

premenstrually, intermenstrually, and menstrually, about mood swings, tension, and so forth, by a very careful protocol. It is an excellent study and probably the best one that has ever been done.

Interestingly enough, Dr. Moos came to the conclusion that women on the pill actually had fewer complaints than those who were not. Thus, a large percentage of the so-called side effects of the pill are probably not related to the pill at all, but are coincidental symptoms that women experience in the course of their everyday lives; only there is usually no one around to ask them about the way they feel, and to assume that everything they report is due to the pill.

There is a fourth—

Senator NELSON. I was going to ask a question. I notice that in that study, maybe he covers more, but covering the question of irritability in his study, the incidence of irritability is higher substantially for those who are not taking oral contraceptives; is this correct?

Excuse me, does it show the other? What does that chart show on irritability on page 3?

Dr. GOLDZIEHER. It shows that irritability is higher with no oral contraceptive.

Senator NELSON. Higher if they are not taking it?

Dr. GOLDZIEHER. That is right.

Senator NELSON. And lower if they are. It also shows the same for the title "Mood Swings" and the same for "Depression" and the same for "Tension." I am not qualified as a scientist, but I could imagine that the fear of pregnancy might cause all of those.

Dr. GOLDZIEHER. I certainly would agree with that.

Senator NELSON. If you become pregnant, you might have tension, depression, mood swings, and irritability.

Dr. GOLDZIEHER. And loss of libido, which I will come to in just a minute.

There is a fourth important factor which we all recognize but tend to forget when we try to associate pill-taking with complaints of various kinds. This is the psychological factor. In a very revealing study, a group of Swiss doctors kept women on the same type of contraceptive pill for several years, but every 6 months they changed the external appearance of the pills.

The next graph shows the results of that study. It shows clearly that every time the appearance of the pill was changed, a certain number of women began to complain of nausea all over again. Since there was no fundamental change in the medicine in itself, this could only have been psychological.

The next figure shows the effect of changing the appearance of the pill on the women's sex drive. Obviously, sex drive is an extremely complex psychological phenomenon. Here this becomes evident. As women became accustomed to a particular pill, their sex drive improved, probably indicating, as you just mentioned, a release from fear of unwanted pregnancy. When the appearance of the pill was changed, they became anxious, since they could not be sure that the new pill was as effective as the old one. Their sex drive promptly diminished, since they were once again afraid of becoming pregnant. Over the next 6 months their assurance—and their sex drive—recovered. The Swiss doctors were able to repeat this pattern three times over. There can hardly be a better illustration of the importance of psycho-