That a similar quantitative relation can be demonstrated in anaphylactic animals tested directly with the foreign protein is shown in the following table: Here an excess of the foreign protein above a certain definite dose per body weight results in a decrease in the toxic effects (percentage of deaths).

The guinea-pigs here reported were sensitized by subcutaneous injections with 0.01 c.c. pooled human serum. They were tested 14 days later by intravenous (jugular) injections with pooled human serum. Test dose recorded as c.c. per 200 grams of body weight.

Test Dose.	Animals Tested.	Died.		Per Cent. of Deaths.
		3 to 8 Min.	1 to 3 Hrs.	
Under 0.20 c.c.	8	0	1	*12.5*
0.20–0.31 c.c.	23	12	2	*61*
0.34–0.37 c.c.	5	0	1	*20*
0.40–0.45 c.c.	7	0	1	*14*

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The question of tonus in skeletal muscle.

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The idea that the tonus of skeletal muscle is dependent upon the sympathetic system, as asserted by De Boer,[1] is an attractive one, as it brings the tonus of striped muscle into the same category with vaso-constriction and vaso-dilation; but De Boer having been criticized by Beritoff,[2] it was determined to work out the problem independently, in order to arrive at a definite conclusion if possible. The work has been done on frogs at intervals during the winter, but it was not intended to publish until the results of experiments on mammals had also been ascertained, if at all. The appearance of an article by Yas Kuno,[3] however, in the current number of the *Journal of Physiology*, has determined me to publish my results on frogs, as they seem to be confirmatory of his findings.

[1] DeBoer, S., *Folia Neuro-biologica*, Vol. 7, 1913, p. 378.

[2] Beritoff, J. S., *Folia Neuro-biologica*, Vol. 8, 1914, p. 421.

[3] Kuno, Yas, *Jour. Physiol.*, Vol. 49, 1915, p. 139.

The method employed was essentially that of De Boer, with the exception that the gastrocnemius to be observed was simply severed from its insertion by cutting through the tendo achilles, and then freeing it as far as possible from the underlying muscles by breaking through the intermuscular septum with a probe. By this means the skin remained intact; a desideratum, as it has been claimed that removal of the skin results in loss of tone. The tendon was attached by a thread to a writing lever, and the leg firmly fixed at the knee joint by a muscle clamp. Briefly, the results obtained were as follows:

When the brain of a frog is pithed, there is a progressive loss of tone in the muscle, due to shock, until a certain maximum lengthening of the muscle is reached in about forty minutes or more. With the recovery from shock, there are usually a number of spontaneous movements, which are registered as contractions of the gastrocnemius, and the muscle after contraction does not lengthen to the same extent as before. One would say it regains a certain amount of tone, but not all by any means. If now the abdomen be opened and the viscera exposed (a necessary proceeding for cutting the rami communicantes), there is again a loss of tone. After fifteen to thirty minutes there is again a maximum lengthening of the muscle, and now cutting the sciatic plexus, or the rami communicantes has no effect, except that the contraction which results from cutting the sciatic is not followed by a "contraction remainder" as was the case after spontaneous contractions with the nervous connections intact.

It seems possible then, that the results obtained by De Boer were due to the effects of the operation rather than to the cutting of the rami communicantes, for it appears from his article that he began his observations at once. It seems clear also that for the present we shall have to hold fast to our old idea that tonus of skeletal muscle is dependent upon the central nervous system, and not on the sympathetic.