# School Pesticide Monitor

A Bi-monthly Bulletin on Pesticides and Alternatives

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### **Pesticide Exposure Linked to Elevated Asthma Rates**

According to preliminary findings by researchers at the University of Southern California (USC), published December 9, 2003 at *Environmental Health Perspectives Online*, children exposed to household pesticides in their first year of life develop asthma twice as often as those never exposed.

"The first year of life seems uniquely important in terms of susceptibility to environmental triggers of asthma," said Frank Gilliland, PhD, professor of preventive medicine at USC's Keck School of Medicine and one of the study's authors. "Understanding the causes of asthma early in life is especially important because persistent asthma early in childhood is associated with long-term health problems."

Researchers looked at 338 children who had been diagnosed with asthma before they turned five years old and matched them with 570 asthma-free children of the same age who lived in the same communities. They found that the risk of developing asthma before age five rose significantly with various exposures:

- Children exposed to weed-killers before turning one year old have more than four-and-a-half times the risk of developing asthma before age five as non-exposed children.
- Children exposed to insecticides before age one have nearly two-anda-half times the risk of developing asthma before age five as non-exposed children.

According to the Centers for Disease Control and Prevention, about 20 million people in the U.S. suffer from asthma, including more than 3.5 million children under the age of 15. The rate of asthma in preschoolers and school-age children has nearly doubled between 1980 and 1999.

Earlier studies have shown that several pesticides, such as pyrethrins and pyrethroids, organophosphates and carbamates, are known to trigger or exacerbate asthma symptoms.

For a copy of "Early Life Environmental Risk Factors for Asthma: findings from the Children's Health Study," see http://ehpnet1.niehs.nih.gov/docs/2003/6662/abstract.html.

## School's Mold Spray Program Under Criminal Investigation

A criminal investigation is looking at the company and the pesticide used to spray the Samuel Staples Elementary School in Easton, CT in an attempt to control its mold problem, according to the *Fairfield Minuteman*. The school hired Microb Phase Laboratories, which claimed to have extensively used a product called Microb Shield for the past three years — a product that federal and local law enforcement officials stated the company was not licensed to spray. Furthermore, the product's manufacturer, AEGIS Environmental, stated that it has never sold the product to Microb Phase.

Officials are also looking into other names the company has used, such as Air Tech Environmental Services, and other areas it has been hired to work around the Atlantic northeast, including possibly schools in New York and New Jersey. The Easton Police Department and the U.S. EPA's Criminal Investigation Division for New England are involved in the criminal investigation.

Questions were raised when a Staples School Building Committee began looking into whether the school's ceiling tiles needed to be removed because of years of water damage. Some of the committee members then began looking into Microb Phase and trying to identify the chemicals it uses. When comparing tests on the ceiling tile and the MSDS' for the chemicals Microb Phase stated it used, things did not add up, according to the independent consultant Gil Cormier, who was hired by the committee.

Although the Easton Health Director stated that there were no health concerns, a sevenyear-old student was taken out of the elementary school after she began suffering from respiratory problems, joint pain, stomachaches and headaches and three consecutive trips to the emergency room. The student's brother was also taken out of the school when he began suffering from sinus infections and a chronic cough. The students' health has improved remarkably since transferring them to a private school.

What You Can Do: Full disclosure of chemicals used in schools is extremely important for an open dialogue and an avenue toward pesticide reform. Request a Material Safety Data Sheet (MSDS) from school officials on each of the chemicals being used in the building, which will provide the chemical formulation, along with health and environmental effects. As this incident shows, it may even be necessary to contact the appropriate entities to verify pesticide product use. For information on least-hazardous mold control, contact Beyond Pesticides.

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## **Responding to the Threat of Toxic Cleaning Products**

#### The Problem with Cleaning Products

Many sanitizers, disinfectants and other cleaning products used in schools contain chemicals that can pose serious health threats through inhalation, skin contact and ingestion. Children face a higher risk of adverse effects from exposure. A recent study published in the October 2003 issue of the peer-reviewed journal *Environmental Health Perspectives* (EHP) found that working youth face safety and health risks from occupational exposure to disinfectants at a rate far higher than adults. The study, which reviewed data from the federal government and the state of California from 1993 through 1998, found 307 reported cases of acute occupational disinfectant-related illness, or an average of 51 cases per year. Teens showed a four-fold increased risk of illness from exposure to disinfectants than adults.

"These findings suggest the need for greater efforts to prevent adolescent acute occupational disinfectant-related illness," the study authors write. "This may require strengthening regulations and enforcement as well as increased educational efforts directed at employers, youth, parents, school officials, and physicians. Better mechanisms for reporting and tracking chemical illnesses among working adolescents are also needed."

Commenting on the study, Dr. Jim Burkhart, science editor for EHP, says, "Young people are often less educated about the dangers of disinfectants, less likely to resist assignments that could be dangerous, and less likely to report exposure. While none of the case studies resulted in significant disability or disfigurement, we need to make sure employers, parents and teens know about basic precautions."

According to EPA, approximately one billion dollars are spent on a variety of different types of antimicrobial products, including disinfectants, each year. There are 275 registered antimicrobial active ingredients and more than 5000 antimicrobial products currently on the market. EPA's website states that their use does "involve risks of potential efficacy failure and exposure hazards."

Because disinfectants, along with other pesticides, can contaminate indoor air and result in serious health effects, especially for children, schools should take steps to minimize dirt and grime and use less toxic alternatives. If you are a parent, or other concerned party, ask school officials for Material Safety Data Sheets for each of the cleaning products used. From there, you can advocate for policy change by approaching officials with viable alternatives. As a school official, make sure that safer practices are implemented through a policy statement, proper training and product use restrictions.

#### Alternatives To Toxics

Government and institutional purchasers looking for safer, environmentally preferable cleaning products can now look to a product list developed through an EPA-funded consensus-based criteria that expanded the Green Seal's Industrial and Institutional Cleaners Standard GS-37. Several state and local government purchasers have integrated this new purchasing criteria into their vendor requests. (For more information, see http://www.newdream.org/procure/products/cleaners.html.)

But oftentimes the most basic cleaning ingredients are all you need:

- Regular soaps lower the surface tension of water, washing away unwanted bacteria.
- Baking soda can act as a cleaner, scouring powder, air freshener, and carpet deodorizer, and is gentle enough for use on materials such as fiberglass.
- Washing soda is more caustic than baking soda (and should be used with rubber gloves), but does not release harmful fumes like other solvents. This can be used on grease, petroleum oils, and dirt. It can be made into scouring powder, soft scrubber and floor cleaners.
- White vinegar and lemon juice are appropriate cleansers for wood surfaces and mineral buildup.
- Australian tea tree oil and grapefruit seed extract can both be used as disinfectants.