

New study suggests link between environmental toxins and early onset puberty in girls

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Although scientists have speculated over the negative effects of environmental toxins for years, new data suggest that certain environmental toxins may disrupt the normal growth and hormonal development of girls. Some of these toxins, such as the mycoestrogen zearalenone (ZEA) produced by the *Fusarium* fungus species, can be found naturally in the environment, have properties similar to the female reproductive hormone estrogen, and are also structurally similar to anabolic growth agents used in animal breeding.

A new study scheduled for publication in *The Journal of Pediatrics* suggests that certain mycoestrogens may be directly linked to the early onset of sexual development in young girls.

Dr. Francesco Massart and colleagues from the University of Pisa in Italy studied a group of girls affected by the early onset of puberty, or central precocious puberty (CPP), from the North-West region of Tuscany. They undertook the study to explain why this area has a much higher than average incidence of CPP. The authors tested the girls for mycoestrogens to see if environmental toxins were a factor in the girls' premature sexual development.

Six of the 17 girls with CPP were found to have elevated levels of ZEA. According to Dr. Massart, "Although this finding might be incidental, ZEA may be related to CPP occurrence in girls exposed to

mycoestrogens. However, the presence of ZEA pollution could not explain the epidemic of CPP in the region, suggesting that other environmental factors such as herbicides and pesticides may be involved.”

The authors also noted that because of its chemical resemblance to some anabolic growth agents used in animal breeding, ZEA may promote accelerated growth in exposed children. Though the researchers were unable to identify a definitive cause of the high rates of CPP in this region of Tuscany, the study identifies the need for more research into the possible negative effects of environmental pollutants on children.

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