With the diluting fluid thus properly adjusted, vena puncture is made under aseptic conditions. After all air and fluid have been forced out of E by the blood, the mercury bulb is lowered and C is opened long enough to allow the mercury in the sampling tube to be replaced by blood. The stop-cock S is then closed and T is inverted to mix its contents. With the rubber connecting tubes detached, the sampling tube is centrifuged until its supernatant fluid is entirely clear. This is then placed with the standard tubes in a water bath at 38.5° C. for 10 minutes before it is matched with these in the comparator block.

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## 3735

## Relation of Calcium and Phosphorus in Blood of Parathyroidectomized Dogs.

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Changes in the blood calcium and phosphorus in dogs were investigated, both before and after complete thyro-parathyroidectomy. While it was found that tetany occurred at varying levels of calcium concentration, there was always a definite mathematical relation between the concentrations of the two elements when symptoms first appeared. In normal animals the Ca:P ratio ranged between 1.5 and 2.0. After operation there was progressive reduction in this ratio until the first attack of tetany, when it was always approximately 1.0. Occasionally, there was an increase after spontaneous recovery from an attack, but usually there was a progressive decrease with each successive attack until death occurred. Treatment by any of the established methods restored the ratio, but symptoms always disappeared long before there was any extensive readjustment of the ratio. The following table illustrates the relationship:

TABLE I.

| No. | Ca mg. per 100 cc. | P mg. per 100 cc. | Ca:P | |
|---|---|---|---|---|
| 21 | 11.65 | 5.10 | 2.28 | 24 hours after treatment, no tetany. |
| | 6.22 | 6.78 | 0.917 | Tetany and spasticity. |
| 36 | 11.30 | 4.44 | 2.545 | Day before operation. |
| | 5.60 | 6.36 | 0.880 | 5 days after op. First attack. |
| | 9.60 | 4.75 | 2.022 | 15 days after op. 24 hrs. after treatment. No tetany. |
| | 5.44 | 5.87 | 0.926 | 17 days after op. Severe tetany. |
| 43 | 11.47 | 5.71 | 2+ | 2nd day before op. |
| | 8.87 | 5.01 | 1.5 | 2nd day after op. No tetany. |
| | 5.88 | 8.20 | 0.717 | 3rd day after op. Mild tet. 2nd attack. |
| | 5.19 | 9.43 | 0.551 | 7th day after op. Severe tetany. |

3736

## The Influence of Amytal Upon Blood Sugar Content.

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The statement of Page[1] that during amytal narcosis no perceptible changes in blood sugar content occur was so suggestive for new possibilities in the study of carbohydrate metabolism as to warrant a repetition of the experiments of Page. In our work, the rabbit

TABLE I.
*The Influence of Amytal upon Blood Sugar Content in the Rabbit.*

| Rabbit Number | 1 | 3 | 4 | 6 |
|---|---|---|---|---|
| Weight in grams | 2000 | 2200 | 2200 | 2100 |
| Method of introduction of drug | Per os | Subcutaneous | Intraperitoneal | Intraperitoneal |
| Mg. per kilo | 80 | 80 | 50 | 100 |
| Blood sugar content in mg. per 100 cc. of blood. | | | | |
| Before injection of drug | 122 | 100 | 107 | 140 |
| 30 minutes later | 138 | 130 | 131 | 140 |
| 45 minutes later | 148 | 145 | 185 | 198 |
| 1½ hours later | 138 | 185 | 155 | 267 |
| 2 hours later | — | — | — | 336 |
| 3 hours later | — | 286 | 160 | — |
| 4 hours later | — | — | — | 285 |
| 5 hours later | 123 | 221 | — | Died |