

Cancer

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fully explain how breast cancer develops. The breast is rich in adipose cells, and carcinogens that accumulate in these fat tissues may be responsible for inducing cancer rather than the fat itself, or the fat alone. Environmental contamination of human breast milk with PCBs, PBBs and DDE (a metabolite of the pesticide DDT) is a widely acknowledged phenomenon. These fat-soluble substances are poorly metabolized and have a long half-life in human tissue. They may also interact with one another creating an additive toxic effect, and they may carry what are called "incidental contaminants": compounds like dibenzofurans, dioxins [2,3,7,8-tetra-chlorodibenzo-p-dioxin or TCDD] considered to be the most toxic synthetic chemical known to science ("Dueling Studies: How two Industries Created a Fresh Spin on the Dioxin Debate" by Jeff Bailey, *The Wall Street Journal*, February 20, 1992).

But what is outrageous in the discussion about human breast milk poisoning is that little or no mention is made of the possible effects on the women themselves.

Among the established effects of these substances are: liver dysfunction, skin abnormalities, neurological and behavioral abnormalities, immunological aberrations, thyroid dysfunction, gastrointestinal disturbances, reproductive dysfunction, tumor growth and enzyme induction. Serious concerns have been raised about the risks that this contamination entails for infants who are breast-fed. But what is outrageous in the discussion about human breast milk poisoning is that little or no mention is

made of the possible effects on the women themselves, particularly since it is known that most of these substances have estrogenic properties (that is, they behave like estrogen in the body). It is as if the women, whose breasts contain these carcinogens, do not exist. We witness the paradox of women being made invisible, even while their toxic breasts are put under the microscope.

THE PESTICIDE STUDIES

Very recently some scientists have at last begun to look at the chemical-breast cancer connection. In 1990 two Israeli scientists from Hebrew University's Hadassah School of Medicine, Elihu Richter and Jerry Westin, reported a surprising statistic. They found that Israel was the only country among 28 countries surveyed that registered a real drop in breast cancer mortality in the decade 1976-1986. This was happening in the face of a worsening of all known risk factors, such as fat intake and age at first pregnancy. As Westin noted, "All and all, we expected a rise in breast cancer mortality of approximately 20 percent overall, and what we found was that there was an 8 percent drop, and in the youngest age group, the drop was 34 percent, as opposed to an expected 20 percent rise, so, if we put those two together, we are talking about a difference of about 50 percent which is enormous."

Westin and Richter could not account for the drop solely in terms of demographic changes or improved medical intervention. Instead, they suspected it may have been related to a 1978 ban on three carcinogenic pesticides (benzene hexachloride, lindane, and DDT) that heavily contaminated milk and milk products in Israel. Prior to 1978, Westin said, "...at least one of them [pesticides] was found in the milk here at a rate 100 times greater than it was in the US in the same period, and in the worst case, nearly a thousand times greater." This ob-

servation led them to hypothesize that there might be a connection between the decrease in exposure following the ban and the decrease in breast cancer mortality.

The pesticides that were contaminating Israeli milk are known as inducers of a superfamily of enzymes called the cy-



tochrome P450 system. These enzymes can promote cancer growth, weaken the immune system, and destroy anti-cancer drugs. Westin and Richter believe that these induced enzymes could have increased the virulence of breast cancer in women and therefore increased the mortality rates. They speculated that when the pesticides were removed from the diet, there was a situation of much less virulent cancer and the mortality from breast cancer fell.

Westin and Richter are convinced that there is a critical need to increase awareness about environmental conditions and cancer. Health care clinicians, for example, could play an important role in the detection of potential exposures to toxic chemicals that might be missed in large studies. "It's a question of a mindset and of programming and training and activating the medical profession and the health professions to keep their eyes and ears open for such possible associations," said

Richter. "This is not necessarily expensive. It's a question of awareness and professional commitment."

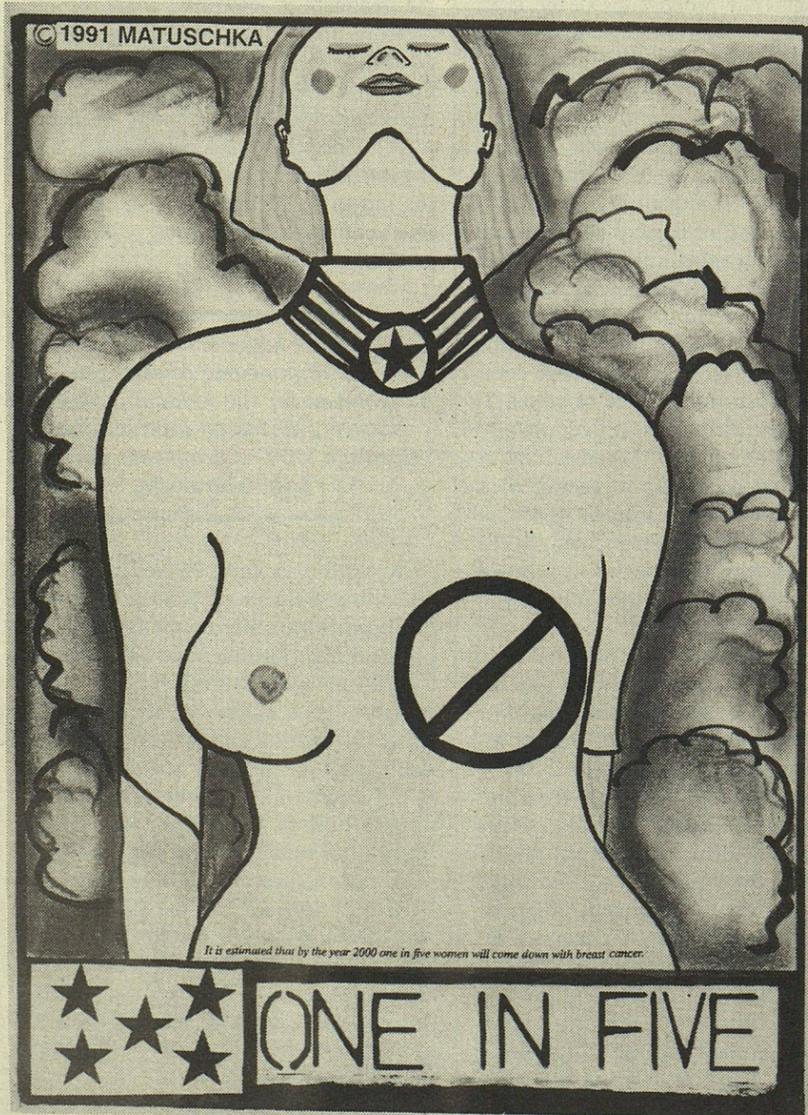
This is a refreshing view since it encourages individual physicians to ask questions about work environment, living quarters, dietary habits, etc, that could provide important clues about the cancer-environment connection. Epidemiological studies, as currently conducted, are not that sensitive in identifying low levels of risk, and the long latency periods of some cancers may not be adequately taken into consideration. Needless to say, the relevant questions are not usually asked of cancer patients.

Other studies are beginning to directly measure chemical residues in women who have breast cancer compared to those who don't. Dr. Mary Wolff, a chemist at New York's Mount Sinai School of Medicine recently completed a pilot study with Dr. Frank Falk (then at Hartford Hospital in Hartford, Connecticut) that has just been published in *The Archives of Environmental Health*. In this case-controlled study, Falk and Wolff found that several chemical residues from pesticides and PCBs were elevated in cases of malignant disease as compared to non-malignant cases.

The study involved 25 women with breast cancer and the same number of women who had biopsies but did not have breast cancer. The results showed differences significant enough to interest the national Institute for Environmental Health Sciences which will fund a larger study, a collaboration between Wolff and Dr. Paolo Toniolo, an epidemiologist at New York University School of Medicine and one of the authors of a study conducted in Italy on the role of diet in breast cancer. Wolff and Toniolo's new study will look at the level of DDT and its metabolites in the blood

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ART FOR LIFE



BETH DULIN

Before her activism against breast cancer started in 1991, Matuschka made "art for art's sake." But that has all changed. Now she makes it her life's mission.

"I was never devastated about losing my breast," explains the former fashion, lingerie, and artist's model. "I was devastated about losing my life."

Her mother died at the age of 41, after a double mastectomy and a hysterectomy failed to eradicate cancer. For four years Matuschka's mammogram did not show the marble-sized tumor that had been growing in her body for that same amount of time. But she knew, anyway. "I began to think something was wrong by the way my face looked. It was the same way my mother looked."

After her mastectomy, Matuschka stayed home for six months, taking chemotherapy and trying to rehabilitate herself. She did this by changing her diet and lifestyle to macrobiotics.

"I got into it because I felt I had just been handed my finality papers." It was a last ditch effort. And it worked.

It was during this time she started the artwork, for which she has received much attention. WHAM (Women's Health Action Mobilization) was the first to discover her. Through her involvement with WHAM, she started BHAM (Breast Health Action Mobilization) with two other women whose mothers also died of breast cancer. "As a founder of BHAM, my job is to get as much media coverage through my art work and articles as I can."

In her politicking against breast cancer, Matuschka pushes some major reforms. "Initially, there has to be more information on prevention. There needs to be more distribution of adequate information to women regarding mammography screening and baseline self-examinations as well as options and treatment."

Matuschka sheds light on the fact that ICI (Imperial Chemical Industries), the

manufacturers of tamoxifen, are the major sponsors behind Breast Cancer Awareness Month. (see "Tamoxifen. Is it worth the Risk?" NDFW Nov/Dec 1992) Few people know "this gives them the right to approve or disapprove the materials that are given to the press. This is why there is no concentration on prevention," she explains. "There are almost 200,000 new cases of breast cancer in this country each year. Many more than that are given tamoxifen as a treatment. At the rate of \$100 a month per woman, the profits are wonderful. And this idea of using tamoxifen in high-risk women as a preventive measure is scary because women using tamoxifen are subjected to a higher rate of liver and uterine cancer."

Instead, Matuschka would like to see "more research which would monitor macrobiotic women and women eating the standard American diet, to ascertain if there is an increased risk due to diet. They'll do it with drugs, but they won't do it with food, because the bottom line is cash. We can go to the moon and shoot pictures of the solar system into our TV sets and we can x-ray the earth for mineral deposits. But we can't invent tests for early cancer detection that are more accurate than the mammogram machine. The engineers and whiz brains aren't motivated to put their minds into causes on earth—they prefer to play in the stars where people don't live and die."

Finally, Matuschka would like to see the day when one-breasted actresses, models, and artists are accepted into the mainstream. "I do not cover up the fact that I had a mastectomy. To the contrary, my recent efforts accentuate the fact that I am missing a breast. This is a statement to let people know that breast cancer cannot be concealed any longer." ▲

Those interested in Matuschka's artwork for purchase or display, should contact her at 212-722-2131, 150 East 87th Street, New York, NY 10128.