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Do PCBs Cause Cancer In Humans?

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TRACES OF TOXIC PCBs (polychlorinated biphenyls) were found recently in drums of hazardous waste removed from an illegal dump near Ellisville. Almost as controversial as the discovery itself, however, has been the argument over whether PCBs cause cancer.

The St. Louis-based Monsanto Co., which was the sole producer of the toxic chemical, says no. Fred A. Lafser, director of the Missouri Department of Natural Resources, says yes.

The U.S. Environmental Protection Agency and the National Institutes of Health say PCBs are known to cause cancer in animals and are strongly suspected of causing cancer in humans.

PCBs were used in a wide range of industrial products, including cooling oil for electrical transformers and capacitors, until their manufacture was banned by the Toxic Substances Control Act in 1979. Monsanto voluntarily stopped production of PCBs two years earlier.

The local cancer controversy was sparked after news reports quoted Lafser as saying, "PCBs definitely cause cancer." Monsanto issued a press release pointing to a 1978 National Cancer Institute study that found that rats that were fed PCBs did not develop cancer.

Monsanto also cited a 1973 study by the Center for Disease Control that found PCBs caused cancer in rats. "This single study formed the basis for the 'cancer-causing label' that has been put on PCBs by federal and state officials and a broad section of the news media ever since," the statement said.

James W. Gunter, who is in charge of PCB regulation for EPA, acknowledged that there have been only two animal studies — with contrary conclusions. But he said his agency believes that the study that linked PCBs to cancer was conclusive because it was more extensive.

EPA's CANCER POLICY, he explained, is that "when a substance causes cancer in animals, for regulatory purposes we assume that it also causes cancer in humans." That's because cancer often takes many years to develop in humans.

Monsanto said it was "aware of seven epidemiological studies done in the U.S. of groups of people exposed to PCBs. None of these studies found PCBs to cause cancer in humans."

But a 1979 EPA report apparently refutes that contention. According to the report, more than 1,200 Japanese became sick in 1968 when they ate rice oil contaminated with PCBs. "Although precise data is not yet available, preliminary tabulations of deaths among the victims through 1975 show an excess in the rate of cancer, particularly of the stomach and liver," the report states.

In another study cited in the report, 92 workers likely to have been exposed to PCBs in a New Jersey petrochemical facility between 1949 and 1957 were found to have a "significant excess" of skin and pancreatic cancer.

The cancer question notwithstanding, the government and Monsanto agree that PCBs are toxic — although they disagree on the degree.

MONSANTO STATED, "There are enough real, legitimate concerns about potential environmental harm from PCBs without unnecessarily alarming the public with labels like 'cancer-causing' and 'deadly toxin'."

The U.S. surgeon general, in a report on hazardous waste issued last week, cited PCBs as one of a number of toxic chemicals so pervasive in the environment that almost all Americans have traces of it in their bodies.

Joseph H. Highland, chairman of the toxic chemicals program of the Environmental Defense Fund, a national environmental group, called PCBs "an environmental catastrophe."

"The very properties that make PCBs attractive to the industrial user are the properties that make them an environmental hazard: they are resistant to both chemical and biological breakdown," Highland said.

Monsanto said it wished to "in no way minimize the very real environmental concerns associated with irresponsible disposal of wastes containing PCBs. The problems with PCBs center on the fact they they remain intact in the environment for many years."

Monsanto said PCBs are "considered only mildly toxic on an acute basis when ingested by humans — about on the same order as common table salt."

Gunter agreed with Monsanto's appraisal, but contended that chronic effects were the real issue. He said some of the Japanese who ate the contaminated rice oil developed chloracne, a skin ailment. Tests on animals have shown that PCBs can cause liver damage, numbness of limbs, miscarriages and stillbirths, he said.

"We may not know for a long time the long-term, chronic effects of PCBs on humans," Gunter said. "They can take decades to show up. We don't experiment on humans, so we may have to wait for a tragic accident to know for sure."

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