published in full detail elsewhere. For the present purpose, two time units of measurement will be distinguished: (B) the time in minutes from the removal of the heart to the onset of rigor, and (S) the time in minutes from the removal of the heart until rigor is maximal.

Rats which are rendered unconscious by a blow on the head or neck yield a shock rigor curve which is far shorter than normal. It may be seen from Table 1 that treatments 3, 4, 6, 8, 9 and 10 enhance the shock effect and lead to an onset of rigor immediately after the heart beat ceases. The onset of the effect and its disappearance on recovery are reflected in the shape of the rigor curve. Digitalis or cardiazol (Table 1, treatments 5 and 7) almost completely nullify the influence of brain shock, asphyxia, or exhaustion on the rigor, but do not nullify the influence of thyreotoxic principle. Chronic asphyxia (45–120 min. exposure to an atmosphere of approximately 5·8 per cent oxygen) does not influence the rigor curve.

Table 1

No.	Normal		Thyroidectomized		Treatment
	B	S	B	S	
1	25·0	44·2	44·4	67·8	Amytal narcosis
2	10·0	22·1	42·6	59·9	Shock by blow on neck
3	4·2	14·2	47·0	62·3	0·5 mgm. strychnine + blow on neck
4	6·0	17·3	39·5	61·5	0·008–0·02 gm. caffein sodium benzoate + blow on neck
5	26·0	40·3			5–6 mgm. cardiazol + blow on neck
6	9·0	23·0	37·9	55·2	20 minutes swimming, death under amytal narcosis
7	15·4	36·4			Same treatment + previous digitalis treatment
8	5·0	13·3	17·4	35·7	KCN (6 mgm. subcutan.), death under amytal narcosis
9	1·5	5·0	2·0	8·5	0·15 mgm. mono-iodoacetate, death under amytal narcosis
10	3·8	9·0			Iodothyrine + blow on neck

The cardiac rigor curve of thyroidectomized rats is essentially different from that of normal rats (Table 1). The former is of markedly greater duration and is not influenced by brain shock, caffeine or strychnine administration. Exhaustion does not affect this curve. Digitalis is without influence upon it. Acute asphyxia causes a marked but relatively smaller curtailment of the rigor curve when thyroidectomized rats are used. Chemical rigor produced by mono-iodoacetate poisoning is, on the other hand, essentially the same in thyroidectomized as in normal rats.

The beating time of thyroidectomized rat heart immersed in Ringer solution at 36° C. is twice that of normal rat heart.

Table 2

Animals	No. of exp.	Heart glycogen gm. %	Loss of heart glyc. through chronic oxygen lack gm. %	Loss of heart glyc. through chron. oxygen lack in % of initial value	Muscle glycogen gm. %	Liver glycogen gm. %
Thyroidect.	15	0·250	0·113	31	0·27	1·92
Control	15	0·068	0·142	68	0·26	1·84

The markedly greater glycogen content of the heart of thyroidectomized rats is only slightly reduced by killing without narcosis through a blow on the neck (Stein, Tuerkischer, Wertheimer[2]). Chronic oxygen-lack affects the cardiac glycogen content of thyroidectomized rats to a lesser extent than it does the cardiac content of normal rats. Both treatments reduce the cardiac glycogen content of normal rat to a minimum. KCN and also caffeine have an identical effect on the heart glycogen of both thyroidectomized and normal rats. Thyroidectomy does not produce any of the above-mentioned deviations from normal in skeletal muscle.

The total creatinine content of the heart of thyroidectomized rats averages 23 per cent more than normal. Skeletal muscle of thyroidectomized rats gives normal creatinine values. Cardiac phosphagen and lactic acid content are not changed by thyroidectomy.

The specific nature of the changes produced by thyroidectomy in cardiac rigor, glycogen storage, and total creatinine content leads to the conclusion that removal of the thyroids affects the special metabolism of heart muscle in a manner which is not dependent on the depression of general metabolism by thyroidectomy.

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Drinking Habits of Animals

In a recent publication[1], I made reference to a paper by Gregersen[2] in which he recorded that dogs, confined in cages and fed once a day, drank water from time to time during 2–5 hours after the meal and scarcely at all at other times of the day. I interpreted this to mean that the dogs did not drink water until an interval of two hours had elapsed after the time of feeding, whereas the charts shown in Gregersen's paper indicate clearly that the dogs drank water from time to time during the 2–5 hours *immediately* following the time of feeding. I wish to record my apology for my error.

Also, mention is made, in my paper already referred to, of the drinking habits of leopards kept in confinement and fed once a day on flesh. Further observations made on one such leopard showed that, although on several occasions it did not drink water after feeding until an interval of about 2 hours had passed, this was not a constant habit. The observed intervals, expressed in minutes, between the time of completion of a meal and the time of first drinking water thereafter were: 2, 6, 15, 50, 56, 115, 120, 121, 148.

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