

Cancer in Children

Babies aren't supposed to be born pre-polluted.
— Jane Houlihan, Environmental Working Group

It's a sure sign that something is very wrong when children get cancer. Some infants are even born with the disease.

As Sandra Steingraber wrote in her landmark book, *Living Downstream*, children don't smoke, drink or hold stressful jobs. And yet in Europe¹ and the US² from the 1970s to the 1990s there was a steady 1% annual rise in childhood cancers, and a slightly smaller rise in Canada.³ There were 9,500 new cases in the US in 2005, representing 15 children per 100,000.

The main childhood cancers are leukemias, which are cancers of the blood (30% of the total), and cancers of the brain and nervous system (21%).⁴

While the number of children with cancer has stabilized or fallen since the 1990s, and the number of children dying has been cut by half

since the 1950s as treatments have improved,⁵ this is little comfort if a child you know has cancer.

Why is this happening? There are some strong environmental clues:

- The human embryo is especially vulnerable to chemicals. Recent data from hormone disruptor pioneer Theo Colborn indicates that several adult and childhood cancers are programmed before birth, making the fetal origins of cancer a troubling new frontier.⁶
- The developing fetus is also more susceptible to DNA damage from vehicle pollution and second-hand smoke than its mother, despite the protection of the placenta.⁷ One study concluded that the children of fathers who worked with benzene or alcohols in industry prior to conception are nearly six times more likely to develop leukemia.⁸
- The average newborn has 230 industrial chemicals in its blood at birth, 180 of which are known to cause cancer in humans or animals.⁹ That's surely not a healthy way to start life on Earth.
- Children are also exposed to chemicals in breast milk from consumer products such as plastics and carpets and from the air, water and food, many of which disrupt biological processes. The US Environmental Protection Agency (EPA) says infants and young children are ten times more vulnerable to cancer-causing substances than adults because they live longer after the time of exposure and they eat, drink and breathe more than adults relative to their weight.¹⁰



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- Exposure to pesticides is also linked to childhood cancer. Children whose yards are treated with pesticides are four times more likely to have soft-tissue sarcomas.¹¹ A Los Angeles study linked the parents' use of pesticides during pregnancy to a 3- to 9-fold increase in leukemia.¹²
- In the 1950s Dr. Alice Stewart carried out a landmark study that showed that a single fetal X-ray doubled the risk of childhood leukemia, which is why pregnant women should avoid them.¹³
- Exposure to electromagnetic fields is also a risk. A large seven-year British study showed that children who lived in homes within 200 meters of high-voltage power lines when they were born are almost twice as likely to get leukemia as those who lived more than 600 meters away.¹⁴ This has been supported by other British, Swedish and Canadian studies.
- In 2001 the World Health Organization concluded that power-frequency magnetic fields are possible human carcinogens, based on a consistent association between childhood leukemia and residential exposure to extremely low-frequency electromagnetic fields. Children who live in homes with high magnetic fields (> 0.4 μ T) have twice the risk of getting leukemia.

Enough is enough! We need strong, decisive action to keep toxic substances out of our children's bodies and to protect them from as many risks of childhood cancer as possible.

- Cancer Incidence and Survival Among US Children & Adolescents: www.seer.cancer.gov/publications/childhood
- Center for Children's Environmental Health: www.ccceh.org
- Center for Children's Health and the Environment: www.childenvironment.org
- Child Health and the Environment: www.healthyenvironmentforkids.ca
- Childhood Cancer Research Group, Oxford: www.ccrq.ox.ac.uk
- Children's Environmental Health Network: www.cehn.org
- Families Against Cancer and Toxics: www.familiesagainstcancer.org
- Health Effects of Pesticides: www.kidsforsavingearth.org/mnchec/articles/pesticides.htm
- Kids with Cancer: www.kidswithcancer.ca
- Making Our Milk Safe (MOMS): www.safemilk.org
- Preventing Harm: www.preventingharm.org

Jean-Dominic Lévesque-René of Île Bizard near Montreal was ten when he found a lump on his neck in 1994. A biopsy led to the diagnosis of non-Hodgkin's lymphoma, and he was told he had a 50% chance of surviving. While in hospital, he met other children with cancer and discovered that half the area of Île Bizard had golf courses sprayed with pesticides. He posted a map of Quebec in his hospital room, and each time a child with cancer was admitted, he asked where they lived. Twenty-two were from Île Bizard, out of a population of 4,000 children — 37 times higher than the normal rate.¹⁵ He also learned that the herbicide 2,4-D, linked to non-Hodgkin's lymphoma, had been sprayed on the grass at home every summer since he was a toddler. Since leaving hospital, Jean-Dominic has been a persistent activist and campaigner for bylaws to ban the cosmetic use of pesticides.¹⁶