per second with an amplitude of 5-10 μv, with a superimposed α wave 14-18 cycles per second. Bipolar recordings show only a slow 5-8 cycle wave. In monopolar cerebellum recordings a slow wave of 6-8 cycles per second with an amplitude of 4-7 μv is seen as the dominant frequency. Most electrical activity appears to be blocked in bipolar recordings. Bilateral asynchrony and asymmetry were observed when monopolar recordings were made from contralateral areas of the brain. Possible causes of asynchrony are discussed.

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Effect of Alloxan on Feed Consumption in Rats.* (30193)

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The variation in the voluntary feed consumption of normal mature female rats of the Sprague-Dawley-Rolfsmeyer strain has been observed(1). The mean feed intake of 265 g rats was 5.26 g/100 g body weight (bw) with a range from 2.9 to 7.6 g/100 g bw/day. While the neural regulation of feed intake has been studied extensively(2) the possible role of the endocrine glands and their hormones has been neglected. It is interesting to speculate as to the cause of the difference in feed consumption of individual animals. May the difference be due, in part, to variation in the secretion rate of the various hormones? In initiating experiments to determine the effect of various hormones on feed consumption, the effect of endocrine gland removal on feed consumption has been undertaken.

In our initial study, the effect of thyroparathyroidectomy and of adrenalectomy on feed consumption has been reported(3). It was shown that feed consumption gradually declined 24% about 60 days after thyroparathyroidectomy and 27% after adrenalectomy. Removal of the 2 glands reduced feed intake 30%.

The present paper reports upon the effect of alloxan at a level sufficient to induce a chronic state of diabetes(4) on feed consumption.

Materials and methods. Twenty-five nulliparous mature female rats of the Sprague-Dawley-Rolfsmeyer strain weighing a mean of 223 g were placed in metabolism cages constructed so as to prevent coprophagy and feed wastage. Temperature was maintained at 78 $\pm$ 1°F and the rats were artificially illuminated during daylight hours. Purina Lab Chow with an energy value of 4.41 calories per gram and 23.4% total protein was fed during a preliminary period of 2 weeks to determine the mean daily feed consumption of each animal in the group. While the normal feed consumption of the animals prior to alloxan administration is considered the preferable control, the feed consumption of a

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TABLE I. Effect of Alloxan on Feed Consumption in Rats.

Treatment	Days	No. of rats	Mean body wt (g)	Mean food intake (g) Per day	Per 100 g bw	S.E.	Diff. (%)	Remarks
Normal control	10	24	240	13.76	5.73			
	20	24	246	13.78	5.60			
	30	24	249	14.05	5.64			
Exp group	14	25	223	13.10	5.88			
	14	17	223	13.27	5.95[1]	.90	100	Surviving groups
	14	8	222	12.73	5.73			Died
Alloxan	1	25	224	7.56	3.38			
	2	25	212	5.75	2.71			
	3	24	204	4.01	1.97		—67	
	4	23	200	6.59	3.30			
	5	18	206	9.34	4.53			
	6	18	210	13.30	6.33			
	7–12	17	215	17.37	8.08[2]	.40	+36	
	13–18	17	220	20.48	9.31[3]	.88	+56	

[1-2,3] Significant at .001 level. [2-3] Significant at .05 level.
S.E. = Standard error of mean.
Difference % compared with survival group.
bw = Body weight.

group of normal rats of similar body weight was also included to note any change which might occur during the experiment period.

The rats were given a single intraperitoneal injection of alloxan (reagent) at a level of 15 mg/100 g bw to induce a chronic state of diabetes(4). Daily estimates of feed consumption were continued for a period of 42 days. During the first 6 days of treatment a total of 8 rats died. The sugar in the urine was estimated by the use of "Tes-Tape" (urine sugar test tape, Lilly).

Results. The 24 normal control rats weighing initially 240 g were maintained for a period of 30 days covering the experimental period. Their mean daily feed consumption by 10-day periods is presented in Table I. On the basis of daily feed consumption/100 g bw, a slight decline was observed during the 30-day period which might have been expected of the experimental animals. In the comparable 25 rats of the experimental group normal feed consumption was measured for 14 days. The mean body weight and daily feed consumption were respectively, 223 g and 5.88 g/100 g bw. The rats were then given a single intraperitoneal injection of alloxan (reagent) at a level of 15 mg/100 g bw to induce a chronic state of diabetes. The mean daily feed consumption dropped for a period of 3 days to 67% of the mean control level, then began a gradual increase to above normal by the 6th day. Body weight also declined, then began to increase again by the 6th day. During this period 8 rats died. The mean daily feed consumption of the 17 surviving rats was slightly higher than that of those which died, but not sufficient to suggest that their normal feed consumption played a role in their death (Table I).

During the 7th to 12th days, feed consumption increased 36% and by the 13th to 18th days increased 56% above their normal control feed consumption. During this period mean body weight returned to normal. The urine was positive for sugar.

Discussion. In a previous study the mean daily feed consumption of a group of 24 Sprague-Dawley-Rolfsmeyer female rats weighing 265 g was 5.26 g/100 g bw(1). The 24 rats in the normal control group weighing initially a mean of 240 g showed a mean daily feed intake of 5.73 g/100 g bw during the initial 10-day period and 5.60 and 5.64 g at successive 10-day periods. In a preliminary study the 25 experimental rats weighing a mean of 223 g showed a range in normal feed consumption from 5.12 to 6.76 g with a mean of 5.88 g/100 g bw during a period of 14 days. It has been reported that intraperitoneal injection of alloxan at a level of 15

mg/100 g bw induces a chronic state of diabetes(4).

When alloxan was injected, feed consumption dropped for a period of 3 days to 67% of control intake but then increased to above normal by the 6th day. During this period 8 rats died. It was thought that these rats might be animals in the lower range of feed consumption. However, a comparison of mean feed consumption of the survivors with those which died did not suggest that their slightly lower normal feed consumption played a role in their death.

The 17 surviving rats continued to increase in feed consumption to a mean 36% above their control period during the 7th to 12th days after alloxan injection and by 56% during days 13 to 18. Since the normal control group showed a slight decline in feed consumption/100 g bw whereas these rats increased in feed consumption, it seemed preferable to compare the change on the basis of the feed consumption of the experimental group during the preliminary control period.

Summary. A group of 25 mature female Sprague-Dawley-Rolfsmeyer rats weighing a mean of 223 g consumed a mean of 5.88 g/100 g bw of Purina Lab Chow daily during a 2-week control period. When alloxan was injected intraperitoneally at a level of 15 mg/100 g bw to induce chronic diabetes, feed consumption declined to a level 67% below the control period, then began to increase. Eight rats died during the first week following treatment. The 17 surviving rats increased feed consumption 36% during the 7th to 12th days and 56% during the 13th to 18th days. These data show that induction of chronic diabetes by alloxan increases feed consumption by over 50%.

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Production of Aortic Thrombosis in Rabbits. (30194)

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Arterial thrombosis as a complication of atherosclerosis has only rarely been produced in experimental animals. Most of the successful attempts involved physical damage to the arterial wall(1,2). In recent years some investigators utilized differences in electrical potentials (injury currents) to produce aggregation of cellular elements on the vascular intima leading to thrombosis in otherwise normal, non-atherosclerotic vessels(3). This was done by introducing electrodes *in vivo* (properly oriented as to polarity) into the intima of the vessel in dogs and rabbits, or by surrounding a segment of canine aortic wall(4), or the meso-appendix of the rat with excised autologous skeletal muscle. Whether the change in polarity between intima and adventitia is the only, or most important, cause of thrombus formation or whether other alterations are equally important has not been clearly established.

The present experiments were undertaken to determine whether excised skeletal muscle, wrapped around the abdominal aorta of normal rabbits can consistently produce arterial thrombosis.

Material and methods. Three series of experiments were carried out using a total of 103 rabbits. The abdomen was opened under sodium pentothal anesthesia. Approximately 1 cm of the abdominal aorta between the

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