ascribed to a pressure difference. The outflow may be so regulated that any desired rate of perfusion can be maintained. In the outlet system a graduated side arm is arranged in communication with a tambour to record the pressure changes within the segment. These pressure changes produce volume changes in the graduated side arm which calibrates continuously the record made by the tambour. The contractions of the longitudinal fibers are simultaneously recorded by attaching a thread to the glass outlet tube and bringing it over a system of pulleys to a lever. The segment with its attachments is immersed in a beaker of oxygenated Locke's solution kept at body temperature. The method has proved useful in the study of the influence of extracts on the muscular coats after passage through the mucosa.

This is a preliminary report.

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Depancreatized Dogs Kept Alive Several Months with Insulin Administered by Stomach Tube.

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Gaebler and Murlin[1] have found that insulin in ox-blood serum administered to phlorhizinized dogs by stomach tube caused positive, though small, effects on the respiratory metabolism and on the excretion of sugar, indicating combustion of more glucose than was burning just before the insulin was given. Blood serum was chosen because of its anti-tryptic action.[2] The insulin effect was not so great nor so prolonged as had been obtained earlier[3] with a salt precipitate of insulin on depancreatized dogs. Recently a number of dogs totally deprived of the pancreas and fed on meat have been kept alive for periods of six weeks to four months on daily doses of 40 to 100 clinical units of insulin in blood serum administered carefully by stomach tube in such a way as to preclude the possibility of absorption from the mouth. The effect on respiratory metabolism is immediate. Respiratory quotients as high as 1.06 have been obtained and in several instances, *as reported with salt precipitates,*[3] *the capacity to oxidize sugar has persisted for 24 hours and more.* Frank, Nothmann and Wagner[4] have observed similarly prolonged effects from the use of their synthetic compound given by mouth.

The effect on blood sugar is not so sudden as after subcutaneous or intravenous injection and several times effects on respiratory metabolism were obtained without any measurable effect on blood sugar.

Blood serum affords partial protection of insulin against the known destructive action of pepsin in the stomach and from possible destructive action of erepsin in the intestinal mucosa.

This is a preliminary report.

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[1] Gaebler, and Murlin, *J. Biol. Chem.*, 1925, lxvi, 731.

[2] Jobling, and Petersen, *J. Exp. Med.*, 1914, xix, 239.

[3] Murlin, Sutter, Allen, and Piper, *Endocr.*, 1924, viii, 331.

[4] Frank, Nothmann, and Wagner, *Klin. Woch.*, 1926, v, 2100.