

A detailed report of the application of this procedure and a study of motility in the rabbit's uterus under the influence of various hormones and drugs is now in the process of being completed.

8009 P

Innervation to and Within the Uterus.*

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In the course of certain experiments it became desirable to know the nature of the distribution of nerve paths from the pelvic plexus to their ultimate destinations in the uterus. Accordingly, we have performed a series of experiments in suitable ovariectomized rabbits. In some of these the parametrium was cut through progressively and the uterus left intact. In others, the uterus was cut first and the parametrium left entire. These experiments showed that when some spot in the middle third of the parametrium is cut, the uterus above the level of section fails to respond to lumbar sympathetic stimulation, even though the uterus itself is still intact. With the parametrium uncut, but the uterus severed, the whole organ still responds to pre-sacral nerve stimulation. Experiments on the essentiality of the utero-vaginal junction (containing the uterine cervical ganglia) were performed. This whole region, including cervix, could be excised without modifying the responses of the uterine cornua when the lumbar sympathetic nerves are stimulated. Section of a selected small region of the parametrium at the level of and close to the site of the cervix, promptly abolishes uterine responses to sympathetic nerve stimulation.

In other experiments point stimulation of suitable places on the parametrium was made progressively from the tubal end, caudad. It was found in favorable experiments that the uterus contracts more or less locally, directly opposite the site of parametrial stimulation. This local contraction spreads very slowly in both directions, cephalad and caudad.

Our results indicate, therefore, that lumbar motor sympathetic

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fibers pass close to the utero-vaginal junction and then dip more or less deeply into the parametrium as they pass toward the upper end of the uterus. Along their whole course they give off fibers to the uterus, innervating rather restricted regions, and do not contribute to a widespread, diffuse plexus within the uterine walls. This holds for the highly nervous utero-vaginal junction as well as for the uterus proper, which is virtually devoid of nerve cells.

8010 P

A Complex Polysaccharide Fraction from the Cells of the Human Type of Tubercle Bacillus, H 37.* †

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The recent work of Avery and Goebel¹ has shown the importance of omitting the use of alkali in the purification of the specific polysaccharide of Type I pneumococcus. It was accordingly deemed advisable to repeat the isolation of the tubercle bacillus fractions described in a recent note,² omitting the steps involving precipitation from alkaline solution, and keeping all solutions at least at a slight acidity. While the difficulties of the fractionation were increased, the B₁ and B₂ (low rotating) fractions were ultimately isolated in the same form as before. However, the C fraction (high rotating, insoluble in 75% methyl alcohol) differed markedly in its chemical properties. Aqueous solutions of the substance were opalescent, even after passage through a Berkefeld filter, and, on treatment with alkali, slowly deposited a bulky precipitate consisting mainly of magnesium palmitate. Magnesium was identified as the double ammonium phosphate, while the palmitic acid, crystallized from 60% methyl alcohol, melted at 53-57° and gave C = 75.18%, H = 12.73% (calculated, C = 74.92%, H = 12.59%), neutral

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¹ Avery, O. T., and Goebel, W. F., *J. Exp. Med.*, 1933, **58**, 731.

² Heidelberg, M., and Menzel, A. E. O., *PROC. SOC. EXP. BIOL. AND MED.*, 1932, **29**, 631.