

## 122 (2645)

The Schultz-Dale technique with large guinea pigs and with calcium-free Fleisch-Ringer solution.

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In the course of various studies on sensitization it was found desirable to use large guinea pigs. It was noted that a calcium-free Fleisch-Ringer<sup>1</sup> bath at 37° C. reduced the amplitude of the contractions of excised uteri of guinea pigs weighing as much as 525 grams, and rendered these tissues suitable for anaphylactic studies. The application of this solution to the Schultz-Dale technique was suggested by the work of Ransom<sup>2</sup> dealing with the effect of strophanthus on cats' uteri suspended in a calcium-free physiological salt solution.

The modified Fleisch-Ringer solution has been in use for the last six months and has given uniformly satisfactory results with tissues of guinea pigs weighing not more than 600 grams. The effect of potassium-free as well as calcium-free solutions have been compared with that of the complete solution. Some of the results are shown in Charts 1-5.

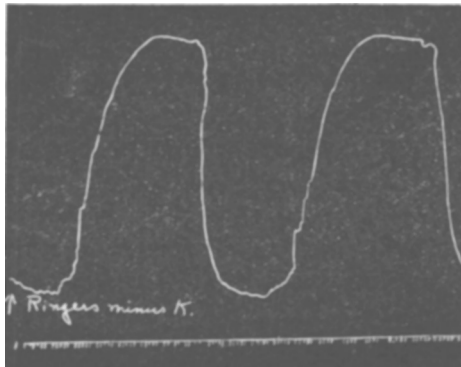


CHART I. Excised uterine horn from a guinea pig weighing 351 grams in a bath of potassium-free Fleisch-Ringer solution at 37° C. Ten second time interval recorded in all charts. Showing normal uterine contractions making observations impossible.

<sup>1</sup> *Arch. f. exper. Path. und Pharm.*, 1922, xciv, 22.

<sup>2</sup> *J. Pharm. and Exper. Therap.*, 1920, xv, 181.

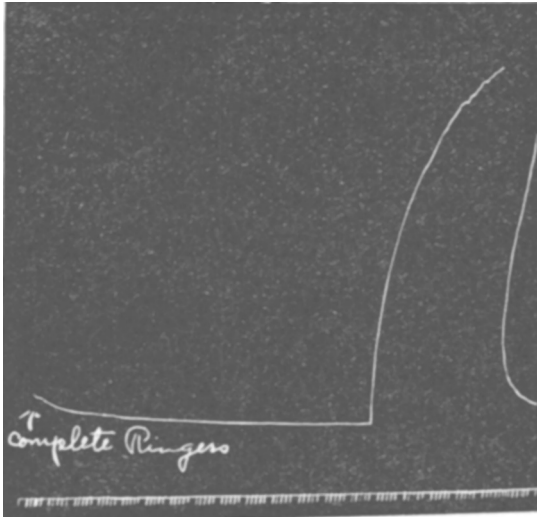


CHART II. Uterine horn from guinea-pig weighing 300 grams suspended in complete Fleisch-Ringer solution at  $37^{\circ}$  C. Also showing normal contraction in uterus of large guinea pig.

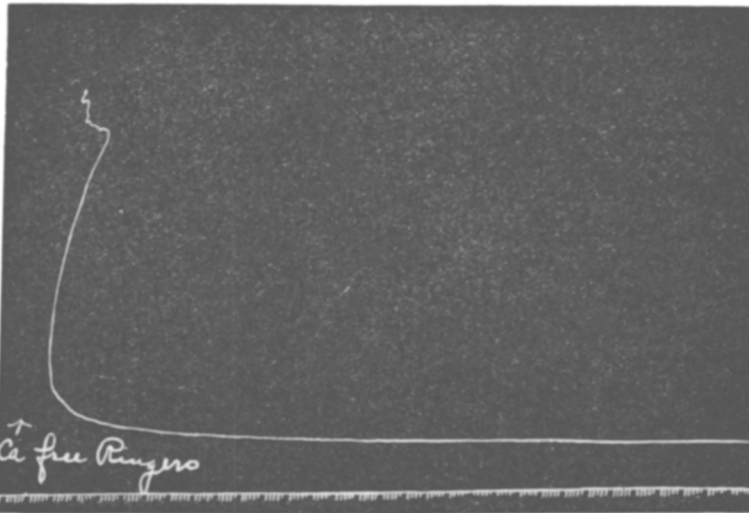


CHART III. Same horn as in Chart II with complete solution replaced by a calcium-free Fleisch-Ringer solution at  $37^{\circ}$  C. Contractions of uterus ceased, permitting use of Schultz-Dale technique.

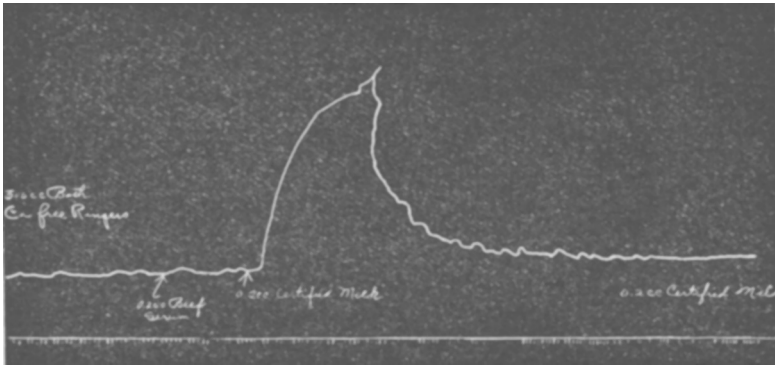


CHART IV. Weight of guinea pig 525 grams. Sensitized by feeding certified milk. Calcium-free Ringer's solution. Typical reaction on addition of certified milk.

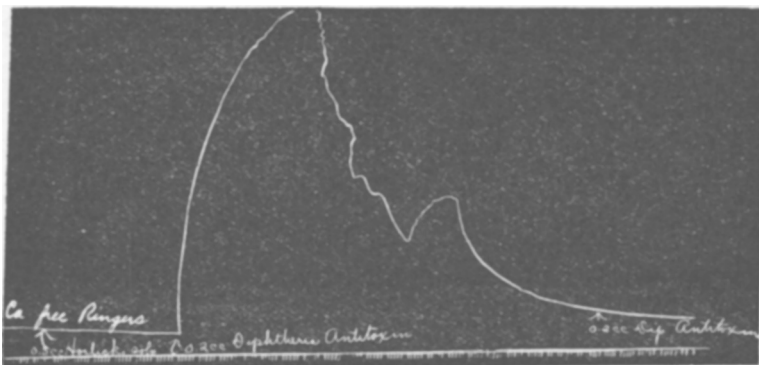


CHART V. Guinea pig fed Horlick's malted milk and injected with 0.5 cc. toxin-antitoxin mixture subcutaneously to prevent rapid gain in weight and thus sensitized to horse serum. Weight 409 grams. Calcium-free solution. Typical reaction on addition of horse serum.