

mal occurrence correlated with ovulation, or with the advanced development of one or more large follicles which, however, might fail to culminate in ovulation.

The present experiment deals with 2 adult ovariectomized macaques which were treated with ovarian hormone* in the form of gelatin pessaries for intra-vaginal administration. Daily doses were administered for 12 days. The beginning daily dose of 20 rat units was gradually increased until during the last 3 days of the experiment each animal was receiving 40 rat units per day. A total of 375 rat units of hormone was administered to each animal.

Daily examinations of vaginal contents were carried out by Hartman's method during the time of hormone administration and continued for 7 days following cessation of treatment. A microscopic study revealed the usual cellular content as described by Corner³ and by Allen.⁴ On the 10th, 11th and 12th days of the treatment and on the first day following the cessation of the treatment erythrocytes were demonstrated in the vaginal contents. In the cases of these 2 ovariectomized monkeys this ovarian hormone successfully substituted for the endocrine function of the ovaries in inducing this phenomenon experimentally.

5017

A Note on the Use of Wheat Starch in "Synthetic" Rations.

HELEN S. MITCHELL.

From the Nutrition Laboratory, Battle Creek Sanitarium, and Battle Creek College.

In the preparation of vitamin-free synthetic rations for animal experiments the purification of ingredients is a time consuming task. A starch which does not seem to need purification for vitamin B work may be of interest. Wheat starch, a by-product in the manufacture of gluten, was found to be considerably cheaper than the best grade of pure corn starch and entirely lacking in the antineuritic factor. Over 60 rats were used in making the comparisons and checking the results reported here. Polyneuritis developed in from 3 to 4 weeks when a ration containing wheat starch, purified casein, salt mixture, crisco, and cod liver oil was supplemented with 0.5 gm. daily of autoclaved yeast. There was no apparent difference between the response on the raw starch and on that which had been auto-

* "Amniotin" supplied by E. R. Squibb and Sons.

claved for 3 hours at 18 lbs. pressure when food intake was limited to the same amount for all rats. In a preliminary series of tests the rats receiving the synthetic ration containing autoclaved starch made a greater temporary gain and were slower in developing polyneuritis than the ones on the raw starch ration. Since this could not have been due to a difference in vitamin content it was puzzling until it was noted that the rats ate more of the autoclaved than of the raw starch ration. With limited food intake the growth in the 2 groups was the same, indicating that the difference must have been one of palatability and not of availability or vitamin B content. When raw yeast was used as a supplement, normal growth resulted with either the raw or autoclaved starch rations. No effort was made to determine the vitamin G content of the wheat starch, but it is unlikely that it carries any appreciable amount.

These data seem to indicate that wheat starch is a satisfactory and economical substitute for corn starch in synthetic rations and that it does not require autoclaving to insure its freedom from the antineuritic factor.