep.

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The object of the investigation was to determine whether athyroidism in sheep is associated with any striking abnormality of intermediary metabolism, such as might be revealed by the nitrogen partition of the urine. The subjects were three sheep which have already been described before this Society by Simpson.[1] At the age of two months they had suffered the loss of the thyroid and internal parathyroid glands, and had subsequently developed into typical cretins. One year after the first operation the external parathyroids also had been removed. While the later condition was of course not that of uncomplicated athyroidism, symptoms referable to the loss of the parathyroids were but slightly marked. Tetany, in particular, was never observed. When the animals came under my care they were one and a half to two years old.

To furnish a basis of comparison two normal sheep, nearly four years of age, were included in the investigation. As the most convenient way of avoiding the difficulties caused by variable appetite, etc., all five animals were starved. The urine was collected as voided.

[1] Simpson, PROC. SOC. FOR EXP. BIOL. AND MEDICINE, 1911, IX, 2.