Parkinson's disease strikes 60,000 people each year in the U.S. More than a million Americans are living with the disease at any one time. [1] More people suffer from Parkinson's than from multiple sclerosis, muscular dystrophy and amyotrophic lateral sclerosis (Lou Gehrig's disease) combined.

Parkinson's is a progressive brain disorder that is almost always fatal, but the suffering can go on for years. The disease usually strikes people over age 60, but a few people get it before they reach 40.

Parkinson's begins when a certain class of brain cells begins to die, cells that produce a chemical called dopamine, which your body needs. Dopamine serves as a chemical messenger helping to control muscle activities. Loss of dopamine leads to the pro- gressive loss of muscular control, giving rise to a variety of symptoms: stiffness, tremor, slow movement, difficulty with balance, difficulty walking, a stooped-over, shuffling gait. As the disease progresses, the patient may develop difficulty speaking, symptoms of senility (dementia) similar to Alz- heimer's, and severe depression.

In recent years, an effective medication, levodopa (known as L-dopa), has relieved many of the symptoms of Parkinson's for many patients, at least for a period of time. In addition, transplanting dopamine-producing brain cells from dead fetuses into the brains of Parkinson's sufferers has delayed the progression of the disease in some cases. Nevertheless, Parkinson's remains a common but poorly-understood terminal disease.

The causes of Parkinson's disease have been debated for 150 years, with no resolution.

A breakthrough occurred in the early 1980s when a group of young people developed the symptoms of Parkinson's disease after taking an illegal drug called MPTP, which is similar to the narcotic pain killer meperidine (which is sold under the trade name Demerol).[2] MPTP is also similar in chemical structure to several pesticides and herbicides. [3-7]

Subsequently, symptoms of Parkinson's were induced in monkeys by feeding them MPTP.[3] This led the medical community to begin thinking of Parkinson's as a disease caused by chemical exposures. Early studies began to show a pattern: many people with Parkinson's have a history of exposure to pesticides, especially insecticides and herbicides.[4-7]

However in the early 1990s, Parkinson's was linked to a gene in a few Italian and Greek families,[8] and this sent researchers down into the brains of Parkinson's suffers has delayed the progression of this script has been repeated over the years in Love Canal, Bhopal, and hundreds of Woburns in the United States, where communities are contaminated. But what gets lost in the public's consciousness is the ubiquity of the chemical assault in communities across the country. There are hundreds of Woburns in the United States, where communities living next to chemical companies, paper mills, computer manufacturers, military bases, medical waste incinerators, and toxic dumps suffer an array of health problems related to their toxic exposures. When residents seek some kind of justice from these exposures, they are stymied by a compromised regulatory system that regularly protects corporate interests rather than public health. Contrary to conservatives' mantra, the problem is not too much government. The problem is government too much serving the needs of industry.

In another sense, however, Woburn has become a familiar script that reads something like this: Multi-billion dollar company poisons community. People get sick and die. Corporation denies the problem as long as possible, using its money to outlast desperate families seeking justice. When loss of the court case looks likely, corporation settles for an undisclosed sum in exchange for silence and a waiver of future liability.

This script has been repeated over the years in Love Canal, Bhopal, and in the bodies of DES daughters. Corporation names differ, but the outcomes are similar. Human lives are just the cost of doing business. The world goes on. After the damage is done, corporations crank up their public relations machines to project an image in which they bring "good things to life." Eventually the horror fades, replaced by images of horrors from other places.

That leaves environmental chemicals as the culprit for the vast majority of Parkinson's, according to the researchers who conducted this twin study. By announcing their results, they specifically pointed out that the search for causes of Parkinson's should now re-focus on environmental chemicals such as pesticides and herbicides.[10]

The twin study should provide comfort to family members of Parkinson's victims who have been fearful about their own future based on their genetic relationship to the victim.

However, the new study provides cause for concern among farmers, pesticide applicators, and people who live in farming communities where regular exposure to pesticides is unavoidable. Since the late 1980s, a steady stream of studies from around the world has shown again and again that a common thread among victims of Parkinson's is a history of exposure to insecticides and herbicides.[4,7,11-15]

Most recently a study showed that exposure to industrial solvents is linked to Parkinson's.[16] -Peter Montague (National Writers Union, UAW Local 1981/AFL-CIO)

THE NEED FOR CIVIC ACTION
by Gary Cohen[17] and Nancy Evans[18]

Many years have passed since the drinking water wells in Woburn, Massachusetts were contaminated.

In one sense, the tragedy stands as a singular event in the history of our nation. In an average middle class town, seven children died from leukemia due to toxic chemicals in their drinking water. Lives forever lost. A community forever scarred. A story captured in Jonathan Harr’s powerful book, CIVIL ACTION,[19] and now released as a major Hollywood movie.

The public health crisis extends well beyond individual communities and their polluting corporate neighbors. The reality is no place escapes this toxic nightmare. These facts highlight the problem:

* There are fish consumption bans in 40 states due to mercury

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contamination. In its latest report to Congress, the U.S. Environmental Protection Agency warned that 1.6 million children and women are at risk of mercury poisoning from even modest consumption of fish. (See REHW #597.)

* High levels of dioxin in breast milk mean that newborns get 80 times their lifetime "safe" dose of dioxin during their first six months of life. In June, 1998, CONSUMER REPORTS published test results that showed all the major baby food brands had alarming levels of dioxin in meat-based products.[20] Dioxin is an identified human carcinogen, known to disrupt the hormonal system of the growing child.[21] (See REHW #390, #391, #414, #463.)

* According to a National Academy of Sciences report, 70 pesticides that cause cancer in animals are allowed in commercial foods, as are 20 other chemicals considered probable human carcinogens.[22] Other pesticides permitted in food are known to interfere with the nervous system, the immune system or the reproduction system.[23] (See REHW #481, #493.)

Children are the most vulnerable to this toxic assault since their rapidly developing systems are more sensitive to these chemicals. [22,23] Cancer now kills more children under fourteen than any other disease. (See REHW #559, #588.)

We all live in Woburn. As a society, we are conducting an uncontrolled chemical experiment on our children and future generations. While the chemical industry continues to tout the safety of its products, every child born in this country harbors a host of toxic chemicals in his/her body. This is a profound violation of basic human rights and the sanctity of life.

We don't need more Woburns to convince us we have a problem with toxic chemicals and a regulatory and justice system that offers neither effective regulation nor justice. We simply need the political will to directly challenge the polluting companies and the government agencies that protect them. Without such civic action, Woburn will be a never-ending story.

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[1] See http://neuro-chief.e.mgh.harvard.edu/parkinsonsweb/Main/-IntroPD/Intro.html (omit the hyphen at the end of the first line, above.).


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[23] John Wargo, OUR CHILDREN’S TOXIC LEGACY; HOW SCIENCE AND LAW FAIL TO PROTECT US FROM PESTICIDES (New haven, Connecticut: Yale University Press,
Descriptor terms: parkinson's disease; neurological disorders; morbidity statistics; dopamine; levodopa; l-dopa; genetic causes of disease; pesticides; insecticides; herbicides; rural life; drinking water; woburn, ma;