

4750

Effect of a Diet Low in Salts on Oestrous Cycle of Albino Mouse.*

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In 1922 Evans and Bishop¹ found that a diet poor in salts had a definite effect on the oestrous cycle of the white rat. They found that on such a diet the experimental animals reached maturity later than their litter-mate controls and that only 15% of the oestrous cycles of these animals were of the 4 or 5 day length as opposed to 48% of those of the control animals.

We have carried out similar experiments on the white mouse. The animals used were about 60 days of age. Vaginal smears were made daily for 3 weeks, and all animals not showing cycles of 4 to 5 day length were discarded. They were then divided into experimental and control groups.

The following experimental diet was used: Casein 31%, dextrin 41%, Crisco 20%, cod liver oil 3%, yeast 5%.

The control animals received the same diet, with the exception that salts were fed at a 7% level and the dextrin reduced to 35%.

There was a very definite change in the oestrous cycles of the experimental animals, only 25% of the cycles being of the 4 or 5 day length, while many of the long cycles were 12 to 20 days in length. In the control group, 70% of the cycles were 4 or 5 days in length and in the remaining cycles, only a few were over 7 days in length.

The experimental animals grew at a slightly lower rate than the control animals. The difference at the peak of the experiment was 13.75%. In all cases, however, the latter exhibited a rather sleek coat, as contrasted with the coarse, roughened fur of the experimental mice.

It is evident from these experiments that the oestrous cycle was affected much more than the growth ability, indicating that the oestrous cycle is a much more delicate indicator of the well-being of the animal than is the growth curve.

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¹ Evans, H. M., and Bishop, K. S., *J. Metaboliatic Res.*, 1922, i, 335.