secretin. This procedure was again repeated at the termination of the experiment to see if there was any variation to the original dose. Two sets of extracts were made and 6 dogs were run, with similar results in every case. Further, if we injected the salt filtrate B into the animal, there occurred a fall in blood pressure, varying according to the dose and the tissue used, from 25 to 100 mm. of Hg. In all such cases the pancreas was slightly stimulated, the amount of secretion produced depending on the degree of fall in blood pressure and its duration.

These results show that the secretion caused by various tissue extracts other than gastric and intestinal mucosa is due to the presence of vaso-depressor substances and not to the specific substance called secretin. About 10 times as much secretin can be extracted from the intestinal mucosa of the first 6 feet of the intestine as from the mucosa of the pyloric antrum. Before an extract can be said to contain secretin, it must be at least shown that it is free of vaso-depressor action.

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The Intravenous Administration of Irradiated Ergosterol.*

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This investigation was begun in the hope that the intravenous administration of ergosterol might throw some light on the mechanism of its action, if it could be shown to be effective by this method. Normal dogs of 10 to 12 kilos weight were selected and confined to a stock diet of ground beef heart and Puppy Meal, 3:1. Ten animals have now been studied. Routine determinations of calcium and inorganic phosphorus were made. Figure 1 shows the results on one animal, which is fairly typical of the series. After a short period of preliminary observation, injections were begun of ergosterol in corn oil. This oil alone, in amounts up to 15 cc. does not produce any of the observed effects. In the illustrative case. approximately 20 mg. were administered daily during 2 weeks. The

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calcium concentration was increased, but there were pronounced fluctuations for which no explanation can be offered at present. During 10 days, the animal gained weight rapidly and became extraordinarily active. During this time also, there were pronounced fluctuations in the concentration of inorganic phosphorus, but the average level was unchanged. At the end of this period it became apparent that the calcium concentration was decreased almost to the original level; so the daily dose was increased to 30 mg. The result was a second increase in calcium to almost 16 mg. at the end of another week. The dose was now increased to 50 mg. On the 25th day after the first administration, the calcium concentration was increased to almost 19 mg.; at this time the phosphorus had fallen to 4.7 mg. The dog had now begun to lose weight and had become less active. At the termination of the observation, post mortem examination of various organs, particularly of the parathyroids, will be made.

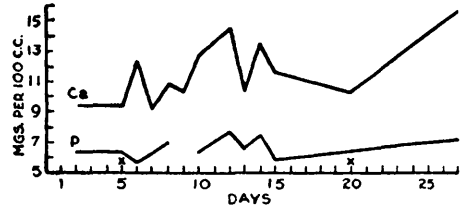

FIG. 1.

In the case of 2 other animals which received the maximum dose at an earlier stage, tetanoid spasms have been observed, which resembled superficially the spasms resulting from an overdose of parathyrin, but neither calcium nor phosphorus concentrations were excessively high at this time. These dogs have lost weight much more rapidly. Neither one ever showed any increased activity.

Other blood changes are being studied. Also, a study of urinary excretion and of metabolism will be undertaken.