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Variations in Self-Disinfecting Power of the Skin During the Menstrual Cycle.

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Several normal young females have been hospitalized and the skin reactions, blood chemistry, and other metabolic studies have been carried out daily for the period of one or more menstrual cycles. We report in this paper the results so far obtained by testing the self-disinfecting power of the skin each day during the complete menstrual cycle.

The technic was the same as that employed by Singer and Arnold[1] and Karns and Arnold.[2] The hands were submerged in suspensions of *B. prodigiosus,* bacteriological specimens were removed from palmar and dorsal surfaces of both hands by means of sterile swabs.[1] Results are an average of the disinfecting power of all 4 surfaces. Patients were tested daily for periods of 28 days.

One studied through 3 menstrual cycles shows a decided inhibition in self-disinfecting power at this time, (A, B and C). The others show daily changes in inhibition, with individual variations as to the time, which may occur during the cycle, (D, E and F). Each individual has a pattern, which is repeated during every cycle; the same general reactions hold for all. Subject Mc—(G) shows a high skin disinfecting power and an interference with menses while upon a ketogenic diet.

The variations in the self-disinfecting power of the skin of the normal female during the menstrual cycle can be definitely correlated with other demonstrable skin changes. Blood chemical and metabolic alterations can also be shown to occur during definite periods of this cycle. The correlation of all of these various tests with self-disinfecting power of the skin will be published later.

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[1] Singer and Arnold, PROC. SOC. EXP. BIOL. AND MED., 1930, **27**, 364.

[2] Karns and Arnold, PROC. SOC. EXP. BIOL. AND MED., 1931, **28**, 375.

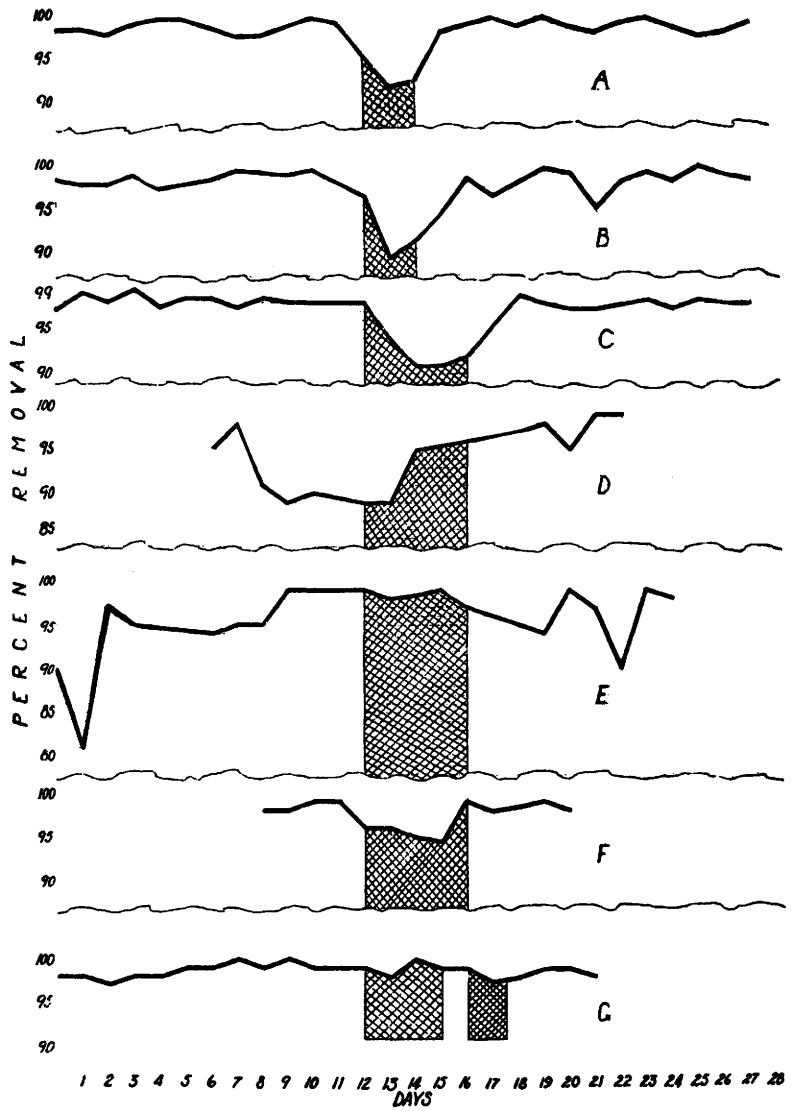

FIG. 1.

Daily determinations of the rate of disappearance of viable *B. prodigiosus* from skin of female subjects during 28 consecutive days. Crossed-in area indicates the menses period.

A, B, C, subject Mc; D, subject D; E, subject L; F, subject F; G, subject Mc, who was on ketogenic diet for two weeks.