



# More kids are getting brain cancer. Why?

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## Toxic chemicals appear linked to rising rates of some cancers.

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As scientists and physicians, we've seen a drop in the death rates of many adult and childhood cancers because of earlier detection and better treatment. But we are also seeing a disturbing rise in the reported *incidence* of cancer among young children and adolescents, especially brain cancer, testicular cancer, and acute lymphocytic leukemia. In fact, after injuries and violence, cancer is the leading cause of death in our children.

The increase in childhood cancers may be explained in part by better detection or better access to medical care. But evidence suggests the rise in these childhood cancers, as well as in cancers like non-Hodgkin's lymphoma and multiple myeloma among adults, may also be partially explained by exposure to chemicals in the environment, chemicals found in many products, from paints and pesticides to dark-colored hair dyes.

### What We Know

Pound for pound, kids are exposed to more toxic chemicals in food, air, and water than adults, because children breathe twice as much air, eat three to

four times more food, and drink as much as two to seven times more water. Recent epidemiologic studies have shown that as children's exposures to home and garden pesticides increase, so does their risk of non-Hodgkin's lymphoma, brain cancer, and leukemia. Yet, right now, you can go to your hardware store and buy lawn pesticides, paint thinner and weed killers, all containing toxic chemicals linked to these diseases.

In both children and adults, the incidence rate for non-Hodgkin's lymphoma has increased thirty percent since 1950. The disease has been linked to industrial chemicals, chemicals found in agricultural, home, and garden pesticides, as well as dark hair dyes.

Studies have shown that Vietnam veterans and chemical workers exposed to Agent Orange, a phenoxy herbicide, are especially at risk for non-Hodgkin's lymphoma. American farmers who use phenoxy herbicides have an increased risk of the cancer. A Swedish study showed that among the general population, the risk of non-Hodgkin's lymphoma rises with increased exposure to these herbicides. And, a study in Southern California found that children of parents who use home pesticides have seven times the risk of non-Hodgkin's lymphoma. Multiple myeloma, a bone marrow cancer,

is also associated with toxic chemicals. Its incidence has tripled since 1950. Farmers are especially at risk: a recent analysis of thirty-two studies worldwide showed "consistent, positive findings" of an association between farming and multiple myeloma.

### What We Can Do

There is much that parents can do to protect their children from carcinogenic chemicals, beginning with the elimination of many pesticides both outside and in the home. And, of course, the cessation of smoking. There are more suggestions on our website, [www.childenvironment.org](http://www.childenvironment.org).

But more needs to be done. As a society, we've done much to protect people, especially children, from the toxic chemicals in cigarettes. But too many toxic chemicals are being marketed without adequate testing. We should demand that new chemicals undergo the same rigorous testing as medicines before being allowed on the market. And we should phase out those chemicals linked with a wide range of health problems from neurological impairment to cancer in children.

A summary of the supporting scientific evidence, and a list of scientific endorsers, can be found at [www.childenvironment.org](http://www.childenvironment.org).



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