Pesticides invade practically every aspect of our lives, from chemical-dependent farms to the wooden decks in our backyards. Pesticides are applied to the foods we eat, the schools our children attend, our offices, our public parks, and in our own homes and lawns. Many of us witnessed the spraying of toxic insecticides into our own communities this summer, pluming off the back of mosquito control trucks. Other trucks amble down our streets spraying herbicides targeting weeds. Such widespread chemical use exposes a broad array of people to an equally broad array of toxics. The result is that homeowners, teachers, children, landscapers, farmers, farm workers—almost anybody—are liable to suffer the health effects from exposure to a dangerous mix of chemicals.

The toxic body burden

As more chemicals are introduced into our lives, we carry the burden in our bodies, making us more susceptible to new exposures. This “body burden” was recently reported by the Centers for Disease Control and Prevention (CDC) when it released the Second National Report on Human Exposure to Environmental Chemicals¹ (which detected a total of 89 chemicals in the volunteers tested, including selected organophosphate pesticides, herbicides, pest repellents and disinfectants. The Environmental Working Group (EWG), in partnership with Mt. Sinai School of Community Medicine and Commonweal, released a similar study, Body Burden: The Pollution In People², in which subjects contained an average of 91 compounds, most of which did not exist 75 years ago. Unfortunately, testing for health effects of these chemical mixtures to which we are continually exposed is practically non-existent.

Many victims experience the health effects of toxic exposures without knowing the source of their suffering.

Pesticide poisoning

In today’s society, there are people who cope with exposure to a massive single dose of a pesticide and the resulting health effects, as well as those who deal with the more mysterious synergistic effects of low-level exposure to many chemicals over a long period of time. In both cases, many victims experience the health effects of toxic exposures without knowing the source of their suffering. They assume the chemicals present in their lives are safe—after all, how could the government allow to be marketed a product that is not safe? However, the U.S. Environmental Protection Agency (EPA) registration of a pesticide does not guarantee its safety. In fact, according to the 1986 U.S. General Accounting Office report, Nonagricultural Pesticides: Risks and Regulations, “EPA believes that no pesticide can be considered ‘safe.’” They are registered with a risk assessment review that defines acceptable degrees of risk with high uncertainty factors. For many chemicals, there is a serious lack of toxicity data. Furthermore, most pesticide products contain so-called “inert” ingredients that have not been adequately tested to address the public’s health concerns. Despite these alarming factors, toxic pesticides continue to be used every day. To make matters worse, as more people suffer, most health care providers receive just minimal training in environmental illness and cannot provide adequate care to pesticide exposure victims.

There are various symptoms a person may exhibit as a result of a pesticide poisoning. A common consequence of poisoning is multiple chemical sensitivity (MCS), in which a person’s body is no longer able to handle the onslaught of chemicals that exist in daily life because of impairment to their nervous and immune system. A person with MCS has to make drastic life changes to steer clear of the ubiquitous chemical nature of our society, avoiding what is commonplace for most of us. In addition to sensitivity, pesticides can trigger a number of other symptoms, including nausea, dizziness, headaches, diarrhea, aching joints, disorientation and inability to concentrate. Chronic pesticide exposure can affect fertility, development, and the onset of breast and prostate cancer, thyroid disorders, endocrine system disruption, learning disabilities, attention deficit disorder, neurological injury, and kidney and liver damage.
Pesticide incident monitoring

Considering the serious health risks that pesticides pose, it is logical that a monitoring system should be put in place to track their effects. This would be a valuable tool not only to identify needed changes in pesticide policy, but also to educate the public on the adverse effects of pesticides. However, ever since it shut down the Pesticide Incident Monitoring System in 1981, the federal government has no such system to record incidents of exposure. Presently, EPA relies on industry reporting of adverse effects from pesticides, a system that has been criticized as inadequate.

In response to this lack of adequate monitoring, Beyond Pesticides embarked on a campaign to collect and document pesticide poisoning cases. Over the years, countless stories have been recorded from pesticide victims throughout the country. These courageous voices, speaking out against the pervasive use of toxic chemicals in our country, are a strong foundation in Beyond Pesticides’ campaign for pesticide reform. In 1996, Beyond Pesticides released the stories of a multitude of these victims in the report Voices for Pesticide Reform: The Case for Safe Practices and Sound Policy, which reviewed pesticide poisonings collected from the 1970s to the 1990s in order to explain the human health and environmental effects of daily and common pesticide use. Since then, a whole host of pesticide poisoning victims have stepped forward and shared their story with Beyond Pesticides. Currently, Beyond Pesticides is creating a follow-up to Voices for Pesticide Reform, so as to expose the public health threat that continues to pervade American life. Cases of pesticide exposures in various realms – agriculture, school, home and garden, community and pressure-treated wood – will all be recounted. Following are just some of these documented reports that will be released.

Termite treatment sickens family and home

Loretta Hanes’ life was changed forever after, she reports, Orkin treated her Washington, DC home for termites in 1998. To this day, she is unable to re-enter the home that she still owns, due to the high level of contamination there. Orkin treated her home with permethrin, which, like all other synthetic pyrethroids, is a central nervous system poison. Research on the chemical has shown adverse effects on the immune system, enlarged livers, decreased female fertility and endocrine disruption. Elevated levels of this poison in a home are simply unacceptable, yet that was the state of Loretta’s home after the Orkin treatment she describes, and it is still in this contaminated state five years later.

Following the treatment, the Hanes family suffered numerous health problems, including neurological conditions and cardiovascular disease. They hired an occupational hygienist and environmental toxicologist to test their house for contamination, in order to document what in the house was making the family sick. The toxicologist’s report, written January 4, 2001, stated, “The level of contamination indicates that the house is not currently acceptable for human habitation.”

Loretta’s own doctor advised her and the rest of the Hanes family to “avoid living or staying for prolonged periods in the home until such time as it is remediated.” She relocated to an apartment, a move that she thought would be a temporary until her home could be saved. Unfortunately, the home never was saved and is still uninhabitable. The family can simply not afford the extravagance of cleaning the home that Orkin sickened with pesticides. Orkin will not take responsibility for contaminating the home by paying for its remediation, despite proof of unacceptably high levels of the pesticide they applied to it years earlier. In an effort to place corporate accountability where the family feels it belongs – with Orkin – the Hanes’ issued a complaint to the District of Columbia Department of Health’s Pesticide Enforcement & Certification Branch (PECB), alleging that Orkin made an ineffective termite treatment and did not properly use pesticides. An investigation by the PECB revealed, “Orkin violated several sections of the District of Columbia Municipal Regulations... during inspections and treatments to control the infestation.” These violations included:

- “use of a pesticide inconsistent with label directions”
- “making false or fraudulent records and reports”
- “making false or misleading statements during or after an inspection”
- “applying pesticides in a manner that may cause harm”
- “faulty, careless or negligent use of a pesticide”
- “application of a pesticide by an unlicensed or unregistered person”

In a meeting with Orkin regional and branch managers and the PECB, a settlement was reached in which Orkin would pay a $2,000 fine to the District of Columbia. Originally, the fine was set at $3,050. However, $1,000 was chopped off when it was agreed to dismiss charges of “faulty, careless or negligent use of a pesticide” and “application of a pesticide by an unlicensed or unregistered person.” The fine was reduced an additional $50 just because Orkin cooperated with the settlement agreement. Although Orkin did have to pay $2,000 to the government as a result of its misuse of pesticides, the Hanes family is still in limbo. The government fine has not allowed them to remediate their home. Selling the home is not a viable option since the contamination decreases its value considerably, besides the fact that it is a potential health threat to anyone who would choose to live there. The Hanes’ health and finances have both been compromised as a result of Orkin’s actions. The family is currently seeking legal action against Orkin.

Government employee put in harm’s way

An illegal mixture of pesticides poisoned South Carolinian Lou Ann Pack on August 18, 2002.
Lou Ann worked for the South Carolina Department of Transportation (DoT). She enjoyed the physical labor of working for the DoT. Being too energetic for simply flagging, she was transferred to raking of the asphalt. She was eventually transferred again to herbicide spraying of wildflowers on the interstate, in June 2000 – a transfer that increased her job risk quite a bit. Here, she would be working with dangerous mixtures of toxic herbicides each day, driving the truck that sprayed wildflowers along the Interstate.

Such risky work, combined with what she explained as her employer’s irresponsibility and disregard for human health, left Lou Ann with an illness she is still trying to overcome. For many weeks, Lou Ann was required to drive a truck with a broken air conditioner and spray chemicals in unbearable heat. She was forced to crack her window open, which may have contributed to a build up of chemical exposure to her body. The chemicals she sprayed at that time were only a small fraction of what her body would soon have to bear.

Lou Ann reported to Beyond Pesticides that one fateful day her boss instructed her to mix several chemicals together in a 300-gallon tank to use on the interstate. These included Transline (clopyralid), Glypro (glyphosate), Garlon 3A (triclopyr), Plateau (imazapic, ammonium salt), Ground Zero (bromacil), and Indue F. She was also told to mix Vantage (containing naphthalene) with Ground Zero and Indue F. Lou Ann mentioned that she was told not to write down in her daily work log that Transline was part of the mixture, and to make sure she did not tell anyone that she was mixing it with the other chemicals. According to Lou Ann, her boss had told her it was an experiment to see if the job could be done with one application instead of two. By trying to save resources in this way, her boss was creating an unauthorized toxic mixture with unknown effects. However, by the day's end Lou Ann would know firsthand what the dangerous cocktail was capable of. Although the mixture congealed, and just didn’t “look right” to Lou Ann, she felt pressure to go ahead with the work in order to maintain her good standing with her employer. At the end of the day, she decided to hand spray off the back of the truck. However, immediately after she stepped onto the back of the truck, she smelled a strong chemical odor and began to show symptoms of exposure. She became nauseated and dizzy, a severe headache came on, and her eyes began to tear. She began feeling confused and weak, and jumped off the back of the truck. She entered the truck's cab and put her face to the air conditioner for 20 minutes in an effort to dispel the symptoms. When she returned to the shop, everyone had left for the day. It was a Friday, so Lou Ann left work and went home. She was sick the entire weekend.

Scared of her illness, she went to work Monday and talked to her supervisor, asking if there was a doctor she could see. He responded with chaffing remarks that it was all in her head, but gave her a phone book to find a doctor. The doctor, as it turned out, was very suspicious that Lou Ann’s symptoms were linked to chemical exposure. In correspondence between a toxicologist and her regular practitioner, the toxicologist wrote that he thought her illness was indeed due to exposure to the pesticides she was spraying. He stated, “Of her many possible toxic exposures – even the ‘inert’ agents listed, including a glycol ether, ethanol, diethanolamine and ethylenediamine tetraacetic acid (EDTA), have significant toxicity – naphthalene seems a good fit [with] her initial symptoms. Its inhalation toxicity is usually measured by its low vapor pressure, but when made into an aerosol by spray nozzles, it could readily gain access to skin and the upper airway in droplet form, and thus work its toxic mischief. Alternatively, the possible exposure to the above ‘inert’ ingredients might be playing a role, and the toxic effects of a combination of the above agents can only be speculated.”

Since her exposure, Lou Ann’s supervisor was written up for the illegal mixing of chemicals, and the spray truck she was using was disassembled.

These pesticide-poisoning victims and many others will be featured in an upcoming report from Beyond Pesticides chronicling the effects of commonly used pesticides on society. If you would like to share your story, please contact Beyond Pesticides at (202) 543-5450 or write to Beyond Pesticides, 701 E Street, SE, Suite 200, Washington, DC 2003.

Endnotes