

Subj: PANUPS: New Reports Find Pesticides in People
Date: 2/14/2003 2:21:23 PM Central Standard Time
From: panups@topica.email-publisher.com

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P A N U P S

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New Reports Find Pesticides in People

February 14, 2003

Dozens of pesticides and other chemicals are in the blood and urine of people in the United States, according to two reports released in late January. Together, the two studies offer startling new evidence of the chemical body burden carried by the U.S. population.

The first study, conducted by the Centers for Disease Control and Prevention (CDC), tested thousands of people for 116 chemicals, 34 of them pesticides. The CDC's Second National Report on Human Exposure to Environmental Chemicals is a significant expansion from the first study released in 2001, which focused on nine pesticides and 27 chemicals in total. This year's report includes evidence of the U.S. population's chemical body burden of three types of pesticides: organochlorines, organophosphorus compounds and carbamates. CDC scientists also tested for a few widely used weed killers and other pesticides that don't fall into any of these categories. Nineteen of 34 pesticides were detected in the blood or urine of test subjects.

CDC highlights two specific pesticide-related findings in their report. First, metabolites of the pesticide chlorpyrifos are nearly twice as high in children (age 6-11) than adults. Most home uses of chlorpyrifos (widely known by the Dow product name Dursban) were recently banned by the U.S. Environmental Protection Agency (EPA), but an estimated 10 million pounds of the pesticide continue to be used each year in agricultural production.

The second CDC highlight relates to the organochlorine pesticide DDT, which was banned in the U.S. in 1972. DDT breakdown products (DDE) were found in Mexican Americans at levels more than three times that of non-Hispanic whites. DDT use for malaria control continued in Mexico until its phase out in 2000. In addition, DDE was present in the bodies of youth aged 12-19 born after the U.S. ban, indicating continued exposure from residues in the environment. This is consistent with PANNA's findings of ongoing contamination of the U.S. food supply with DDT residues (see PANUPS, December 4, 2000, http://www.panna.org/resources/panups/panup_20001204.dv.html.)

The second study, Body Burden: The Pollution in People, was led by Mount Sinai School of Medicine in New York and conducted in collaboration with Environmental Working Group and Commonweal. Researchers found 167 industrial chemicals, pesticides and pollutants in the blood and urine of nine adult subjects. Each subject carried an average of 91 compounds. Seventeen of the chemicals found were breakdown products from organochlorine and organophosphate pesticides.

Though the sample size for the Body Burden study was too small to be scientifically significant, the study was unique in that the nine subjects were not anonymous. Individual profiles and personal reactions to

the study are included in the report, giving a human face to the chemical body burden data.

Other chemicals found in the two studies include polychlorinated biphenyls (PCBs), dioxins and furans (industrial by-products) and phthalates (softening agents widely used in cosmetics, toys and other consumer products).

Individuals vary widely in their sensitivity to individual chemicals, and it is difficult to predict the specific health effects of long term, low-level exposures like those found in the two studies. The pesticides found in the U.S. population have a wide range of known health effects, including cancer, birth defects, neurological damage, infertility and weakened immune systems. There are insufficient studies on the possible health effects of exposure to multiple chemicals.

Recent research shows that surprisingly low levels of exposure to young children or fetuses in the uterus can cause irreversible damage if the exposure occurs when a certain organ or system is in a critical stage of development. The effects of this damage may not become apparent until later in life--a specific example is infertility or other damage to the reproductive system. (See PANUPS, August 2, 2002, http://www.panna.org/resources/panups/panup_20020802.dv.html.)

The pesticide body burdens found in the new studies result from a variety of exposures. Pesticide residues in food are a major source of exposure, as are pesticides in drinking water. Farmworkers and people in communities and schools located near farms where pesticides are sprayed may inhale fumes from the applications or come in contact with residues of spray drift that have settled in their yards or homes. And pesticides used in the home can be absorbed through skin contact, inhalation or accidental

ingestion.

Reducing or eliminating pesticide use in the home and supporting organic agriculture are two concrete ways consumers can respond to the body burden news. Not surprisingly, new evidence shows that children who eat more organic food have fewer chemicals in their bodies. (See PANUPS, January 31, 2003, http://www.panna.org/resources/panups/panup_20030131.dv.html.) Supporting organic production will send a powerful message to farmers and will lead to falling demand for agricultural pesticides.

CDC will be checking levels of these and additional chemicals every two years, and will make the full data set for both the first and second National Report on Human Exposure to Environmental Chemicals available in mid-March. PANNA plans to do further analysis on the pesticide body burden findings at that time.

For more information:

CDC's Second National Report on Human Exposure to Environmental Chemicals:

<http://www.cdc.gov/exposurereport/>

PANNA's Pesticide Backgrounder and additional body burden resources:

http://www.panna.org/campaigns/docsPops/docsPops_030130.dv.html

Body Burden: The Pollution in People: <http://www.ewg.org>

PANUPS is a weekly email news service providing resource guides and reporting on pesticide issues that don't always get coverage by the mainstream media. It's produced by Pesticide Action Network North America, a non-profit and non-governmental organization working to advance sustainable alternatives

to pesticides worldwide.

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Pesticide Action Network North America (PANNA)

49 Powell St., Suite 500, San Francisco, CA 94102 USA

Phone: (415) 981-1771

Fax: (415) 981-1991

Email: panna@panna.org

Web: <http://www.panna.org>