

# OFF THE BEAT

## Don't Let Toxic Chemicals Go To Your Head

Day after day scientific labs churn out more devastating information about the toxic potential of the 50,000 drugs, 36,000 pesticides, 7,000 food additives and hundreds of thousands of other chemicals in the American environment. Vinyl chloride, heptachlor, chlordane, DDT, menopausal estrogens, Red No. 2 cause cancer; sulfur dioxide, carbon monoxide and photooxidants trigger asthma and heart attacks; birth control pills induce stroke; cigarettes lead to emphysema and lung cancer—ad nauseam. If you're concerned about what all these chemicals are doing to you, take heart; this disseminator of the bad news worries, too. In fact, her head is reeling from a toxic chemicals overload!

If you think I'm kidding, consider some of the anxieties that have run through my head in the course of a day. First off, I crawl out of bed, my thoughts turning to the aroma and taste of freshly ground and brewed coffee. Yum. Then I think—uh, oh—not more than two cups. Otherwise I might be courting bladder cancer, peptic ulcers and heart disease. As I make my way to my little kitchenette, a cockroach invariably greets me. I reach for my trusty pesticide can and let him have it, wondering what chronic pesticide exposure is doing to my brain and nervous system.

In the bathroom I down some vitamin C pills to ward off a cold I'm getting and to counter the extra stress I expect that day. Then I recall that I took some aspirin earlier and that the vitamin C might keep the aspirin from being eliminated from my body. Now it's off to work. As I pass the District of Columbia Lung Association building, a sign in the window reminds me that the air pollution index is dangerously high. Now I wish I'd taken a vitamin E pill to counter the smog.

Comes lunchtime—must make sure that I eat enough protein, vitamins, minerals and unsaturated fats to prime my liver enzymes so that they rid my body of dangerous foreign chemicals. And enough raw vegetables and whole grain products to expedite waste products through my body and avoid rectal cancer. After work I hold my breath as a bus expels toxic fumes in my face. Back in my apartment I reach for a cocktail. Too late I remember that I just took an antihistamine, and that it enhances the depressive effects of alcohol, causing drowsiness, mental dullness and inability to concentrate.

What I suspect is that many of us are letting toxic chemicals go *too* much to our



heads. And the culprits are no less than scientists and science funders who publish bad news in scientific journals without providing perspective on it.

For instance, scientists have used gas chromatography to detect pesticides in people in parts up to a billionth. But pesticides in such tiny amounts may not necessarily be doing anything baneful to the body. Then there is the grave danger of applying laboratory dress-rehearsals—tissue culture and animal experiments—to the human situation. Different cell lines and animal strains can react differently to the same chemical. Dosing animals with enormous amounts of chemicals is nearly always going to produce toxic effects. But how often are people exposed to such large doses? For instance, the defoliant 2,4,5-T was used to clear jungles in Vietnam during the Vietnam war. This chemical induces birth defects in mice and rats. But it has never been proved—spite of extensive efforts—that the chemical caused birth defects in Vietnamese children. And even supposing that chemicals were present in the human body in such large amounts as used in animals, how long do they stay there? In what forms? The reason DDT is relatively harmless to people is that it is quickly broken down by liver enzymes into DDE, a less toxic metabolite.

Even Government regulatory agencies have serious doubts over whether their lab tests can be extrapolated to people. For instance, it took the FDA 10 years to decide that Red No. 2 should be removed from the market. And apparently the most convincing reason for doing so was that high doses of the dye increased tumors in a sensitive strain of laboratory rats. At the

same time FDA Commissioner Alexander M. Schmidt said that foods on the market containing the dye could be sold until they were used up "because there is no evidence of a public health hazard."

And how about the good aspects of the many chemicals in our environment? Scientists rarely receive grants to explore the benefits. Yet without many of these chemicals our lives would be far less pleasant, comfortable and even, in many cases, less healthful. Alcohol is knocked for all its evils, but it can also restore the nasal mucosa and speed the flow of blood to the heart. Although a witch-hunt is on to condemn marijuana, Harvard investigators recently found that it can improve the appetites of cancer patients who suffer from nausea due to chemotherapy.

Now don't get me wrong. I know that there are very real toxic threats in our environment—lead poisoning in children, mercury poisoning in Japan, the kepone pesticide tragedy among workers in Hopewell, Va. Last August, state officials warned consumers not to eat bass from the Hudson River or salmon from Lake Ontario because researchers had found that the fish contained dangerously high levels of polychlorinated biphenyls (PCB's). Very young and old persons do not have the same liver-enzyme defenses against toxic chemicals that the general population does. Some persons were born with genetically defective liver enzymes. Improper diet can also impair the liver enzymes. I *do* advocate taking reasonable precautions against toxic chemicals: eating a wholesome diet, e.g. natural, whole-grain cereals instead of those larded with sugar and additives; telling the cigar smoker in the no-smoking section of the Metroliner where to get off; riding a bike instead of driving. (I once was the only person who came to an air pollution conference by bike; the scientists came by car.) What I *am* arguing for is that we stop letting the spate of bad news about toxic chemicals warp our perspective, wear down our health and use up our precious leisure hours.

For example, how many gallons of spring water should you lug from the supermarket to avoid toxic chemicals in drinking water? (I made it through seven.) How many hours should you devote to hand-picking bugs off tomato plants to avoid using a pesticide? (I made it through 15 minutes.) How many days should you stay in bed to avoid a high air-pollution index? (I've never stayed home one. Otherwise, I wouldn't be able to bring you all the bad news about toxic chemicals that is crying to be publicized.)

And it is especially time, in this bicentennial year, that we stop letting toxicologists and company deprive us of our American right to the pursuit of happiness. As one doctor laments: "They can't find that coffee causes cancer too. It's the only pleasure that I have left."

—Joan Arehart-Treichel