

Abstract:

Does in-utero exposure to chemical hair relaxation have a negative impact on birth weight or other birth outcomes for infants compared to infants who do have the same exposure?

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Background:

Chemical hair relaxers often contain ingredients that are concerning to be endocrine disrupting chemicals (EDCs) such as phthalates, that can break down the protein structure of the hair. These chemicals can be absorbed topically through the scalp, and have had concerns for negative birth outcomes due to maternal exposure during pregnancy.

Methods:

A literature search was performed following the protocol of the FPIN HDA program. Included studies examined pregnant patients who were asked if they had used hair relaxers during/prior to the pregnancy. Results were obtained using one retrospective cohort study and two case control studies. Results A 2006 population-based cohort study examined pregnancy outcomes among female hairdressers (N=550) which showed no significant differences in fetal loss (OR 0.7; 95% CI, 0.3-1.8), multiple births (OR 1.3; 95% CI, 0.7-2.5), preterm birth (OR 1.0; 95% CI, 0.7-1.6), small-for-gestational age (OR 1.0; 95% CI, 0.7-1.3), congenital malformations (OR 0.8; 95% CI, 0.6-1.2). A 2005 case-control analysis investigated the association of hair-relaxer use and preterm births within a large follow-up study of African-American women (N=6130). Multivariable analysis did not show significant difference in preterm birth among ever users of hair relaxers compared to never users of hair relaxers (OR 1.0; 95% CI, 0.6-1.8). In a 1999 case-control analysis of Black women in North Carolina who delivered a singleton birth preterm or with low birth weight were compared to Black women who delivered full-term, normal weight live births (N=525). In babies exposed to maternal hair chemicals, there was no increased association of preterm births (OR 0.7; 95% CI, 0.4 - 1.1) or low birth weight (OR 0.6; 95% CI 0.4 - 1.1).

Conclusion:

Occupational exposures to EDCs in hairdressers did not demonstrate increase in negative birth outcomes (SOR: B, cohort study). In studies using self-reported questionnaires on use of hair relaxers at home or in a salon there was no association with reduced birth weight or preterm birth (SOR: B, case-cohort studies).