

Pesticides' Dangers to Children

Babies in the uterus, infants, and children through age five are especially vulnerable to the effects of pesticides because their small size makes any exposure a larger percent in relation to their overall weight. Pesticides are the greatest risk when cells are rapidly multiplying, in infancy or puberty. Children may be more susceptible to loss of brain function if exposed to neurotoxins and may be more susceptible to damage to their reproductive systems as well. Immature organs and body systems are less able to detoxify these chemicals and more likely to be adversely impacted.

In *Our Children's Toxic Legacy*¹, author John Wargo cites several recent studies connecting pesticides and cancer in children: "In 1981 three pediatricians in California reported in *Lancet* the incidence of acute leukemia in seven cases shortly following in-home exposure to organophosphate insecticides. The interval between exposure and diagnosis ranged between one and twenty-eight weeks.

"In 1989, the Children's Cancer Study Group reported that among families of 204 children with acute nonlymphoblastic leukemia, the most consistent association found in their analysis of potential causes was pesticide exposure.

"In 1993, a team led by J. R. Davis in Missouri found that children exposed to pesticides from in-home exterminators faced a 2.3 times higher risk of brain cancer. In 1985, T. H. Sinks found an elevated risk of brain cancer among children born to mothers who used aerosol pesticides during pregnancy and after birth.

"Davis and his colleagues found the use of lindane to control head lice among children between the age of seven months and diagnosis increased the odds of brain cancer 4.6-fold over controls. The use of pesticide bombs in the home to control nuisance insects during pregnancy increased the odds of childhood cancer 6.2 times. The use of no-pest strips for nuisance insects also caused risk to increase by 3.7 times. Use of flea collars and flea shampoos on pets also caused elevated risk, although the compounds used as the active ingredients were not reported. Garden use of diazinon elevated risk by 4.6 times. Finally, use of herbicides in the yard elevated risk by a factor of 3.4."¹ Exposure can also come from lawn-care pesticides tracked indoors onto carpets where children play; sprayed fruits and juices (which represent 21% of children's diets); and drinking water.

A 1998 study has shown that childhood pesticide exposure can cause impaired hand-eye coordination, decreased stamina, and memory impairment.²

Risks From Lawn-Care Pesticides states, "Childhood malignancies linked to pesticides in studies include leukemia, neuroblastoma, Wilms' tumor, soft-tissue sarcoma, Ewing's sarcoma, non-Hodgkin's Lymphoma, and cancers of the brain, colorectum, and testes."³

According to international research from 52 studies in children analyzed by Dr. Marion Moses, M.D. at the Pesticide Education Center in San Francisco, short-term effects from pesticide exposure include rashes, burning of the eyes and throat, breathing problems, and flu-like symptoms. Long-term effects can include cancer, birth defects, and damage to the brain, lungs, kidneys, and liver, as well as the endocrine, nervous, and immune systems. Pesticides can aggravate or cause asthma, allergies, and multiple chemical sensitivity.

¹ J. Wargo, *Our Children's Toxic Legacy*, pp 197-198, 1998 Yale University Press.

¹ Elizabeth A. Guillette, et al, from *Environmental Health Perspectives*, Vol 106, #6, June 1998.

¹ *Risks From Lawn-Care Pesticides*, p. 24, Environment & Human Health, Inc., North Haven, CT