Washington Star 9/24/76

Effect of PCB Chemical Analyzed

Are Alarms Over Breast-Feeding Premature?

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Although health and environmental experts are disturbed by recent findings indicating the presence of industrial chemicals called polychlorinated biphenyls (PCBs) in mothers' milk, they feel that it would be premature to warn nursing mothers against breast feeding.

This was the consensus of pediatric experts and federal officials who met yesterday at an all-day special session called by the Department of Health, Education and Welfare.

The meeting focused on what advice to give mothers in light of a preliminary Environmental Protection Agency study that found detectable amounts of PCBs in 18 of 20 samples of milk taken from nursing mothers in 11 states including Maryland and Virginia.

The average amount of PCBs in the fat portion of the milk was 1.8 parts per million, but the levels ranged from 9 to 10.6 ppm, with the high in a Michigan sample. When the nationwide study, conducted by researchers at Colorado State University for the EPA, is completed more than 1,000 samples will be analyzed.

NO ONE KNOWS WHETHER the levels detected thus far are dangerous to human health, but the experts assembled at the National Institutes of Health yesterday worried about the potential impact since PCBs experimentally fed in higher doses to animals have produced a variety of toxic effects.

Susceptibility differs among species, but health effects have included skin rashes and discoloration, liver tumors and reproductive problems, said Dr. Albert Kolbye of the Food and Drug Administration.

Particularly disturbing was a study of rhesus monkey mothers and infants by Dr. James R. Allen of the University of Wisconsin Medical School. Mothers fed PCBs in their diets had more stillbirths and miscarriages, and when their pregnancies did succeed the nursing babies were affected.

The infant monkeys tended to be smaller than normal, suffered skin discoloration, swollen lips and eyelids, loss of eyelashes, and were more susceptible to infectious diseases, Allen said. And a few infants who underwent further study later seemed to suffer from behavioral and learning defects, he said.

Allen estimated that, at the lower PCB feeding levels, the monkey milk had roughly 10 times as much PCB contamination as that seen in humans in the EPA study.

WHILE THE FDA's Kolbye felt that monkeys can be "fairly good predictors for humans," he cautioned that the results from the Wisconsin study might not be directly applicable since the PCB preparations fed to the monkeys differed from the PCBs that would normally be ingested by humans. Different forms of PCBs vary in toxicity and in the degree of contamination by other chemicals.

Concerned about the margin of safety, Kolbye concluded that "the recent work of Dr. Allen raises questions which deserve further investigation."

Human evidence of the damaging effects of PCBs comes only from poisoning accidents — in 1968, for example, more than 1,000 Japanese ate rice oil contaminated with PCBs — but the effects of long-term environmental exposure to PCBs at lower levels have not been measured.

In the 45 years that PCBs have been manufactured, over 1 billion pounds have been produced in the United States for a variety of industrial uses.

The chemicals slowly made their way into the nation's environment, but the alarm was not sounded until 1966, when PCBs were detected in the tissues of wildlife.

SINCE THEN the uses of PCBs have been cut back voluntarily — the chemicals now are primarily used in enclosed electrical circuitry. But, noted the chairman of yesterday's meeting, Dr. David Rall, director of the National Institute of Environmental Health Sciences, "This is not a problem that is going to go away." PCBs are persistent compounds that slowly build up in the fatty tissues of animals, including man.

FDA officials in recent years have sought to restrict the intake of PCBs in foods as well as food packaging.

MONS 036600