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Regarding the innervation of the blood vessels of the intestine.

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Quantitative measurements of the blood flow in the mesenteric vein proved that the innervation of the blood vessels of the intestine by way of the splanchnic nerves is bilateral. Vasoconstrictory effects were produced on stimulation of the left and right splanchnicus major.

Cutting the cervical parts of the nervi vagi caused a marked slowing of the blood stream. Division of the vagi above the diaphragm produced a similar but much milder effect.

The experiments also tend to show that the vagi contain vasoconstrictory fibers for the intestine.

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Note on anaphylaxis to horse serum.

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Young guinea pigs, bred from mothers which have been treated with a mixture of horse serum and diphtheria antitoxin, are found very susceptible to the toxic action of horse serum. Recently I have had the opportunity to study the blood of these guinea pigs hypersusceptible by reason of their descent and can now contrast its properties with those of the blood of the animals hyper-sensitized by direct treatment. The blood of the animals directly or actively sensitized contains a substance which when the blood is transferred to untreated young animals of normal descent, renders them immediately (within 24 hours) hypersensitive to horse serum. It also contains a substance which renders "fresh" animals to which it is transferred hypersensitive, after an incubation period corresponding to that required for direct sensitization by horse serum. This substance, designated as "anaphy-

lactin" by Gay and Southard, who discovered it, is much more potent than that which acts immediately if its power is stated in inverse terms of the amount of blood which must be transferred in order to develop the reactions. One tenth to one cubic centimeter will give results after two weeks while fifteen cubic centimenters are needed to develop the possibility of reaction after twenty four hours.

In the study of the animals hypersensitive by breeding, these distinctions become greatly emphasized. When the blood of such animals aged four or five weeks, is transferred in quantity (15 c.c.) to fresh guinea pigs they become sensitive to the toxic action of horse serum within twenty four hours. But whether the quantity of blood used be large or small, the anaphylactin or substance sensitizing after an incubation period, cannot be demonstrated.

These experiments were undertaken in the belief that the young born of serum-treated mothers were probably rendered hypersensitive by a passive process, analogous, although of opposite result, to the transfer of immunity from mother to offspring. Taken alone or in conjunction only with facts so far developed in regard to this reaction they support this view. Certain experiments not as yet concluded have shown, however, that the sensitiveness of the young animals may last longer than had been supposed. Certain other results, which on control are found to be clearly exceptional, point to the possibility of an influence extending from the treated mother to her grandchildren through the female line. In the hope of extending these observations I defer drawing definite conclusions on these points.

Some experiments on the reaction of the rabbit to horse serum, incomplete from the point of view with which they were begun, have shown that this animal is much more difficult to sensitize to the point where the intravenous injection of serum will cause sudden death, than is the guinea pig. The toxin-antitoxin mixture so effectual for the latter animal does not sensitize the rabbit at all. It would therefore seem most unwise at present to draw conclusions from the recent work on anaphylaxis in animals which would influence in any way the therapeutic use of specific sera.