270 mm of water by introducing physiologic saline into the cisterna magna. The blood pressure rose from 120-130 to approximately 200 mm of Hg. After ergotamine tartrate, all 3 showed an abrupt fall in the blood pressure, 2 dying in 1 to 2 minutes, while in the third, the blood pressure fell from 190 to 100 in 4 minutes, but in the next 12 minutes, rose steadily to the original 190, where it remained for another 10 minutes, after which the experiment was discontinued.

Electrocardiograms were taken on 4 kaolin-hypertensive rats before and after the administration of ergotamine tartrate. There was no immediate slowing of the heart rate. Three of the rats showed slowing (85-200 beats, 15-33%, per minute) 20-30 minutes after ergotamine was given.

Ergotamine tartrate lowers transiently the high blood pressure associated with increased intracranial pressure in the rat. A peripheral vasomotor depression or paralysis, which ergotamine tartrate has been shown to induce under various circumstances, and which may become obvious only in the presence of increased sympathetic constrictor activity, would appear to be a likely explanation.

The electrocardiographic findings were interpreted as evidence that the immediate fall in blood pressure was not due primarily to a cardiac depressant effect of ergotamine.

9910 P

Effect of Adrenal Vein Ligation and Pancreatectomy on Metabolism of Renal Tissue.

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Previous reports[1, 2] reveal that ligation of the lumbo-adrenal veins results in an amelioration of experimental diabetes as evidenced by diminished glycosuria and ketonuria and a basal R.Q. elevated above the diabetic level. The present experiments were conducted in order to determine the ability of renal cortex to utilize carbohydrate. Renal tissue from diabetic animals is incapable of utilizing added glucose

[1] Fazekas, J., Himwich, H. E., and Martin, S. J., PROC. SOC. EXP. BIOL. AND MED., 1937, **37**, 361.

[2] Fazekas, J., Himwich, H. E., and Martin, S. J., *Science*, 1938, **87**, 144.

and the respiratory quotient remains close to 0.7. The results obtained on the ligated depancreatized animals are presented in Table I. It will be noted that the basal R.Q.'s on the tissues of dogs 3

TABLE I.

Dog	Survival, days	Blood* glucose, mg %	No addition		Glucose		Lactic Acid	
			$-QO_2$†	R.Q.	$-QO_2$	R.Q.	$-QO_2$	R.Q.
					18.1	.74		
1	14	+385	17.0	.70	18.3	.72	19.3	.79
2	10	314	17.5	.74	19.0	.79	23.2	.85
					19.1	.85		
3	25	68	17.6	.82	19.6	.81	21.3	.86
					15.6	.88		
4	25	296	14.3	.85	15.5	.87	18.5	.93

*Blood glucose at time of sacrifice.
†—QO_2 = mm³ oxygen consumed per mg dog weight of tissue per hour.

and 4 were definitely above 0.7. In all the experiments, glucose produces a questionable rise in oxygen consumption and R.Q., while lactate causes a significant increase in both oxygen uptake and respiratory quotient. The level of the blood sugar at the time the kidney was excised did not influence the character of the result. Previous work on hypophysectomized depancreatized animals failed to reveal an elevated basal R.Q.[3] and the addition of glucose failed to stimulate metabolism but lactic acid was oxidized. Further experiments are now in progress to determine whether a larger series of kidneys excised from hypophysectomized depancreatized animals would yield results similar to those obtained from the depancreatized preparation with lumbo-adrenal veins ligated.

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Adrenin Content of Adrenals of Cats Subjected to Anoxia.

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Effects of anoxemia upon the rate of secretion of epinephrine from the adrenals are not entirely clear, possibly because of the different experimental methods utilized by various authors. Cannon[1]

[3] Fazekas, J., Campbell, E. H., Jr., and Himwich, H. E., *Am. J. Physiol.*, 1937, **118**, 297.

[1] Cannon, W. B., *Endocrinology and Metabolism*, New York, 1924, **2**, 174; Cannon, W. B., and Hoskins, R. G., *Am. J. Physiol.*, 1911-12, **29**, 274.