

Pesticides could become the ultimate male contraceptive. Why?

Sperm defects, sex reversals and other abnormalities.

Something is happening to the reproductive system of the males of many species. It's happening to male birds of prey around the Great Lakes and male alligators in Florida. To male harbor seals in the Netherlands and male polar bears in the Arctic. And to boys and men throughout the industrialized world.

Scientists have amassed a great deal of evidence linking reproductive system abnormalities, reduced sperm motility, sperm defects, sex reversals and altered sex ratios with exposure to an array of synthetic chemicals known as endocrine disruptors. These include pesticides and certain industrial chemicals like dioxin, PCBs, and phthalates, as well as arsenic, lead, and mercury. Some of these chemicals "mimic" estrogen; others interfere with testosterone and some block the thyroid function.

As physicians and scientists, we are concerned that despite the growing scientific evidence, these chemicals are still on the market.

What We Know

Medical studies have indicated that the sperm counts of males in America and Europe have decreased over the last fifty years. Despite gaps in the data, sperm counts have clearly declined in many places and are inexplicably low in others. The most sophisticated analysis, published in *Environmental Health Perspectives*, the journal of the National Institute of Environmental Health Sciences, indicates the decline may be as great as forty percent.

We know that some chemical workers exposed to endocrine-disrupting pesticides have been made temporarily, and in some cases, permanently sterile.

Dioxin, produced in the incineration of trash containing polyvinyl chloride plastic and chlorine-treated paper, has been shown to be responsible for birth defects and other reproductive problems in birds of prey around the Great Lakes. Dioxin is extremely toxic, and exposure as low as 25 parts per trillion causes feminizing effects in animals. A dioxin accident in Seveso, Italy, was followed by a decrease in the number of boys being born. The ratio of boys to girls is also decreasing in the U.S., Canada, and Denmark. A Danish study found a link between endocrine disruptors and the increasing incidence of undescended testicles in boys.

Endocrine disruptors affect women as well. Several animal studies link small exposures to dioxin with endometriosis.

What We Can Do

Parents should limit their children's exposure to pesticides, both outside and in the home. Organically produced foods should be purchased whenever

possible. And care should be taken to see that no fish from contaminated waters are consumed. There are more suggestions on our website, www.childenvironment.org.

But we must do more. Though not the sole cause, it's clear that exposures to endocrine disruptors can be contributors to reproductive problems in both animals and humans. Some synthetic chemicals already shown to adversely affect animals and humans are still being sold today. And other chemicals in the same chemical families have not been tested. Wouldn't we all be better off if chemicals had to be tested for safety before they were put on the market? Certainly males would be better off.

A summary of the supporting scientific evidence, and a list of scientific endorsers, can be found at www.childenvironment.org.



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