

Science Confirms What DES Daughters Know From Experience

“Adverse Health Outcomes in Women Exposed In Utero to Diethylstilbestrol,” *The New England Journal of Medicine*, Robert N. Hoover, et al., October 6, 2011; 365: 1304-14.

Reviewed by Kari Christianson

Women exposed before birth to the anti-miscarriage drug diethylstilbestrol (DES), which was prescribed to their mothers primarily from 1938 thru 1971, know all too well of the health problems it inflicted on them as individuals. But an article in the October 6th issue of *The New England Journal of Medicine* provides a comprehensive look at what is known to date of medical problems for DES Daughters as a whole.

According to lead author Robert N. Hoover, M.D., Sc.D., of the National Cancer Institute DES Follow-up Study, researchers can say conclusively that prenatal DES exposure is linked to twelve adverse health problems for DES Daughters. The health problems are: infertility, spontaneous abortion, ectopic pregnancy, second trimester pregnancy loss, preeclampsia, preterm birth, stillbirth, neonatal death, natural menopause prior to the age of 45, cervical intraepithelial neoplasia grade 2 or higher (CIN2+), breast cancer after age 40, and clear cell adenocarcinoma of the vagina and cervix.

For the first time risk assessments also evaluated the presence of vaginal epithelial changes (adenosis) as a bio-

marker of timing and dose of prenatal DES exposure. Researchers documented the dose-response relationship from the records of the DES Daughters in the study, using the presence of adenosis as a measure of the first DES exposure (See page 9 for further information about adenosis).

For most of the twelve adverse health outcomes, the risks were higher still among DES Daughters with vaginal changes, indicating earlier and higher exposure.

As noted by Hoover, most of the twelve health problems are common

in the general population, too. Without the horrific finding 40 years ago of a very rare disease, vaginal clear cell adenocarcinoma, researchers may not have been alerted to the need to study DES-exposed women for other adverse health outcomes, as well.

The DES Follow-up Study has followed the largest cohort of documented DES-exposed people over time. The study, which combined data from three studies initiated in the 1970s, was established in 1992.

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has been one of the key challenges for research studies, but because this cohort of DES-exposed women and men were recruited from health care institutions that had maternal pregnancy records, dose and timing information was available. Additionally, the study of these cohort participants has continued for decades, allowing the researchers to study DES health effects on a population over time.

As Hoover states, “... adverse outcomes continue to occur in women

exposed in utero, and continued monitoring, as is ongoing in this cohort, for established and unexpected adverse outcomes seems prudent.”

Of note is that researchers plan to continue following the health of not only DES Daughters, but DES Sons and DES Grandchildren, as well.

Forty years after publication of the first study of an adverse health effect related to prenatal DES exposure, this study clearly states the need for continuing the ongoing research into health experiences of the DES-exposed population. **DES VOICE**