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## Effect of Long-term Exercise on the Estrous Cycles in Female Rats

By *Shigeko Shinohara\**

Forty-eight female wistar strain rats were used. Twenty-eight rats were assigned to an exercise group and 20-rats were assigned to sedentary control group. The rats in the exercise group were trained to run on a treadmill for 45 minutes regularly for 5-weeks at speed 30m/min.

Body weights of the two groups were similar during experimental period and showed no significantly difference from one another.

Daily vaginal smear that revealed estrous cycles were extended diestrus period in the exercise group. Eleven-rats were no alterations in the estrous cycles. Other 17-rats became acyclic for several days and acyclic days were almost prolonged by the diestrus stages. Although among the sedentary control rats, there were no cycles longer than 6-days.

The weights of uteri at diestrus were significantly lower in the exercise-trained rats than the control sedentary rats. And the weights of ovaries showed same results but no significant. Conversely, the adrenal glands showed hypertrophy in the exercise-trained group and were statistically significant ( $p < 0.05$ ).

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