some questions occur to the committee, you do not mind being interrupted.

Dr. KANE. Fine.

Senator NELSON. Thank you very much, Doctor.

Dr. KANE. Mr. Chairman, members of this committee, I have been asked by this committee to present a report on one of the newer entries to the "diseases of medical progress," a term used to describe illnesses newly generated by our potent therapeutic agents. The earlier studies on oral contraceptive agents, as I will document later, seem to indicate little problem in this area. However, in view of the large literature on mood and behavior alterations in relation to sexual hormone variation in women, such reactions should come as no surprise.

Psychiatric reactions, especially depression, in the early postpregnancy period are commonplace in the practice of obstetricians. We from our department recently reported that 28 percent of a group studied of normal women reported subjective symptoms of anxiety and depression in the postpregnancy period, confirmed by psychological test materials. Somewhat more surprising, however, was the fact that this figure was less than half that of the changes reported in the last 3 months of pregnancy. These are normal pregnant women. These are not psychiatric patients. While rates of psychosis among pregnant women are below those rates expected in nonpregnant women, in the early postpregnancy period milder forms of illness become less frequent and major psychoses, which many psychiatrists feel are unusual in their clinical phenomenology, dramatically increase in incidence. The fact that 80 percent of these psychotic episodes occur within the first 30 days after delivery suggests a relationship to the dramatically altered endocrine state occurring at the end of pregnancy.

The menstrual cycle is also associated with alterations in mood and behavior, especially immediately prior to and during the menses. A number of studies have documented the markedly increased incidence of psychiatric illness during this period, including suicides, suicide attempts, homicides, and admissions for acute psychosis. Some have attributed this to the decline in hormones taking place during this time. The relief of premenstrual symptomatology by the oral contraceptive agents is striking in some studies and may be related to the shortening of the period when there are low levels of hormones.

Another period of major psychosocial endocrine change for a woman is the menopause, which also is associated with a marked increase in incidence of major and minor psychiatric illness. The incidence of such illness, especially so-called involutional psychotic reactions, is more than 3 to 1 in favor of women.

The use of steroid hormones for treatment of various conditions has also been associated with notable mood and behavioral change in a certain number of people receiving these drugs. A variety of studies have reported mild to moderate euphoria and increased well-being as well as tiredness, depression, and increased irritability. Frank manic and depressive psychotic episodes with higher dosages of steroids are not unusual. Animal and human studies would also