The examples in Table I indicate the increase in the basal secretion observed.

The evidence strongly suggests that "gastric hypersecretion" may arise as a result of a purely mechanical factor acting upon the pyloric humoral mechanism. Our results corroborate Savitsch's[1] work with glass beads in pyloric pouches and may lend support to his conclusion that the pyloric humoral mechanism is under nervous control.

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Behaviour of Denervated Spleen in Adrenalectomized Animal.

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It has already been shown that the denervated spleen contracts following exercise. Since adrenalin is one of the most powerful contractors of the spleen, it is desirable to study the behavior of the denervated spleen in animals which have been bilaterally adrenalectomized.

Dogs were used for this study. The adrenals were usually removed in 2 stages. Denervation of the spleen was performed by dividing visible nerves accompanying the splenic vessels and all intervening omental tissue between stomach and spleen. In some cases the spleen was divided into 2 and only one half denervated, the other remaining as an innervated control. In others, the upper half of the spleen was denervated without cutting the spleen into 2; the demarcation between the 2 portions was always clearcut. Immediately after operation, the denervated portion was purplish in hue and cool to the touch in contrast to the red and warm normal portion. Experiments were run before and after the 2nd adrenalectomy. The size of the spleen was traced on a soft celluloid sheet and the area calculated in cm.^{2} by means of the Amsler planimeter. The mean error of the observation is $\pm 1.6\%$, so that allowance of $\pm 5\%$ may be made. The results summarized in the following table, are expressed in terms of the control splenic size taken as 100%.

Exercise, CO, bleeding and death bring about definite contraction of both the normal and the denervated spleen. Intravenous injection of lactic acid or sodium lactate (3-100 mg.) did not contract

[1] Savitsch, W. W., *Russki Physiol. J.*, 1922, iv, 282.

TABLE I.

Area of innervated and denervated spleen in double adrenalectomized dogs.

Experimental condition	Remarks	% difference of splenic area	
		Innervated	Denervated
Trotting	1500 m. at 100 m. per min.	— 9.5	—13.0
"	" " "	— 4.6	—15.4
"	" " "	— 9.3	—10.4
"	1500 m.	—15.1	—20.1
"	2000 m.	—12.8	—13.5
Rebreathing CO-air mixture from Douglas bag	10 l. air (1% coal gas), 5 min.	+ 2.8	0.
Same	10 l. (20% coal gas), 5 min.	— 6.6	— 5.2
Rebreathing pure CO	10 l. (100% coal gas), 4 min. Fatal	—19.3	—10.1
Rebreathing CO-air mixture	10 l. air (30% coal gas), 4 min.	—36.4	— 1.0
Rebreathing pure O_2	10 l. pure O_2, 5 min.	+ 0.2	+ 0.6
Rebreathing pure CO	10 l. (100% coal gas), 3 min. Fatal	—25.9	— 4.8
Bleeding	100 cc. blood	—	—9.6. —8
Death (after CO)	4 min. post-mortem	—29.9	— 6.1
" "	3 min. post-mortem	—28.5	—19.9
CO_2	3-5 min.	— 7.3	+ 0.9
Stream of CO_2 to nostrils	3-5 min.	— 0.5	— 2.9
$C_3H_6O_3$ neutralized with NaOH	3 mg.	0.4	— 1.9
	7 mg.	—15.8	+ 2.2
$C_3H_6O_3$	50 mg.	—12.6	— 7.8
	50 mg.	—12.0	+ 1.3
	100 mg.	+ 2.5	— 0.5

the spleen, but tended rather to increase its volume. CO_2 and O_2 inhalation for 3-5 minutes have practically no effect.

The contraction of the denervated spleen in doubly adrenalectomized animals may be accounted for either by a local postural change in the splenic vessels or musculature in response to changing volume flow (diminished splanchnic volume flow in exercise and hemorrhage) or to a local effect of anoxemia (CO and post-mortem effect?).