

or interesting, the physician may ask for a literature search of medical journals. If neither of these turns up any suggestion that the patient's symptoms may be related to pesticides, most physicians will be quite reluctant to make a diagnosis of pesticide-related illness, particularly because a disproportionately high number of such cases wind up in compensation or tort suits in which the physician may have to defend this diagnosis.

5) In many parts of the country, the library resources in occupational and environmental medicine are extremely limited and there are only about 800 board-certified specialists in occupational medicine in the U.S. As a result, the physician may not have a local source to consult in this field.

All of these factors make physicians understandably reluctant to pursue diagnoses of pesticide-related illness. Unless the signs and symptoms and history of exposure are relatively clear-cut, the physician often feels that trying to make the diagnosis will be frustrating, unrewarding and may even expose her or him to the risk of professional ridicule or the risk of lawsuits.

I realize that this long list of problems may be discouraging to patients and workers in search of help. It may seem to suggest that physicians should not be expected to learn about pesticide health effects or to make these diagnoses. I do not mean to imply that. All general practitioners, including internists, family medicine physicians, pediatricians, obstetricians and gynecologists, nurse practitioners and physician's assistants, as well as toxicologists, clinical pharmacologists and emergency room nurses and physicians should be acquainted with the range of symptoms and illnesses which may be associated with pesticide exposure. But it is important to recognize the barriers faced by health providers who are sympathetic and interested in learning about pesticides, and the reasons why health professionals may be hesitant to get involved or may grow discouraged.

Steps Toward Diagnosis

Physicians who are interested in occupational and environmental medicine must 1) gather comprehensive occupational histories; 2) provide for appropriate biological testing; and 3) offer worker education. Elements of the occupational history gathered from a worker should include job title, type of industry or farm, name of employer, period of employment, job duties, protective equipment provided and/or used, additional job-related hazards (machinery, noise, sun, etc.), information on whether other workers have symptoms, prior work history, history of work-related illnesses, accidents and compensation, home pesticide use or exposure, other chemical exposures on the job or at home (e.g., solvents used in hobbies), and most importantly (if the worker knows this), the compounds to which he or she is exposed. If the worker does not know this, it may be possible to approximate an answer. If a farmworker only knows, for example, that she is working in tomatoes, the physician should be able to learn from the county health office or agricultural commissioner what is typically being applied to tomatoes during that time period. If the worker knows that symptoms developed after fighting a fire in a particular warehouse, it may be possible to find out what was in the warehouse from the fire department records.

No medical examination of a worker should be conducted without appropriate education of the worker about the potential hazards of their job and the means to reduce the associated risks. Simple instruction about such topics as field

sanitation, protection during mixing, loading, and transportation of pesticides, proper storage of pesticides, and the early symptoms of poisoning may prevent serious damage. Pamphlets, one-page posters, information sheets, and even short slide programs have been prepared for patient/worker education on pesticide health hazards.

Because of the inadequate training which most health providers have received in occupational medicine, continuing education programs on pesticide-related health hazards are particularly important. Pesticide reform groups have been successful in some states in sponsoring continuing medical and nursing education programs, or in arranging for county or state health departments to sponsor them. Support for research in occupational and environmental medicine is also important, not just in order to learn more about the health effects of pesticides, but in order to get more of this into the scientific literature so that clinicians in the field have more to refer to when evaluating pesticide illnesses.

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