

PESTICIDES IN OUR BODIES /A TOXIC LEGACY

By Paule Hjertaas, Regina

On Monday October 18th, 2004, I attended with trepidation a conference in Montreal, Quebec, on PESTICIDES IN OUR BODIES /A TOXIC LEGACY. Details on topics and speakers can be found at <http://www.cap-quebec.com/ang-activities.html#pesticide>. The room for 450 people was almost full, and the coverage of the conference by Quebec media was remarkable, outstanding, and still on-going.

The conference medical sponsors included the Quebec College of Family Physicians (QCFP), The Canadian Association of Physicians for the Environment (CAPE), and Physicians and Scientists for a Healthy World.

Speakers were all people with long lists of degrees and expertise in the field.

John Laseter, Ph.D, CEO and Laboratory Director of Accu-Chem Laboratories (1), USA, gave a taped power point presentation. He spoke on BODY BURDEN OF PESTICIDES AND CHEMICALS. He is an internationally known expert in biochemistry and analytical chemistry. Occupational and environment toxicology is one of his and AccuChem's areas of specialization. The highlights of his presentation are that each of us carries a chemical body load, the variety of that body load, and the significance of that bio-active body load such as endocrine-disruptive substances. Dr Laseter also reviewed routes of exposure and appropriate detection test for various classes of pollutants in body tissues.

His most striking slide was the one comparing the amount of a chemical found in blood or urine, to what it represented of body burden. For some chemicals, what we detect is as little as 1/1000th of the amount still present in the tissues. He also brought up the issue of the real life of pollutants in the body. Persistence of a chemical is evaluated in $\frac{1}{2}$ life, the time it normally takes to eliminate $\frac{1}{2}$ the chemical from the body. However, when the quantities retained get small, the rules change and chemicals can be retained a very long time.

Sophie Dahan, Ph.D, Senior Scientist and Program Leader, Cell & Molecular Biology, Montreal, followed. After an introduction on the widespread pollution of Canadian food and environment, such that the average peach in Canada contains residues of 31 pesticides, Ms Dahan spoke on WIDESPREAD CONTAMINATION - HEALTH EFFECTS, which essentially reviewed the findings of the Ontario College of Family Physicians (2), and reiterate their findings of "consistent evidence of health risk to patients from exposure to pesticides", that children are particularly vulnerable to pesticides, and that there is no evidence that one class of pesticides is safer than another. She ended with their strong recommendations that people reduce their exposure to pesticides, a message very well receive by the audience of 450 people.

Then the toxicologists Onil Samuel and Mathieu Valcke, Human Toxicology, National Institute of Public Health Quebec, released their new STUDY ON BODY CONTAMINATION OF CHILDREN IN QUEBEC. The study showed that over 98 % of the children studied are carrying a body burden of organophosphate pesticides, and 15 % of those whose parents had used chlorophenoxy herbicides (2,4-D, mecoprop, dicamba) excreted them in their urine. Their conclusion is that, in the presence of these chemicals in the human body and the lack of knowledge of their effects at those levels and in combination, pesticide reduction efforts such as bans on cosmetic pesticides are valid and justified approaches to reduce body load of pesticides. In fact, reduction is the only effective approach to reducing body burden.

Both remaining speakers were Ontario environmental medical doctors who deal every day with patients who have been poisoned by the man-made environment: Lynn Marshall, MD FAAEM FRSM, Medical Director of the Environmental Health Clinic, Sunnybrook & Women's College Health Sciences Centre, Toronto, and Jennifer Armstrong, MD, who runs the Environmental Health Centre, Ottawa. Both doctors, as well as the other six environmental doctors in Ontario each handle approximately 2500 patients per year, and Dr Armstrong's waiting list is 18 months.

They discussed the definition of MCS (Multiple Chemical Sensitivity), its causes, diagnosis and treatment, and some of the genetic factors that make MCS patients more sensitive to pollutants. MCS patients have large measurable body burdens of chemicals, including pesticides. The demand for environmental doctors has been present in Ontario for decades, but there were many obstacles built into the system, including the lack of an accepted MCS definition until 1999, the lawsuit of Dr Krop by the College for practicing a different type of medicine, and finding a medical code so MDs could be paid for their services. Nova Scotia is the only other Canadian province to have a treatment center for MCS patients.

Dr Pierre Auger, director of Public Health, Quebec Ministry of Environment, has seen enough cases of environmental illness to make him a firm believer in the negative effects of widespread pollution, including pesticides, on human health. Quebec now has a facility to diagnose Multiple Chemical Sensitivity, but does not yet offer treatment. Changing this outcome was one of the major goals of the conference through the launching of The Allergy and Environmental Health Association of Quebec, (AEHAQ) (3). AEHAQ is a non-profit organization that defends the rights of people who have been incapacitated by buildings or other contaminated environments. AEHAQ is greatly concerned about the rising epidemic of preventable illness and injury from exposure to environmental and chemical toxins.

According to a study (4) published in the peer-reviewed journal, Environmental Health Perspectives (EHP), of the American Department of Health, close to 13% of the population suffer from Multiple Chemical Sensitivity (MCS). The Environmental Illness Society of Canada (EISC) commissioned the first study of the socio-economic impact of MCS of Canadians. It was published in 2001 and estimated that *“approximately 4 million Canadians are affected by chemical sensitivity, half a million of whom are severe cases, with 5,000 being disabled by this condition”*. The impact of MCS victims on Canada’s economy is estimated to be as follows: *“\$10 billion are lost in productivity, roughly \$1 billion is lost in taxes, another \$1 billion is used in avoidable health care costs, and about \$1 billion in (avoidable disabilities) are paid”* (5)

In Saskatchewan, despite many presentations to several Health review committees since 1988, and in spite of Dr John Gerrard’s plans and request for an environmental clinic before he retired, every effort to establish an environmental health clinic has come to nothing. The question always comes back: how many Saskatchewan people would need this service? If we used the EHP study numbers, it would be close to 13 %. 13% of Saskatchewan residents with symptoms involving multiple organ systems, who currently either get no medical care, or are getting the wrong treatment for each individual symptom. The potential for saving money by offering appropriate treatment, at the very least would prevent illnesses resulting from inappropriate drugs and treatments.

There is no magic bullet to reducing your body load of toxins. While some are more easily excreted, many are quite persistent in the body. Reducing exposure to pesticides and other toxins remains the gold standard to improve health.

Paule Hjertaas, B.Sc, is a biologist, science writer and editor, and environmental and holistic health consultant living in her environmentally safe house in Regina (I don’t know how to word my interest in pesticides to carry my expertise. It seems that activist does not do it!)

1. www.accuchem.com, info@accuchem.com
2. Pesticide Literature Review; available for free at www.ocfp.on.ca
3. aeha-quebec.ca
4. <http://ehp.niehs.nih.gov/press/12pop.html>
5. Multiple Chemical Sensitivity A Report Prepared for the Ministry of Human Resources of the Government of Canada; 2003; Helke Ferrie;

