Dear Alice,

Do you know anything about the drug DES, taken by some women to enable them to have children? It seemed to have prevented miscarriages and the doctor recommended this drug in the 1940s. Now women and men are having problems, for instance, cancer, etc. Do you have any more info on it?

Answer

Dear Reader,

You’re right on the money with your intel on this drug. Between the years of about 1940 to 1971, DES (short for diethylstilbestrol) was prescribed for pregnant women to prevent miscarriages, premature labor, and other pregnancy complications. The drug is a synthetic form (made in a lab) of the female hormone, estrogen. Researchers thought that these pregnancy complications could arise from low levels of estrogen in a woman’s body. With this in mind, an estimated five to ten million pregnant women were prescribed the medication during this period of time. Later, it was found that DES may not prevent the conditions it was meant to curtail. What’s more, in 1971, researchers also determined that the drug may actually cause a number of serious health issues, not only for the mother, but for the baby as well. Following these findings, the U.S. Food and Drug Administration (FDA) advised all health care professionals to avoid prescribing this medication to pregnant women.

After the discovery that DES didn’t do what it was meant to do, it was found that the drug disrupts the body’s endocrine system. This endocrine-disrupter has been known to increase a mother’s risk of breast cancer by 30 percent, which equates to a rate of about one in six cases of breast cancer in those who took DES (as opposed to one in eight for those who were not exposed to DES). DES was also found to affect the babies, both male and female, of mothers who took the drug and that the effects were the most pronounced during fetal development.

Some studies indicate that the sons of mothers who were given DES may experience or develop:

- Abnormal testicles (e.g., cysts on the epididymis or undescended testicles)
- Increased risk of infection or inflammation of the testicles
- Hypospadias (atypical development of the opening of the urethra)
Daughters of mothers who were given DES may experience or develop the following health concerns:

- Abnormalities of the cervix, uterus shape, and tissue that lines the vagina
- Increased risk of developing an otherwise rare form of cancer of the vagina or cervix, called clear cell adenocarcinoma
- Difficulty becoming pregnant
- Increased risk of miscarriage, pre-term labor, ectopic pregnancy (pregnancy that occurs within the fallopian tube instead of the uterus), and preeclampsia (a condition that results in protein in the mother's urine and high blood pressure, which in turn, may require early delivery of baby)
- Slightly increased risk of breast cancer

In addition to folks exposed to DES in the womb, research is now investigating the effects of the drug on third generation (what is referred to as DES grandchildren). Current studies aim to determine whether the changes to DNA potentially caused by the drug may be heritable (passed down from generation to generation), and whether it may increase the risk of fertility issues, pregnancy concerns, and other health issues among this population.

Mothers who've used DES are advised to let their children and health care providers know about their past use and to seek regular women's health and breast cancer screenings (as recommended of all women). However, knowing for sure that they were exposed to DES may be a challenge. The American Cancer Society [2] has more information to help track down the information needed to verify or determine the likelihood of exposure. It's also recommended that male and female children of women who used DES during pregnancy let their health care provider know about their exposure in the womb and to undergo routine exams (for women specifically, this may include pelvic exams, Pap smears, biopsies, and breast exams).

For even more information and resources, the National Cancer Institute [3] has a handy fact sheet with a number of commonly asked questions about DES exposure.

Alice!
Category:
Prescription & Over-the-Counter-Drugs [4]

Related questions

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Resources

Medical Services (Morningside) [10]
Medical Services (CUMC) [11]
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Links
[8] https://goaskalice.columbia.edu/answered-questions/mammogram