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## Observations on Life-Span of Epinephrectomized Cats.

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In a previous communication[1] it was reported that the oral administration of considerable quantities of fluids to bilaterally epinephrectomized cats prolongs life for some days beyond the usual life-span. Further observations are presented in this report.

I. A series of four adult male cats were bilaterally operated (interval of seven days between operations) and given 50 cc. distilled water three times a day and 50 cc. of milk once daily. The average survival period was 143.8 hours.

II. A second series of cats, consisting of four non-pregnant females and two males, were given intravenous injections of 10 cc. of 7 per cent gum acacia in 10 per cent glucose every forty-eight hours, or at times when marked symptoms of adrenal insufficiency developed. The average survival was 132.8 hours.

III. A third series of seven animals (five non-pregnant females and two males) were treated with 10 cc. of a 5 per cent solution of sodium bicarbonate every forty-eight hours, or at times when marked symptoms of adrenal insufficiency appeared. The average survival period was 132.5 hours.

IV. Series four consisted of three female cats (one in advanced pregnancy, the remainder non-pregnant). The animals were given 10 cc. of a 5 per cent solution of sodium bicarbonate added to a 7 per cent solution of gum acacia in 10 per cent glucose, every forty-eight hours. The average survival period was 172.3 hours.

V. Four double-operated cats were kept at an average temperature of 7.4° C. following removal of the second adrenal. Since double operated animals appear to be very sensitive to cold, an experiment was undertaken in which such animals were kept at cool temperature. However, no effect was noted since the average survival period for the group was 126.3 hours.

VI. Four adult animals, consisting of one non-pregnant female and three males, were kept at an average temperature of 30° C. throughout the experiment. The average survival period was 194.1 hours. No food or fluids of any kind were forced upon the cats of experiments V and VI.

The conclusion seems evident that the average survival period for bilaterally epinephrectomized cats, when they are not subjected to repeated bleeding for blood tests, is in the neighborhood of 4 to 6 days. When double operated cats are bled repeatedly, especially after adrenal insufficiency symptoms develop, the period of survival is very materially shortened. Swingle[2] has recently reported that the blood findings (pH, $CO_2$ capacity, phosphorus, etc.) of cats surviving bilateral adrenal removal (4 to 6 days) are identical with those showing symptoms at sixty hours.

This is a preliminary report.

[1] Corey, E. L., PROC. SOC. EXP. BIOL. AND MED., 1926, xxiv, 206.
[2] Swingle, W. W., *Am. Naturalist*, 1927, lxi, 132.

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## Effects of Pituitrin Administration on Distribution of Injected Fluid.

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Although it is well known that the administration of extracts of the posterior lobe of the pituitary gland may affect blood volume and urine output, there is little agreement as to the mechanism involved. This is due in part to the varying dosages, modes of administration, time of observation, and condition of the experimental animal employed by the various investigators.

The purpose of this investigation was to study the effect of pituitrin administration on the distribution of injected fluid between the blood, urine and tissues. Normal dogs deprived of food and water for 20 hours were used as experimental animals. Ringer's solution was injected intravenously by means of a Woodyatt pump, for a period of two hours, at the rate of either 15 or 25 cc. per kilo body weight per hour. At times, from .05 to .08 cc. of commercial pituitrin (Parke, Davis & Co. or Eli Lilly & Co.) per kilo body weight per hour was added to this solution. Ether was administered by the open cone method in several experiments, in order to study the