

## **Multiple Chemical Sensitivity and Homelessness**

*The costs of Homelessness*

### **ARE WE PROTECTING PEOPLE WHO ARE SENSITIVE TO PESTICIDES?**

It is estimated that approximately 6.1% of the population will have acute reactions to pesticides drifting in their communities. [See Appendix A] On a National level, the prediction would be that 6.1% or potentially 1,902,335 Canadian citizens could be made ill by any blanket spraying of pesticides in our communities. People often become more sensitive with each pesticide exposure, until ultimately they can become so exquisitely sensitive, that they can no longer tolerate even small amounts of pesticide exposures without evoking life threatening symptoms. It is predicted that 0.1% of the population falls in this category and this percentage would likely increase with more pesticide exposures. Sensitizing any population creates more people sensitive to pesticides, other chemicals and other natural allergens [like peanuts or mold] as well as inducing other illness and thus raising health costs.

### **HEALTH RISKS?**

"It is known that there is a connection between chemical pesticides and genetic damage, brain tumors, leukemia, lymphoma and some other types of cancers; that pesticides can cause birth defects and interfere with proper sexual differentiation, reduce intellectual abilities, trigger allergies, immunotoxicity, neurotoxicity and other abnormalities, and that the genetic damage and related health problems may also be transmitted to children of the affected individual and subsequent generations." (Physicians and Scientists for a Healthy World, Feb. 2000)

"Pesticides are known to play, or are suspected of playing, a role in a myriad of diseases and developmental abnormalities, including cancer (brain, breast, stomach, prostate and testicles), childhood leukemia, reduced fertility, damage to the thyroid and pituitary glands, lowered immunity, developmental abnormalities and behavioural problems." (p. xviii, Federal Report - The Standing Committee on Environment and Sustainable Development (2000) "Pesticides: Making the Right Choice for Protection of Health and the Environment." )

"The most widely used pesticides function by disrupting neurological cellular function...emerging data suggest that neurotoxic and behavioural effects may result from low-level chronic exposure to organophosphates and carbamate pesticides. These are commonly used pesticides in Canada: found in ... lawn and garden pesticides..." (Dr. K. Martin, MD, CCFP- EM, 1996)

"By disrupting hormone secretion, endocrine disruptors cause physiological imbalance. In humans, for example, obesity, diabetes and bone decalcification can be the consequences of this kind of hormonal imbalance...linked to breast, prostate and testicular cancers, endometriosis, abnormal sexual development, lowered male fertility, damage to the thyroid and pituitary glands, lowered immunity and behavioural problems..." (p. 38, Federal Report- The Standing Committee on Environment and Sustainable Development (2000) "Pesticides: Making the Right Choice for Protection of Health and the Environment.")

No one can really know what will happen to a child on medication or an even an adult using any type of chemical when there are also pesticides being used. "A major, long-term challenge for regulatory agencies is to develop defensible means of combining exposure assessments in a manner that provides meaningful ways of determining potential health risks from total exposures to many chemicals. Lacking are methods to characterize potential toxicological risk." (US EPA, April 2000)

### **NO EASY ESCAPE**

If any community were considering blanket spraying in residential areas, it would be prudent to note that studies show that there is no protection from staying indoors. One study found that 5 to 6 hours after pesticide spraying began; indoor concentrations exceeded that of outdoors. "The initial benefits of remaining indoor during spraying may not persist" as toxins in outside air move indoors with normal daily activities. (K.Teschke, Environmental Health Perspectives, Vol. 109, Number 1, January 2001)

Outdoor pesticides may persist a very long time when they migrate indoors because there is no sunlight or rain to break them down. Thus community pesticide fogging would lead to a community of homes that may be giving chronic exposure to pesticides. We know that those already sensitive to these products should not stay in their homes and may not be able to go home again until these residues are eliminated. How safe is it for the other vulnerable groups? This is completely unknown but indications are that this type of exposure puts children, fetuses, woman and the elderly at risk.

## WHO WOULD COMPENSATE?

If a community sprays outdoor pesticides it is only right that compensation should be granted to those who have to leave their homes due to pesticide drift. "For individuals who suffer particularly strong symptoms from pesticide exposure, receipt of advance notice of nearby pesticide use means that they must vacate their residences and seek an alternate safe location at the time of the pesticide application and for some days following. According to evidence provided by this population, this involves an expenditure of, typically, one thousand dollars per instance for alternate accommodation and expenses, lost business/income, etc. Further, multiple instances could occur throughout the season and there is an additional problem of finding "safe" accommodation.

Those sensitive to chemicals in our society have considerable difficulty finding safe places in which to live much less move to, for unpredictable and lengthy periods of time. This population includes people with autoimmune diseases, asthma and environmental sensitivities. Unless some consideration is given to the needs of this population, they will not be able to regain their health in order to take their rightful places as productive members of society, and will be a burden on society - when all they need is a healthy environment in which to live.

This group would include individuals not only sensitive to pesticides but also with significant sensitivities to routinely used cleaners and chemicals. The problem is acute for some members of this group, a number have already been driven from their homes by pesticide applications in the past. An indication of just how serious and widespread the problem of housing is for this group can be gained from a study done on homelessness among sufferers from multi-chemical sensitivity in western Massachusetts. The study indicates that the rate of homelessness among MCS sufferers is significantly higher than the homelessness rate within the general population. Within the general population the homelessness rate is less than 1%. A staggering 57% of MCS sufferers have been homeless at one time or another. At the time of the study, 10% had no homes and another 10% were staying in temporary accommodations.

In Western Massachusetts 62% of the homeless MCS population falls in the low-income bracket - a population that cannot afford healthier housing. Shelters for the homeless are often not a viable alternative for people with MCS and so will not be apparent in this population. The negative implications of toxic housing also include a large range of health problems including asthma in children.

(This information comes from a survey done by the Environmental Health Coalition of Western Massachusetts, between March and August 2000. For more information, contact the Environmental Health Coalition of Western Massachusetts, P.O. Box 614, Leverett, MA 01054).

A serious problem would be created by the spraying of cholinergic pesticides in residential areas. These have already been found to be immune suppressants. Malathion, as discovered in a recent study, can seriously damage and suppress the immune system of amphibians and mammals for several weeks so that they are less able to fight off simple infections from viruses (like West Nile virus) and bacteria - this at trace levels of less than 1ppm or 75ppb.

“In human terms, impaired immune systems could lead to people dying of common colds or other infections that a healthy person would be able to resist easily...

... That was the whole take-home message," he said. "The pesticides act exactly the same way as a medical drug they will give to suppress your immune system."

-Immunologist Brian Dixon, University of Waterloo

Mr. Dixon said he was "shocked" that negligible amounts of pesticides were so biologically active and could mimic one of the most powerful drugs in the arsenal of modern medicine. "That was the whole take-home message," he said. "The pesticides act exactly the same way as a medical drug they will give to suppress your immune system." Wednesday, April 24, 2002 Globe and Mail.

It is imperative to stop the knee jerk reactions regarding the use of pesticides. Let us resist making the problems worse for those already suffering from chronic illnesses. Mosquitoes can be reduced by safer means than by fogging pesticides. Let us not make the cure worse than the problem especially for those vulnerable to both WNV and pesticides. It must be noted that in the year 2001, the United Nations Commission on Human Rights recognized that freedom from environmental toxins is a basic human right.

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## APPENDIX [A] Halifax Regional Municipality Staff Report:

“Acute effects are illnesses which result in the short term from one or more exposures to pesticides, and are likely to re-occur. A certain proportion of the population will be subject to specific diseases and symptoms ranging from minor to very severe, as indicated below:

### Acute Health Effects of Pesticide Exposure

Least Severe to Most Severe --->

Perception	Mild		Severe		Potentially Life-Threatening		
General objection to pesticides	Flu-like symptoms	Asthmatic / allergic reaction	Heart arrhythmia	Neurologic symptoms (seizures)	Severe asthmatic reaction	Severe heart arrhythmia	Anaphylactic shock

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