

**Childhood Hair Product Use and Age at Menarche in a Racially Diverse Study Population.** Tamarra James-Todd, Janet Rich-Edwards, Andrea Deierlein, Ruby Senie (Brigham and Women's Hospital, Harvard School of Public Health, Boston, MA 02120)

Abstract:

**Background:** Recent studies suggest that some hair products may contain exogenous hormones and endocrine disruptors (EDCs). African-Americans are more likely to use hair products. EDCs in hair products could alter normal hormone functioning and increase the risk of early puberty and menarche.

**Objective:** To evaluate the relationship between childhood hair product use and age at menarche and to determine whether product use mediates the relationship between race/ethnicity and age at menarche.

**Methods:** We evaluated the association between hair product use and age at menarche among African-American, African-Caribbean, Hispanic, and white women. We analyzed data on a convenience sample of 301 women. Data was collected on hair oil, lotion, leave-in conditioner, perm, and other types of hair products used prior to age 13. We used logistic regression to estimate the association between product use and early menarche (<12 years), adjusting for sociodemographic characteristics.

**Results:** African-Americans were more likely to use hair products and reach menarche prior to age 12 compared to whites. Women reporting childhood hair oil use had 2.5 times the odds of reaching menarche <12 years (95% CI: 1.3-5.2), adjusting for race/ethnicity, recruitment site, and year of birth. After adjustment, hair perm use conferred 2.3 (95% CI: 1.1-5.0) times the odds of early menarche. Hair oil use partially mediated the association between race/ethnicity and age at menarche.

**Conclusions:** Childhood hair oil and perm use increased the risk of early menarche and oil use partially explained earlier menarche in African-Americans. Future studies should evaluate commonly used hair products for endocrine disrupting activity.