Evans and Burr to depress the growth rate. All of our rats that had not attained their normal mature weight were still growing at a regular rate at 90 days of age. In addition, none of them exhibited any visible external bodily defects or lesions. They would have been judged as normal in every way by the most critical observer. All of our female rats on the fat-free-sugar diets were as heavy as the average of Evans' and Burr's rats on their fat-containing diets. Most of them were heavier. This comparison is valid inasmuch as the mean mature weight of the females of our stock is the same as that of Evans and Burr.

Among the male rats a comparison of Group No. 2 (screens) and Group No. 3 (sawdust) indicates some advantage of free access to feces. However, among the female rats Group No. 6 (sawdust) was no better than Group No. 5 (screens).

The food consumption and food utilization data give the explanation of the differences in growth among the different groups. For both males and females the increasingly greater growth rate of the groups as arranged in the table is associated with either increased food consumption or greater efficiency of food utilization or by both of these factors. There is no evidence that the presence of fat in the diet contributed in any way to the changes in food intake or its utilization for growth.

It seems to us that there are no convincing data at hand to warrant the postulation of an essential growth vitamin F associated with fat. We venture the opinion that the differences observed by Evans and Burr could be readily explained on the same bases as our own, if the data were available.

4331

Induction of Menstruation in Women by Use of Ovarian Hormone.*

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In cooperation with Claire Conklin, it was found that the basal metabolism of half the women students examined was low and was about 15% below the Aub-Dubois standard. Some of these were

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studied for prolonged periods but others for only one day so that, in the latter, variations were not considered. It is a significant fact that all of the cases of amenorrhea fell in the low basal group. The basal metabolism of the following women was at times 15% below normal but showed slight variations.

In a previous communication we reported the use of injections of 2000 to 4000 mouse units of ovarian hormone in women and that it was excreted in the urine. Owing to this fact we supposed that repeated injections would be necessary in order to have any marked effects. Consequently, we tried the effects of daily injections into a woman, 19 years old, who had not menstruated for 5 months. One thousand mouse units were injected every day for 9 days. Then they were stopped. At the end of 3 weeks she had a menstruation which lasted 6 days. A second woman, 22 years old, who had amenorrhea for 5 years and had not menstruated at all for 6 months, was given 1000 mouse units a day for 9 days. The injections were stopped for 2 weeks and then began again, when 1000 mouse units were injected every day for 6 days and then stopped again. Five days later she began to menstruate and menstruation lasted 2 days. The fact that menstruation occurred after the second series of injections and not after the first may be due to the possibility that enough hormone had not been injected in the first series. Although there are only 2 cases reported, menstruation occurred in 100% of the cases that we tried on women who possessed ovaries and who had menstruated sometime during their lives. Some other experiments indicate that larger or more frequent doses may be necessary in case the patient's ovaries are not producing some of the hormone. Most of the hormone used was obtained from Parke, Davis & Company and part of it from Squibb and Sons. Before injection we extracted it with peroxide-free ether and evaporated the ether to a small volume and mixed it with Ringer's fluid, boiling off the ether.