more careful about recommending the use of estrogens. These are for women who want to take hormones for the remainder of their days, as I said, to be a thing of beauty and a joy forever. But I would be very, very careful and cautious in the high-risk group in recommending hormones to them.

Senator NELSON. Thank you very much, Doctor.

Our next witness is Dr. Elsie Carrington, professor and chairman, Department of Obstetrics and Gynecology, Woman's Medical College of Pennsylvania.

Dr. Carrington, we appreciate very much your patience in waiting to testify. We appreciate your willingness to come here today and present your views to the committee.

Your statement will be printed in full in the record. You may present it as you desire. If you wish to extemporize from it from time to time, please do so.

STATEMENT OF DR. ELSIE R. CARRINGTON, PROFESSOR AND CHAIRMAN, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, WOMAN'S MEDICAL COLLEGE, PHILADELPHIA, PA.

Dr. CARRINGTON. Thank you, Senator Nelson.

Your committee has invited me to discuss certain metabolic effects of oral contraceptive drugs. A summary of my report as a member of the task forces on endocrine and metabolic effects of oral contraceptives for the Advisory Committee on Obstetrics and Gynecology for the Food and Drug Administration will provide the first part of my testimony.

I have also been asked to comment on the use of oral contraceptive drugs from the standpoint of my role as professor and chairman of the Department of Obstetrics and Gynecology at the Woman's Medical College of Pennsylvania. This is the second part of my testimony. The concerns for maternal health and optimal family life are the same in each but the pressing needs of our women and the responsibilities involved in meeting these needs are more immediately evident in the latter. I would like to say that I can appreciate your concerns and am most gratified with the fairness in the positions that I have seen expressed this morning from your group.

At the time of the first meeting of the advisory committee in November 1965 the number of oral contraceptive users was estimated at about 5 million women. The efficacy of the combined estrogen-progesterone preparations was known to be close to the absolute. Evaluation of their safety was recognized as a formidable task. This is so because little enough is known about normal endogenous steroid metabolism. Normal endocrine function depends not only upon the secretory activity of a given gland but also upon the feedback effect of one hormone as opposed to another, the mechanism for transport in the circulation, the response of the target organ and the enzyme activities influencing the cellular response. So we come to a very complicated type of evaluation.

The steroids used in oral contraceptives have certain similarities to their natural-occurring prototypes, the estrogens and progesterones. However, modifications in their chemical structure even of a