

Rachel's Environment & Health News

#38 - Chemical Exposures Of Parents At Work Or Use Of Pesticides Around Home May Give Children L

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A parent's use of pesticides around the home, or workplace exposure to any of several classes of chemicals (especially chlorinated solvents) can increase children's risk of developing leukemia, according to a new study reported in the July issue of the JOURNAL OF THE NATIONAL CANCER INSTITUTE (pgs. 39-46).

Authors of the study are a team of researchers at the Medical School, University of Southern California at Los Angeles. They studied 123 pairs of families; each pair contained one family with a child less than 10 years old with leukemia, and one family with a healthy child (matched for age, race or ethnicity, socioeconomic status and sex).

Parental exposure to pesticides inside the home, or in a family garden, increase children's risk of leukemia, the study shows. The use of incense in the home also increased the risk. Because they did not expect to find an association between household chemicals and leukemia, the researchers did not inquire about the types of pesticides used. They are re-interviewing the families now to improve their understanding of the problem. Previous studies have linked pesticide use to leukemia among farmers; this is the first study showing a link between household pesticides and leukemia in children.

This is only the second study showing a cancer link between humans and chlorinated solvents. Many studies of animals have shown carbon tetrachloride, tetrachloroethylene and trichloroethylene to be animal carcinogens, and one earlier study linked children's brain tumors to parental exposures to these solvents. [See J.M. Peters and others, "Brain Tumors in Children and Occupational Exposure of Parents." SCIENCE Vol. 213 (1981), pgs. 235-237.]

The present study also showed that parents' exposures to spray paint, cutting oil, methyl ethyl ketone, and to dyes and pigments, increased the risk of leukemia in their children.

Parents bring the chemicals home on their skin and clothing and on their breath. An adult's breath can carry chlorinated solvents for hours after exposure has ceased. Mothers may expose their infant children through breast milk. The greatest risk is to exposed infants and very young children. The parental occupations with strongest links to children's leukemia were machinery manufacture and airplane manufacture for the fathers and personal service (beauty shop operators, domestic servants, and laundry operators) for the mothers.

For a reprint, contact J.M. Peters, Department of Preventive Medicine, University of Southern California School of Medicine, 1420 San Pablo St., PMB B-306, Los Angeles, CA 90033. Ask for "Childhood Leukemia and Parents' Occupational and Home Exposures."

--Peter Montague

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NEW BOOKLET DESCRIBES FEDERAL RIGHT-TO-KNOW LAW FOR WORKERS

In the U.S., 25 million workers (one out of every four workers) is exposed to one or more hazardous chemicals on the job. A recent federal law, called the Hazard Communication Standard (or HCS), requires the manufacturers of hazardous chemicals to tell their customers about the hazards; the law further requires the buyers of hazardous chemicals to tell their workers about the hazards. The purpose of the law is to get information about hazardous chemicals into the hands of the people who work with those chemicals.

Every employer using hazardous materials is supposed to develop a program for telling workers about the hazards. The program is supposed to have two parts: labeling of containers that hold

hazardous materials, so workers can know what they're handling; and MSDSs [material safety data sheets]. An MSDS describes a chemical and any known hazards associated with it. An MSDS is supposed to be readily available in the workplace for each hazardous chemical that workers may be exposed to.

A third component of the Hazard Communication Standard is a training program, to help workers understand (and avoid ill effects from) the hazards they encounter on the job.

The federal agency that's supposed to oversee compliance with the HCS law is OSHA, the Occupational Safety and Health Administration. Knowing how to contact OSHA, and knowing what to expect from OSHA (knowing your rights) is essential to getting effective help from OSHA.

We have found a terrific little (75 page) book that describes the HCS law, tells workers their rights, tells them how to evaluate the HCS program in their shop, tells how OSHA works, and tells what to do if things aren't right. It's \$6.95 from: the Occupational Safety and Health Law Center, 1536 16th Street, NW, Washington, DC 20036; phone (202) 328-8300. Ask for CHEMICAL HAZARDS; A GUIDE TO THE NEW FEDERAL HAZARD COMMUNICATION REGULATIONS.

--Peter Montague

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DEPARTMENT OF ENERGY NUCLEAR FACILITIES NOW SUBJECT TO RCRA

The EPA (U.S. Environmental Protection Agency) has issued final regulations requiring the federal Department of Energy (DOE) to comply with RCRA (the Resource Conservation and Recovery Act) for any waste streams that contain hazardous nonradioactive chemicals. Under the EPA's final rule, any hazardous non-radioactive chemicals at DOE sites will be subject to EPA and state control under RCRA; the radioactive component of those waste streams will continue to be regulated by the Nuclear Regulatory Commission or by DOE itself, under the Atomic Energy Act. [See FEDERAL REGISTER Vol. 52, No. 84, pgs. 15937 to 15941, or contact Henry Garson, Ass't General Counsel for Environment, GC11, DOE, 1000 Independence Ave., SW, Wash., DC 20585; phone (202) 586-6947.]

DOE originally argued that all its wastes were exempt from RCRA. However in April, 1984, settling a lawsuit called Leaf vs. Hodell, the judge declared DOE subject to RCRA.

At its 30 research and production facilities, DOE produces 12 million tons of radioactive waste each year, almost all of it a combination of radioactive and nonradioactive hazardous chemicals. DOE housekeeping and record-keeping during the past 40 years has been, in a word, sloppy. DOE has used, and in some cases still uses, unlined seepage basins and evaporation ponds for much of its liquid wastes and unlined pits and landfills for its solid wastes. Bringing DOE's mixed wastes under RCRA control should open up DOE's operations to increased scrutiny by citizens.

--Peter Montague

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Descriptor terms: rtk; occupational safety and health; osha; hazard communication standard; regulations; training; hazardous chemicals; doe; federal; rcra; radioactive waste; nuclear regulatory commission; landfilling; liquids; liquid wastes; pesticides; indoor air pollution; occupational safety and health; cancer; leukemia; incense; carbon tetrachloride; trichloroethylene; dyes; pigments; methyl ethyl ketone;