Endocrine disruptors and obesity: an examination of selected persistent organic pollutants in the NHANES 1999-2002 data.

Abstract

Recent evidence suggests that endocrine disrupting chemicals (EDCs) may cause perturbations in endogenous hormonal regulation that predispose to weight gain. Using data from NHANES (1999-2002), we investigated the association between body mass index (BMI), waist circumference (WC) and selected persistent organic pollutants (POPs) via multiple linear regressions. Consistent interaction was found between gender, ln oxychlordane and ln p,p'-DDT. Also, we found an association between WC and ln oxychlordane and ln hpcdd in subjects with detectable levels of POPs, whereas an association between WC and ln p,p'-DDT was observed in all subjects. Furthermore, ln Ocdd showed an increase with higher WC and BMI, whereas, ln trans-nonachlor decreased with higher BMI. Hence, BMI and WC are associated with POPs levels, making the chemicals plausible contributors to the obesity epidemic.