

Danger: Pesticides Raise Death Risk 60% for Kids With Leukemia

A new study's findings "underscore the importance of reducing children's exposure to harmful pesticides whenever possible."

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Public concern continues to grow about the harmful effects of pesticides and other environmental pollutants, especially for children. Pesticides have previously been linked to a higher risk of developing childhood leukemia. Now a new study shows that children with leukemia who were exposed to pesticides during their mother's pregnancy have a higher risk of death.

The [study](#), published in *Cancers*, examined more than 800 children with acute lymphoblastic leukemia (ALL), looking at how pesticide exposure affected five-year survival rates. Children exposed to any pesticide during pregnancy faced a 60% higher risk of death, while those exposed to rodenticides, a type of pesticide, during pregnancy had a 91% increased risk. Among all children studied, 92% were exposed to at least one type of pesticide before or after birth, showing how widespread these toxic chemicals are in homes and environments where children live.

"This study highlights that exposures in the home environment, even before a child is born, may have lasting effects on survival after a leukemia diagnosis. While more research is needed, the findings underscore the importance of reducing children's exposure to harmful pesticides whenever possible," said [Lena Winestone](#), MD, MSHP, a pediatric hematologist-oncologist at [UCSF Benioff Children's Hospitals](#) and co-author of the paper.

Exposure cuts across race, income lines

Children diagnosed with ALL before age 1, those from families with low educational attainment and income, and Black children had the highest overall death rates, while white children exposed to rodenticides showed higher death rates than other groups. Breastfeeding appeared to have a protective effect overall for children.

"This research is a powerful reminder that cancer outcomes aren't determined only by medical care — they're also linked to the environmental exposures and conditions in which families live," said first author Seema Desai, MD, MPH, at the University of California, Berkeley School of Public Health.

The study adds to recent research that found children exposed to tobacco smoke and air pollution during pregnancy and after birth are also at increased risk of death. Children are especially vulnerable to toxic chemicals, given the higher concentrations relative to their developing body size.

Although systematic reviews have linked pesticides with worsened cognitive, behavioral, and motor outcomes in children generally, resources to evaluate and mitigate environmental pollutants lag across the country, according to other [research](#). To fill this gap, UCSF's Western States Pediatric Environmental Health Specialty Units (WSPEHSU) offers free resources to reduce pesticide exposure through its [Prescriptions for Prevention](#).

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