COMMENTS

Feeding DHEA to C57/B167 Mice (44534A)

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In a recent issue of the *Proceedings of the Society for Experimental Biology and Medicine*, there appeared an article by Catalina *et al.* (1) on feeding DHEA to C57/B16 J mice. The authors concluded from their results that the primary action of DHEA was to decrease food consumption. Although I do not doubt their results in this strain of mice during the brief study period described in this article, it should be noted that this is not a general result. Mouse strain and duration of the study are of utmost importance. In the first study on the effects of DHEA in the Avy strain some 20 years ago, Yen specifically noted that there was no change in food consumption while these animals were losing weight (2). Recent studies from our laboratory confirmed that the *Ob/Ob*, *fat*, *tubby*, and *Avy* strains lost weight when 0.4% of DHEA was incorporated into a standard AIN76 A diet over a 26-week period without any change in food consumption. Studies in the Zucker rat by several groups including our own results have shown the same results. We have noted in some of the rodents that they disliked the DHEA-containing food for a few weeks, after which they began to consume the food in greater amounts, and for most of the study their food consumption did not differ significantly from the control animals. The effect was somewhat more persistent in the Zucker rats before they began to eat normally. This effect was not seen when other steroids were incorporated into the diet.

This problem has been noted previously by Dole and colleagues in studying alcohol consumption by mice (Dole V, personal communication). There are strains that avidly drink alcohol-water mixtures whereas there are other strains that will not drink alcohol at all.

Taste preferences by different strains of mice in short-term experiments can cause problems in interpreting the results and attempting to generalize them. For these reasons, we do not believe that the long-term effects of DHEA on body weight, blood glucose, etc. are related to a decrease in food consumption, which is at best a transient effect, while weight loss continues for the course of the 26-week experiment.

DHEA is an acquired taste for rodents, and some strains take to it more quickly than others. As in the well-known operetta, "each to his own taste."

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1. Catalina F, Kumar V, Milewich L, Bennet M. Food restriction-like effects of dehydroepiandrosterone: Decreased lymphocyte numbers and functions with increased apoptosis. Proc Soc Exp Biol Med **221**:326–335, 1999.
2. Yen TT, Allan JA, Pearson DV, Acton JM, Greenberg MM. Prevention of obesity in Avy/a mice by dehydroepiandrosterone. Lipids **12**:409–413, 1977.0201