



The Secret Life of Dust

By **Beverley Thorpe**, Posted **March 22, 2005**.

The first U.S. study to test chemicals in household dust found a toxic cocktail in our homes, made of hazardous chemicals emitted from commonly used products.

Chemicals bring new and functional products into our lives. They allow food to stay fresh longer, carpets to be stain resistant, cookware to be non-stick, and rain gear to repel water.

But the range of chemicals in our household products come with a hidden cost. The dangers are outlined in a report released Tuesday, March 22, entitled, *Sick of Dust: Chemicals in Common Products a Needless Health Threat in Our Homes*. The study, which analyzed dust samples in 70 homes across the country, reveals widespread contamination. Every one of the composite samples contained all the chemical classes we analyzed for: phthalates, pesticides, alkylphenols, brominated flame retardants, organotins and perfluorinated chemicals. These chemicals are linked to hormone disruption leading to reproductive and developmental problems. They are also associated with allergies, cancer and immune system damage.

How did these chemicals end up contaminating common household dust? For those who live near a refinery or a chemical production facility, there is direct exposure from emissions. The government's annual Toxic Release Inventory report confirms this. For most others, exposure comes from the ingredients used to make common household products. This information is disturbing, not least because studies show we spend up to 90 percent of our time indoors; most of that at home. Children may take in five times as much dust as adults, since they play and crawl on the floor, making them more vulnerable while their organ and immune systems are developing.

Brominated flame retardants, for example, commonly used on carpets, sofas and in electronic consumer goods are toxic to developing nervous systems. They can disrupt the thyroid which regulates growth and development in newborns. It has long been known that small decreases in thyroid hormone levels can impair learning abilities in children. Yet we now find these chemicals in dryer lint, on the inside film of windows, and – as our study shows – in common household dust.

The "Sick of Dust" report also found toxic plasticisers used to make vinyl soft, stabilizers used in rigid PVC products, emulsifiers used in detergents and cosmetics, and stain-resist chemicals used

in Goretex and Teflon pans. All the chemical classes we tested for are internationally recognized as Chemicals for Priority Action, yet to date government regulators have passed no laws to phase out their use.

Our federal chemicals regulation needs a complete overhaul. Our regulations should promote the use of safe chemicals in products, not justify the ongoing use of known carcinogens and reproductive toxins. The issue should not be defined by what level these chemicals are safe to use. The question should be: why take chances with our children's health when safer alternatives are readily available?

Forward-thinking companies and retailers have not waited for government action. They are restricting the list of chemicals their product suppliers can use and are actively seeking sustainable materials and design ideas for their products. Clean Production Action sent a questionnaire to 35 leading companies and retailers to see if they have a chemicals policy or if they were even aware of the types of chemicals in their product lines. We found furniture manufacturers such as Herman Miller and Ikea had progressive policies to research and use safe chemicals, and carpet manufacturer Shaw Carpets is working closely with green chemists to design chemically-safe and recyclable carpets.

Likewise leading TV and computer brand names such as Dell and Samsung are aggressively researching safer chemicals and replacements for all brominated flame retardants and PVC uses. Aveda and Unilever are working to eliminate the use of any materials known to persist in the environment or damage the hormone system. Unfortunately, such chemicals policies are not standard practice in the retail trade and most companies have no chemicals policy at all.

Faced with similar concerns, the European Union, home to the largest chemical industry in the world, is overhauling its chemicals regulation. Europe will soon make its chemical industry provide missing health data for all its chemicals in commerce as well as require strict authorization for hazardous chemicals production. Many believe this will help set Europe on a path to innovation in safe chemicals. The U.S. needs to follow suit. In the absence of a federal overhaul of chemicals policy some state governments are taking action to phase out certain hazardous chemicals and pesticides. Although progress is slow and faces ongoing opposition, these approaches are building momentum for national reform.

We owe it to the next generation to get our chemicals management in order. Some universities have set up Green Chemistry departments, which is a start, but it's not the sole solution. The Bush administration needs to reverse the failure of past chemicals regulation. It can begin by targeting the chemicals we now find in our household dust.

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