

O-055**MATERNAL URINARY BISPHENOL A CONCENTRATIONS DURING PREGNANCY AND BEHAVIOR IN CHILDREN AT SEVEN YEARS OF AGE IN THE CHAMACOS COHORT****Authors:****Kim G. Harley**, UC Berkeley, USA, kharley@berkeley.edu**Robert B. Gunier**, UC Berkeley, USA**Jonathan Chevrier**, UC Berkeley, USA**Asa Bradman**, UC Berkeley, USA**Antonia Calafat**, Centers for Disease Control and Prevention, USA**Brenda Eskenazi**, UC Berkeley, USA

Background: Bisphenol A (BPA) is a widely used endocrine-disrupting compound detected in 93% of Americans. Prenatal BPA exposures have been associated with behavior problems, including hyperactivity and aggression, in girls at 2 and 3 years of age, but no studies have examined these behaviors at school age.

Objectives: To evaluate the relationship between prenatal BPA exposure and behavior in children at 7 years of age.

Methods: Participants were 300 children and mothers enrolled in the Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS), a longitudinal birth cohort study in northern California. We measured urinary BPA concentrations in mothers twice during pregnancy. When the children were 7 years old, mothers and teachers assessed the children's behavior using the Behavioral Assessment System for Children (BASC) and the Conners ADHD/DSM-IV Scale (CADS). BPA was log₂-transformed and linear and logistic regression models were constructed, adjusting for demographic and other confounders.

Results: Specific-gravity-adjusted urinary BPA concentrations in pregnant mothers were associated with higher odds of teacher-reported hyperactivity (OR=1.6, 95% confidence interval (CI): 1.2, 2.2) and mother-reported depression (OR=2.6, 95% CI 1.3, 5.0) in boys at age 7. Each doubling of prenatal BPA concentrations was associated with increases in teacher BASC scale ratings of depression (β =3.5, 95% CI: 1.6, 5.3), anxiety (β =2.0, 95% CI: 0.0, 3.9) and aggression (β =2.6, 95% CI: 0.2, 5.1) scores in boys. Significant interaction by sex was seen.

Conclusions: Prenatal exposures to BPA were associated with behavior problems in boys, but not girls, at seven years of age.

Keywords: Bisphenol A, neurodevelopment, behavior, attention, hyperactivity