

# SERUM HORMONE PROFILE AND PUBERTY DEVELOPMENT IN BOYS WITH PRENATAL PCB EXPOSURE

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**Background and Aims:** Certain persistent pollutants, such as PCBs and DDTs, are thought to cause endocrine disruption. We examined the serum hormone profile in boys at puberty age in regard to their prenatal pollutant exposures.

**Methods:** In 1986-1987 cord blood was sampled from a Faroese birth cohort and kept frozen. In 2000-2001, birth cohort members were invited for clinical examinations at age 14 years and underwent Tanner staging and, finger length measurement, and serum hormone assessment. Of 436 boys participating (85%), complete data were available for 361 boys (71%). The cord blood has now been analyzed for the persistent pollutants. Associations between exposures and endocrine outcomes were explored by regression analysis after confounder adjustment.

**Results:** Prenatal exposure to PCBs and DDTs showed a negative association with serum concentrations of testosterone and luteinizing hormone and a positive association with sex-hormone-binding globulin. No association was seen with inhibin B and follicle-stimulating hormone, and the same was true in regard to Tanner stage and testicular size. Results were similar for the different PCBs and DDTs, which correlated closely among themselves.

**Conclusions:** These results suggest that an antiandrogenic effect of persistent pollutants may be mediated centrally, rather than through direct testicular toxicity.