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Studies in the physiology of vitamins. II, Does vitamin-B stimulate glands in a manner similar to the alkaloid pilocarpine?

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The hypothesis[1] that vitamin-B functions to stimulate glands in a manner similar to the alkaloid pilocarpine has been investigated experimentally. Extracts of rice polishings, wheat embryo, navy bean and yeast, and neutralized tomato juice, all of which were demonstrated to contain vitamin-B by tests on polyneuritic animals (pigeons and dogs), were examined for their action on the secretory function of the salivary glands. The effect of intravenous injection of these products on the flow of saliva was noted in anesthetized dogs in which the ducts of the submaxillary and sublingual glands were cannulized. In order to ascertain whether any slight temporary flow of saliva that might follow the injection was due to a vaso-dilator effect of the injected product on the sympathetic nervous system, blood pressure was determined by means of a manometer connected with the femoral artery. Normal dogs and polyneuritic dogs were used.

All of these products gave negative results. Stimulation of the chorda tympani nerve or injection of pilocarpine, however, always produced a characteristic flow.

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A contribution to the study of the relationship between vitamin-B and the food intake in the dog.

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Karr[2] showed that in the dog some relationship exists between

[1] Uhlmann, *Zeitsch. f. Biol.*, 1918, lxviii, 3.

[2] Karr, *Jour. Biol. Chem.*, 1920, xlviv, 255.