

IQs at risk: Boys beware!

Aug 23, 2012 by Medha Chandra



I keep reading about how boys have a [harder time](#) at all levels of school than girls. It turns out there may be more going on than the commonly held argument that teaching styles are more conducive to girls' success. Boys may also be at a biological disadvantage — new research shows that their [brains may be more vulnerable](#) to harm from pesticides.

As a mom of an infant boy, this has me seriously worried.

[Study after study](#) has shown that children's IQs, memory and brain health are at risk from exposure to pesticides. This latest study — from researchers at Columbia University — [concludes](#) that among children exposed prenatally to the insecticide [chlorpyrifos](#), boys had more problems with working memory than girls when tested at age 7.

Though having nurturing parents improved children's working memory (especially for boys), it did not lessen the overall negative cognitive effects of exposure to the pesticide.

Children commonly exposed to chlorpyrifos

Chlorpyrifos was commonly used in homes until 2001, when it was banned for home uses largely because of well documented neurological health impacts on children. The pesticide, which is also a suspected hormone disruptor, is still registered for use in U.S. agriculture, with an estimated [10 million pounds](#) applied to crops every year. That's quite a lot.

Children living near agricultural fields continue to be exposed to this pesticide throughout the growing season. Studies show that rural kids living in the same house as workers who apply pesticides in fields have higher levels of [pesticide breakdown products in their urine](#), including from chlorpyrifos, during active crop-spraying periods. Urban children are exposed to chlorpyrifos primarily through their [food](#).

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[CDC testing](#) found the vast majority of the U.S. population — an estimated 75% — also has chlorpyrifos breakdown products in their urine, with the highest levels found among the children who were tested.

All these exposures continue to rob children of their ability to reach their full cognitive potential. And [children's](#) developing bodies are especially vulnerable to pesticides like chlorpyrifos, since they have [lower levels of enzymes](#) that can help make such chemicals less toxic to the body. And as we now understand, [boys are hit the hardest](#).

Lower IQs = high social costs

[Lower IQs](#) can have devastating impacts for kids and their families in the form of poorer grades, and increased likelihood of dropping out of school. Even a small reduction in a child's IQ can increase the need for extra help in school — with the resultant increased costs for school systems across the country — and decrease effectiveness and productivity at work over a lifetime.

In a recent letter to EPA, a group of prominent health professionals called upon the Agency to ban chlorpyrifos. They noted that:

Prenatal exposure to organophosphate pesticides, including chlorpyrifos, has negative impacts on neurodevelopment including perceptual reasoning, working memory and poorer intellectual development in 7-year-old children. Higher blood chlorpyrifos concentrations during pregnancy were found to be associated with poorer mental and motor development at three years of age.

Isn't it high time our decisionmakers and regulatory agencies woke up to the true costs of what pesticides can do to our children's intelligence? EPA, are you listening?!

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