Background

More American women have died of breast cancer in the past two decades than all the Americans killed in World War I, World War II, the Korean War and the Vietnam War combined.[1] The average woman killed by breast cancer loses 20 years of her life. Thus with approximately 46,000 American women killed each year by breast cancer, we are now losing nearly a million person-years of life each year from breast cancer.[2] The costs of this epidemic are incalculably large.

About 182,000 new cases of breast cancer arise each year among U.S. women.[2] Furthermore, since 1940, the incidence (occurrence) of breast cancer has been creeping upward 1% each year. This relentless increase cannot be explained by an aging population or by better detection such as mammography screening.[2] The 1% annual increase is real. Since 1940, a woman's chance of getting breast cancer has doubled.[3]

Everyone now accepts that breast cancer has environmental and "lifestyle" causes. Two basic facts make this conclusion inescapable. First, breast cancer incidence is five times as high in some countries as in others. Secondly, when women migrate from a country with low incidence of breast cancer to a country with high incidence, their daughters acquire the breast-cancer risk prevailing in the high-incidence country.[4] Clearly, something in the environment (air, water, soil, food, or electromagnetic spectrum [for example, x-rays]) is at work here.

Until recently, the search for causes of breast cancer has ranged from nonexistent to lackadaisical --perhaps because of racism (the most rapid rise in breast cancer is occurring among African-American women[2]), or perhaps because in the U.S. women are simply not valued as highly as men. (We know, for example, that in the U.S. women's work is not valued as highly as men's --women are paid only 70% as much as men for equal work.[5])

For years, breast cancer research (centered at the National Cancer Institute [NCI] in Bethesda, Maryland) has focused not on prevention but on therapy and treatment --earlier detection, better chemotherapy, better radiation, and better surgery.[6] These approaches have allowed many women to survive the disease (most of them without their breasts) but they have done little or nothing to prevent the scourge.

This non-preventive approach has been promoted aggressively by "Breast Cancer Awareness Month," an annual campaign that surfaces every October, sponsored by 17 governmental, professional, and medical organizations, including the National Cancer Institute.[7]

Breast Cancer Awareness Month was initiated in 1985 by a British chemical conglomerate called Imperial Chemical Industries (ICI), now known as Zeneca Pharmaceuticals. Breast Cancer Awareness Month is "focused on educating women about early detection of breast cancer."[7] Breast Cancer Awareness Month has promoted the slogan, "Early Detection Is Your Best Prevention," but this is nonsense --if your cancer can be detected it's too late to prevent it. Breast Cancer Awareness Month -- with all the authority of those 17 sponsoring organizations -- consistently diverts attention away from real prevention.

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According to a recent investigative report on Breast Cancer Awareness Month (BCAM) by Monte Paulsen (DETROIT METRO TIMES, May, 1993), "ICI has been the sole financial sponsor of BCAM since the event's inception. Altogether, the company has spent 'several million dollars' on the project, according to a spokeswoman. In return, ICI has been allowed to approve --or veto --every poster, pamphlet, and advertisement BCAM uses."[8] Thus the lack of a prevention message from Breast Cancer Awareness Month has not been accidental, and the 17 sponsoring agencies have adopted and endorsed Imperial Chemical's program and message.

Breast Cancer Awareness Month thus reveals an uncomfortably close connection between the chemical industry and the cancer research establishment in the U.S. Imperial Chemical --with revenues of $14 billion --is among the world's largest manufacturers of pesticides, plastics, pharmaceuticals and paper. ICI is also a major polluter. For example, one of its Canadian paint subsidiaries has been held responsible for 30% of all the toxic chemicals dumped into the heavily polluted St. Lawrence River which separates the U.S. from Canada.[9]

In recent years, breast cancer research has begun to focus somewhat more on causes, but until very recently the emphasis has been on "lifestyle" factors --specifically obesity, alcohol, fat in the diet, age at first pregnancy, number of pregnancies, breast feeding, and so forth. Six years ago, 600,000 women wrote letters to Congress saying they wanted federal researchers to cast a wider net in the search for causes of breast cancer.[6] Two years later, SCIENCE magazine titled a major story, "Search for a Killer: Focus Shifts from Fat to Hormones."[3]

Actually hormones have been at the center of breast cancer research for at least 20 years because everyone agrees that 30% of breast cancers can be explained by exposure to naturally-occurring estrogen, the female sex hormone.[10] Breast cancer may be caused by other things as well, but exposure to natural estrogens in the blood stream is widely accepted as an important cause.) After a woman's period begins, each month her blood stream is flooded with natural estrogens. If she has a baby, the estrogen flow is interrupted. If she breast feeds, the estrogen flow is interrupted. When she goes through menopause, the estrogen flow is greatly diminished.

One of the effects of estrogen is to cause cells to grow in the breasts. Many studies have now confirmed that women who start menstruating later than the average and who go through menopause earlier than the average have a reduce likelihood of breast cancer --presumably because they have a reduced exposure to estrogen. Women who have their first child early have a reduced risk. Women who have many children have a reduced risk. Women who breast feed have a reduced risk.

After a woman goes through menopause, her natural flow of estrogen is greatly reduced. In the past 20 years, about 30% of American women aged 50-65 have been taking estrogen replacement pills after menopause.[11] There are real benefits from this "estrogen replacement therapy" (or ERT) --reduced osteoporosis (thinning of the bones) and reduced likelihood of death from heart disease. Unfortunately, taking ERT pills for 10 years increases a woman's chances of getting breast cancer by anywhere from 30% to 100%, and the longer she takes ERT the worse her outlook for breast cancer.[11,12,13]

In the past 5 years researchers have begun asking, "If some pesticides and plastics and other chlorinated chemicals can interfere with both male and female sex hormones in wildlife and humans,[14] and if 30% of breast cancer is known to be caused by naturally-occurring female sex hormones, isn't there a reasonable likelihood that some of these chlorinated chemicals contribute to the rising incidence of breast cancer?" It seems a reasonable enough question.

Researchers Devra Lee Davis and Leon Bradlow with Cornell University formally proposed a hypothesis, suggesting ways in which environmental estrogens (or, as they are sometimes called, xenoestrogens --"xeno meaning "foreign") might cause breast cancer.[15] The research world began to buzz with interesting new work, asking whether chemicals that mimic, or block, estrogens might contribute to breast cancer.
It seemed a rather straightforward and obvious scientific question to be asking—and one with great consequences for public health. But to the chemical industry it looked like something more than merely an important public health question. With billions of dollars riding on the outcome, they saw it as a political struggle, less about saving lives than about maintaining profits, power and, above all, control. The Chemical Manufacturers Association (CMA) and its subsidiary, the Chlorine Chemistry Council (CCC), quickly developed a strategy to protect their interests against those of the 180,000 women afflicted by breast cancer each year. (See REHW #495.) They hired a scientist to begin casting doubt on the Davis/Bradlow hypothesis by saying this line of research is a dead end, a huge waste of time and taxpayers' money. (Manufacturing doubt is a strategy that has served the tobacco industry handsomely for 50 years, and the chemical industry has now adopted it—all, of course, in the name of "good science.") And they hired a sleazy, third-rate public relations firm—Mongoven, Biscoe and Duchin of Washington, D.C.—to develop a plan for discrediting Devra Lee Davis herself.

[Continued next week.]

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Descriptor terms: breast cancer; organochlorines; good science; mortality statistics; morbidity statistics; african-americans; women's wages; nci; breast cancer awareness month; imperial; chemical industries; zeneca pharmaceuticals; detroit metro times; monte paulsen; st. lawrence river; canada; hormones; estrogen; estrogen replacement therapy;