

# Pesticide Poisoning

## 1. DISEASE REPORTING

### A. Purpose of Reporting and Surveillance

- To identify high-risk pesticides and use practices
- To identify targets for intervention and prevention activities
- To provide education and support for physicians and other health care providers

### B. Reporting Requirements: hospitalized, fatal, or cluster

- Health care providers: **immediately** notify DOH Pesticide Program
- Hospitals: **immediately** notify DOH Pesticide Program
- Laboratories: no requirements for reporting
- Local health jurisdictions: educate health care providers regarding reporting requirements to the State

#### Reporting requirements: other

- Health care providers: notify DOH Pesticide Program within 3 working days
- Hospitals: no requirements for reporting
- Laboratories: no requirements for reporting
- Local health jurisdictions: educate health care providers regarding reporting requirements to the State

### DOH Pesticide Program Reporting Information

Telephone: 800-222-1222 (Poison Center, by agreement for 24 hour access)  
877-485-7316 (DOH Mon.-Fri. 8-5)

## 2. THE DISEASE

### A: Etiologic Agents

**Organophosphate and carbamate poisonings:** affects cholinesterase level (acetylcholinesterase), which inactivates acetylcholine and results in pesticide-poisoning symptoms such as fatigue, lightheadedness, nausea, vomiting, headaches, and seizures.

**Paraquat and diquat poisoning:** oxygen is contraindicated early in the poisoning due to the progressive oxygen toxicity to the lung tissue.

### B: Identification

Pesticide related illnesses often have clinical manifestations similar to other common medical conditions (influenza, cold). An exposure and occupational history is critical for diagnostic, therapeutic, rehabilitative, and public health reasons. An adequate history is needed to determine an environmental or occupational exposure that could cause the illness or exacerbate an existing medical condition. It is also very important to obtain information on pesticide products to which the patient may have been exposed. It is also recommended that the following be obtained:

- Pesticides labels are required by the Environmental Protection Agency. The label provides the Registration Number that is very helpful when contacting the Poison Control Center (1-800-222-1222) or the National Pesticide Telecommunications Network hotline (1-800-858-7378) for assistance. Contact with the Poison Control Center also fulfills the health care provider's responsibility to report to DOH.
- Material Safety Data Sheet (MSDS) all manufacturers are required to provide an MSDS for any chemicals they produce or import. Employers are required to keep copies of MSDS. The will contain material identification, ingredients and occupational exposure limits, and data on the following characteristics: physical fire and explosion, reactivity, health hazards, special protection as well as spill, leak, and disposal procedures, and special precautions and comments.

General management of acute pesticide poisonings must consider decontamination of skin concurrent to resuscitative and antidotal measures that are indicated. Caregivers should avoid direct contacts with contaminated clothing and vomitus. Rubber gloves are recommended over other types of gloves.

### C. Pesticide-related Illness in Washington State

Washington is one of several states that actively tracks and investigates pesticide-related illnesses. From 2000-2004, DOH investigated 709 cases of pesticides illness in the agricultural environment and 745 cases in the non-agricultural environment. Approximately 33% of all identified cases occurred among workers in agricultural settings.

## 3. CASE DEFINITIONS

### Case Definitions for Surveillance

- Documented or suspected human cases of pesticide poisonings
- Suspected pesticide poisoning of animals that may relate to human illness
- Concern about a possible human exposure but no medical evidence to substantiate
- Emergencies relating to pesticides that represent an imminent and/or future hazard to the public and/or labor force due to the toxicity of the material, quantities involved, or the environment in which the event occurs

## 4. METHODS OF CONTROL

### Preventive Measures

- Use of personal protective equipment (PPE) such as respirators, goggles, rubber boots, and gloves with emphasis on maintenance of equipment
- Use of appropriate clothing to minimize for both occupational and non-occupational exposures
- Decontamination of patient and laundry clothing prior to contact with family members and others
- Education about safe use of pesticides with emphasis on reading the label, secure storage, and importance of not allowing children to have contact with pesticides
- Compliance with Restricted-Entry Intervals (REIs)