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Albino rats get in on the ground floor

by Margaret Waterland

One year in the life of a rat is equal to 30 years of human life. Over 600 of these animals are spending their lifetime in the ground floor of the Home Economics Building.

Use of albino rats for demonstration in nutrition courses has been the special problem confronting Miss Mary Barrick, home economics graduate student. Miss Barrick has been experimenting with the time necessary for symptoms to develop and for the animal to die after a deficiency diet has been initiated.

One group of rats was fed a diet typical of many groups of people in the United States including college students. When fed beefsteak, potatoes, cereal products, a few vegetables, a little milk and pie, the rats quickly became listless and their fur lost its sheen for a dull matted appearance. In sharp contrast were the rats who were fed enough additional milk, eggs, vegetables and fruits to balance the diet. They were active and sleek with clean, shiny fur.

The laboratory where this experiment and many others are being carried out is under the direction of Miss Helen Clark, research associate. She is working under Dr. Pearl P. Swanson, of the Department of Foods and Nutrition.

The rats live in small round cages which are arranged on ceiling-high shelves. The rats in the stock colony, from which all experimental rats are obtained, are provided with a jar of meal, a small glass of milk and an inverted globe of drinking water. Student employees and regular attendants do routine work of cleaning the cages and providing fresh food and water in clean, sterile equipment. Graduate students take care of their particular experiments.

At birth the rats are small, pink and furless. Their eyes do not open until they are 2 weeks old. At 17 days of age they begin to eat some adult rations. When the young rat is 28 days old it is either used for experimentation or it goes back into the stock colony. At this age it weighs around 50 grams. When full grown, a normal healthy rat weighs 300 grams. When several are put into the same cage, V-shaped clips in one ear serve as identification.

The stock diet fed to all the rats consists of a gray-green meal containing corn, alfalfa and linseed oil meals, wheat germ and casein. Each rat is given as much of this food as it will eat. Also provided daily are milk and a vegetable such as part of a raw carrot. The animals are weighed regularly as a check on their health.

Because of the difference of life span in rats and humans, it takes a relatively short time to learn the effect of any diet that is being tested. Rats live about 3 years and their growth curve is very similar to that of man. Another reason the results of experiments with rats can be applied to man lies in the fact that their digestive tracts are much the same. In addition the rat is an animal of omniverous habits and will eat the same types of food that people utilize.

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