

Dr. CARR. This is a crucial thing to find out. You see, the work of Dr. Poland, which I referred to, I did not include it in my submission because I had not checked with her, because she did not want to alter what he reported last year in June to the Canadian Society of Gynecologists and Obstetricians, and I did not want to alter that, if she found embryos, found embryos generally stunted from women who have come off the pill, it suggests that the ova altered in some way for a period of time after discontinuing contraceptives. This does not mean more abnormalities at term. It may be that the body is more sensitive in detecting defects and, perhaps, there will be less abortions and abnormalities at term is all I say.

Mr. GORDON. Is there any evidence that a woman showing triploidy in the first pregnancy after stopping the pill will continue showing it in subsequent pregnancies?

Dr. CARR. No, sir; not at all. It is an isolated event and not very likely to occur.

Mr. GORDON. There is no such evidence?

Dr. CARR. No, none at all.

Mr. GORDON. What would be the possible result of the pill compounds being in the mother's breast milk being fed to newborn babies?

Dr. CARR. This is not my area of competence really, but if estrogen is secreted in the breast milk this could produce an effect on the breasts of the infant. It is common to see enlargement of the infant's breasts normally because of the mother's hormones after a normal pregnancy, both in male and female infants, and presumably if she is taking hormones this would have an effect on the baby's breasts. Aside from that I do not have any particular ideas about it.

Senator NELSON. Thank you very much for your presentation, Dr. Carr. The committee appreciates your coming here today.

(The complete prepared statement and supplemental information submitted by Dr. Carr follow:)

STATEMENT OF DR. DAVID CARR

PREAMBLE

The work which we have carried out in relation to oral contraceptives started 3½ years ago. At that time, we had completed a study of the chromosomes of 227 spontaneous abortions (miscarriages). This was an unselected, consecutive series of specimens collected at two general hospitals in London, Ontario. Among these abortuses, 50 were found to have a chromosome abnormality (1). The abnormalities were of three main types: About half the abortuses with an abnormality had 47 instead of the normal 46 chromosomes. In another ¼ of the abnormal specimens, there was a chromosome missing so the count was 45. In the remaining abnormal specimens there were whole extra sets of chromosomes resulting from abnormal behaviour of the male or female germ cells. These cells each contain 23 chromosomes. At fertilization, the number is restored to the 46 normally found in the body. In the abnormal embryos with extra sets of chromosomes the number was either three times that found in the germ cells (69) or four times that number (92). These abnormalities are known as triploidy and tetraploidy respectively.

The chromosomes are the carriers of all the genetic information to the growing embryo. They are its blueprint. If the number is increased to 47 or reduced to 45, the pregnancy usually ends in spontaneous abortion. In a minority of cases, infants with 45 or 47 chromosomes are born alive although they usually show abnormalities. If the number of chromosomes is 69 (triploid), the pregnancy almost always ends in spontaneous abortion by the end of the first month. If there are 92 chromosomes (tetraploid), the pregnancy is lost even earlier. In other words, these two abnormalities are lethal to the developing embryo.

NOTE.—Numbered references at end of statement.