

Breast cancer and DDT: Why Timing Can Matter More Than Dose

Breast cancer rates have surged in recent decades. Today, one in eight women in the United States will get breast cancer during their lifetime. The breast cancer rate is much higher than it used to be. Between 1973 and 1998 the incidence of breast cancer in our country increased by 40%.

Women in some parts of the United States are more likely to be diagnosed with breast

cancer. One of these places is Long Island, New York. In 1993, the higher-than-average breast cancer rates led the federal government's National Cancer Institute to sponsor 10 breast cancer studies of Long Islanders.

One of the National Cancer Institute studies of Long Islanders looked at the link between DDT and breast cancer. Between the 1940s and the 1970s, DDT was routinely sprayed across Long Island to control mosquitoes.



Early studies found no link between DDT exposure and breast cancer.

The study looked at the DDT levels of women who had breast cancer. Then researchers compared those levels to the amount of DDT in the blood of a similar cross section of adult women who did not have breast cancer. The study found that there was no link between the amount of DDT and the incidence of breast cancer in the adult women who were studied. So scientists declared that DDT did *not* raise the risk of breast cancer.

A later study determined that DDT exposure did increase the risk of breast cancer depending on *when* the individual was exposed to DDT.

In 2007, a study was published that also compared DDT in women who had breast cancer and women who did not. But this time researchers used stored blood to measure how much DDT women had in them when they were girls going through the breast development of adolescence. This study showed that women who are exposed to higher levels of DDT before their breasts are fully developed are five times more likely to develop breast cancer.



Exposure to DDT-like chemicals is linked to breast cancer in both women and men. More than 70 former Marines and the children of Marines born at Camp Lejeune, North Carolina have been diagnosed with breast cancer. All of these men were exposed to DDT-like chemicals that contaminated Camp Lejeune's drinking water. There is an increased incidence of breast cancer in both men and women exposed to certain chemicals, but the diagnosis may come many decades after the exposure.

DDT in the news:

As an Insecticide Makes a Comeback, Uganda Must Weigh Its Costs

Faced with unrelenting malaria, which threatened both lives and livelihoods, Uganda's government teamed up with the United States to use chemical insecticide sprays — including DDT — to try to eliminate the disease.

Once condemned as poisonous and inhumane, DDT has staged a recent comeback. In 2006, the World Health Organization strongly endorsed the chemical's use on indoor walls as a cheap and long-lasting weapon in the fight against malaria. The United States also sanctioned DDT to combat the disease in African countries with "a high burden of malaria," including Uganda.

The United States sprayed DDT to eliminate the last remnants of malaria across North America. The disease's eradication was a milestone in public health and development. Malaria almost thwarted construction of the Panama Canal and "influenced to a great extent human populations and human history," the Centers for Disease Control and Prevention says.

But the United States banned the use of DDT in 1972 over the chemical's hazardous environmental impact. Studies have also linked DDT to diabetes and breast cancer. One examination of the consequences of using DDT to fight malaria in sub-Saharan Africa, conducted by the National Institute of Environmental Health Sciences, said the chemical might have increased infant deaths.

Still, the risks of not spraying are clear as well. In Africa, malaria kills 2,000 children each day, according to Unicef, and costs approximately \$12.5 billion in lost incomes each year, the Malaria Consortium says.

For Lillian Etime... a mother of six, the death of her chickens during the first round of spraying set off alarm bells. "We feared that the children could touch the wall," where spray was administered, "and they could die," said Ms. Etime, 32. Ultimately, it

was business that suffered the most, she said, with her revenue reduced by more than half. “The problem I experience is the problem of money,” she said.

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