

In order to determine this point each branch of the vagus was stimulated, whilst the vagi in the neck were successively cooled. The effect of these procedures on the vomiting reflex was meantime noted. The results indicate that, whilst in some cases the excitation passes from the dorsal branch exclusively up the right vagus, and from the ventral branch up the left vagus, in many instances impulses from each stomach nerve are transmitted by both vagi.

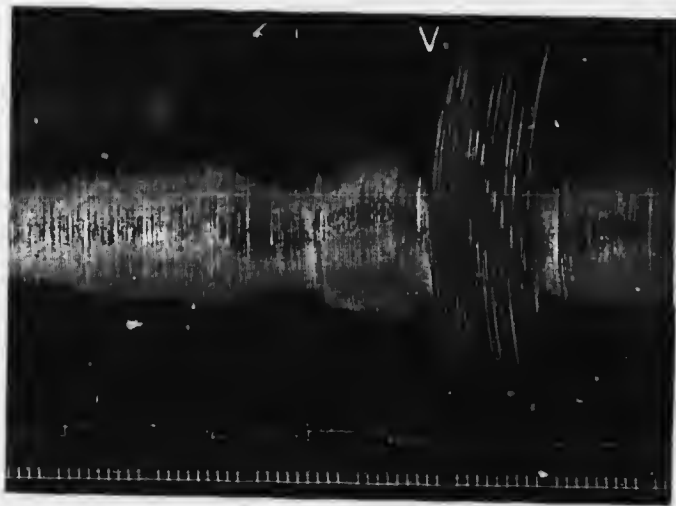


Fig. 3. Effect of stimulating dorsal vagus. Vomiting occurs at V. Distance of secondary 7 cm. Time in seconds.

The final point to be determined in tracing the further course of the impulses up the vagi was which of the rootlets belonging to the 9th, 10th and 11th cranial nerves convey the excitation to the medulla. The lower rootlets were first exposed and vomiting was induced by stimulating the central ends of the vagal branches to the stomach. The ascending rootlet of the 11th nerve was then divided on each side. Stimulation of the vagus nerves again excited vomiting. The impulses from the stomach causing vomiting are, therefore, not conveyed to the medulla by these rootlets.

As the exposure of the upper rootlets involved the removal of a portion of the cerebellum considerable shock invariably resulted, and hence it was found impossible to excite vomiting by the action of