pletely and permanently abolished by doses of nicotine from 1 to 15 mg. per kilo of body weight.

(2) These doses depress the intestine, as shown by the drop in tone, and the cessation of activity of that organ.

(3) Doses larger than 15 to 60 mg. per kilo of body weight brought about a return of the previous activity and a response to vagus stimulation, whether the drugs were given in one or divided doses.

(4) Neither the splanchnic ganglia nor the adrenals are responsible for the depression of the intestine or for the loss to vagus stimulation following the small doses of nicotine, because their removal causes no change in the reaction of the nicotine.

[1] Thomas, J. E., and Kuntz, A., *Am. J. Physiol.*, 1926, lxxvi, 598.

[2] Bayliss, W. M., and Starling, E. H., *J. Physiol*, 1899, xxiv, 99.

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Formation of Lactic Acid in Excised Organs.

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These experiments were undertaken to determine whether excised tissues would form lactic acid under anaerobic conditions. Paired organs of dogs were studied. One of each pair was rapidly triturated in chilled alcohol to prevent post-mortem glycolysis. The other was triturated in Ringer's or buffered phosphate solution (pH

TABLE I.

Lactic Acid in Paired Organs Before and After Incubation.

Dog No.	Organ	Lactic Acid Per Cent	
		Before	After
59	Testis	0.017	0.25
27	"	0.037	0.22
141	"	0.006	0.18
59	Kidney	0.054	0.32
27	"	0.068	0.20
141	"	0.029	0.15
59	Parotid	0.051	0.14
27	Thyroid	0.075	0.16
141	"	0.028	0.090
27	Cerebrum	0.118	0.196
59	Submaxillary	0.086	0.178

8) and then incubated at 37.5° C. for 3 to 10 hours to allow for any possible formation of lactic acid. The lactic acid, after extraction and purification by Meyerhof's procedure,[1] was determined by the oxidation method, as modified by Friedemann, Cotonio and Shaffer.[2]

In every organ studied (kidney, testis, parotid, submaxillary, thyroid, cerebrum) a definite increase of lactic acid was obtained after incubation, an amount ranging from 1 2/3 to 30 times that originally present.

Investigation is now under way to determine the origin of lactic acid so produced.

[1] Meyerhof, O., *Arch. f. d. Ges. Phys.*, 1921, clxxxviii, 114.

[2] Friedemann, T. E., Cotonio, M., and Shaffer, P. A., *J. Biol. Chem.*, 1927, lxxiii 335.

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Glycolysis in Semen.

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In fresh specimens of semen obtained from 50 human subjects the sugar concentration varied from 67 to 658 mg. per 100 cc. In 80 per cent of the specimens the sugar content exceeded 300 mg. per 100 cc. The Shaffer-Hartmann method was utilized in these analyses. Fresh specimens of semen collected and maintained under aseptic conditions and containing motile spermatozoa showed a decrease in sugar when incubated at 38° C. for 6, 9, 12 and 24 hours. The final concentration of sugar after 24 hours incubation amounted to from 10 to 25 per cent of the original concentration. No glycolysis was noted in specimens placed in a water bath at 100° C. for 5 minutes before incubation. The lactic acid of fresh semen varied from 95 to 137 mg. per 100 cc., determined by the Brehme and Brahdy modification of the Clausen method. During incubation, an increase in lactic acid was noted coincident with the fall in sugar. Lactic acid, however, is not the end product of glycolysis, since in some specimens, the initial increase in lactic acid was followed by a subsequent fall. With Cullen's method the average pH of fresh semen was found to be 7.6. During the first 6 hours of glycolysis the pH rose to 8.0, and subsequently it fell to an acid reaction.