
THE PESTICIDE REVIEW

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Santa Clara County Division of Agriculture

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Acute versus Chronic Effects

Pesticide exposures

When an applicator is exposed to a pesticide, several things can happen. The applicator can have no reaction, the applicator experiences an immediate reaction, or the applicator feels the effects at a much later time. These effects are largely dependent upon the chemical in question, its toxicity, where the chemical came into contact with the body, and how much was absorbed.

Acute Effects

Acute effects are reactions that occur immediately or shortly after exposure. Reactions can range from mild to severe, and in the case of materials with a high acute toxicity; a small amount can be deadly.

Examples of mild acute reactions are things such as a skin rash, fatigue, light-headedness, headache, irritation to the eyes, nose, or throat. Most of these reactions are very similar to allergy symptoms.

A severe acute reaction can be things such as excessive salivation, stomach cramps, nausea, vomiting, blurred vision, blistered skin, convulsions, and unconsciousness. If the pesticide exposure occurred on a hot day, some of these symptoms can be mistaken for heat exhaustion or heat stroke.

Chronic Effects

Chronic effects are reactions that do not appear immediately after an exposure. Chronic pesticide reactions are caused by a long-term exposure to a pesticide or by the delayed effect from an exposure.

Because chronic effects can take a long time to appear, it is sometimes difficult to associate the symptom with a pesticide exposure. To complicate things even further, some chronic effects are difficult to differentiate from some diseases. Chronic effects can include sensitization, dizziness, weakness, chronic headaches, weight loss, and jaundice.

Severe chronic effects can be things such as nerve or liver damage, reproductive disorders, genetic mutations, birth defects, cancer, and tumors.

Labels and MSDS

Before you apply a pesticide, be sure to read the label and the material safety data sheet for the material. The label will mention the effects you may experience if you are exposed. (Be aware that you may react a little differently than expected.) If you suspect a pesticide illness, let your supervisor know immediately and seek medical care. (By law, you cannot drive yourself to the doctor if you suspect you have a pesticide illness; you must be driven!)

The most important thing you can do to avoid acute or chronic effects is to wear all of the protective gear required by regulation or the pesticide label. Also keep in mind that safety gear is a last line of defense. Nothing substitutes for good application techniques!

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DPR's TOP 10 PESTICIDE BLUNDERS AT HOME

April 5, 2004

Media Contact: Glenn Brank, DPR

DON'T MAKE YOURSELF AN 'APRIL FOOL' WITH PESTICIDES

None of the following cases resulted in death, although most victims required medical treatment. (State privacy law protects their identities.) Most cases occurred in 2001 and 2002 and were compiled by DPR's Pesticide Illness Surveillance Program. In no particular order, the "top 10" are:

1. A Contra Costa homeowner discovered sewer rats were entering his home through a toilet. He bought an incendiary device intended for gophers and other burrowing pests, and dropped it down a plumbing vent on his roof. The device melted a plastic elbow in the pipe and the roof caught fire, causing \$80,000 in damage before firefighters could extinguish the blaze.
2. A Riverside County woman set off four foggers in her 1,000-square-foot apartment (about three cans more than the recommended application) and left the residence (as the label instructed), only to reenter several times to pick up things she had forgotten. She began to experience dizziness, nausea, and cramps, so she called 911. Upon arrival, a paramedic attempted to retrieve the fogger without wearing a respiratory protection device, and he too became ill.
3. In Stanislaus County, a 38-year-old woman found a home remedy for head lice on the Web. She then applied eight ounces of dog flea-and-tick shampoo and olive oil to her scalp, and wrapped her head in cellophane for five hours. Her scalp began to itch and burn. She felt shaky and also experienced nausea and drooling.
4. In San Joaquin County, a 23-year-old man spotted a fly on his beer can, and sprayed an insecticide on the can. Later, as he drank from the can, his lips began to tingle.
5. An 18-year-old Lassen County resident sprayed half a can of outdoor-use insecticide in his bedroom, then went to sleep. He awoke with nausea, vomiting, dizziness, sweating, abdominal cramps, diarrhea, and other symptoms. He denied his sister's allegation that he was sniffing the insecticide.
6. A Placer County man was spraying his yard with the insecticide diazinon when he stopped for a chew of tobacco, placing the wad into his mouth with an unwashed hand. He began vomiting, salivating, and experienced shortness of breath.
7. A Sonoma County apartment resident sprayed three aerosol cans of lice treatment on his bed, then went to sleep. He awoke the next morning with a headache, nausea, and vomiting. He did not read or follow the product label directions and told investigators he assumed the more he used, the more effective it would be.
8. In Los Angeles County, a woman diluted bleach in a cup to clean it, then forgot about it and went to bed. The next morning, she warmed the cup of liquid and took a sip before remembering the cup contained bleach. In a similar incident, a Sonoma homeowner left a cup of bleach solution that she had used for cleaning on her bathroom counter. She got up at midnight and drank from the cup. Her throat began to burn and she vomited.
9. A Tuolumne County homeowner tried to kill a spider in a cupboard by spraying it with insecticide. The woman then stuck her head in the cupboard to determine if the spider was dead. She began coughing and vomiting from the fumes. In a similar case, a San Joaquin County, a man stuck his head inside a cupboard to determine if the insecticide he had sprayed on ants was working. He developed a mild headache, dizziness, and respiratory symptoms.
10. A San Francisco physician over-treated his closet with mothballs. When he wore clothes from the closet, he began to feel dizzy, nauseated, and suffered loss of muscular coordination. The first time, he recovered in fresh air. The second time, he went to an emergency room and was hospitalized overnight to rule out a stroke before the problem was traced to excessive mothball fumes.

West Nile Virus In California



Article submitted by Kriss Costa

Santa Clara County Vector Control District

In 2003, West Nile virus (WNV) struck over 9,800 people in the US and killed 264. Towards the end of last season, California reported its first 3 cases of WNV. What does that mean for this year? History has shown us the area where the disease appeared the previous year, will likely be hit hard the next season. For example, Colorado reported its first cases (14) of WNV in late 2002. In 2003, Colorado reported over 2,900 cases and 63 deaths, almost 1/4 the total of US cases!

On June 8, 2004, California reported its first human case in Southern California. The 40-year old San Bernardino County woman suffered mild symptoms and has since fully recovered.

California has an advantage over most of the other states in the US. California has 54 mosquito and vector control districts, some in existence since 1915. So although WNV is new to California, mosquito abatement is not.

But we need your help!

The primary carrier of WNV, the *Culis* mosquito, is also know as the "artificial container mosquito", preferring to lay its eggs, not in the natural waterways we routinely check, but in many areas found on private property. Any water that sits for more than a week can produce hundreds of mosquitoes that may transmit WNV.

It is important to check backyards and property for any standing water, including water troughs, rain gutters, flower pots, pet watering bowls, etc.

Birds, especially corvids (crows, black birds) and raptors (hawks, falcons) are very susceptible to WNV. If you find a dead bird, call 1-877-WNV-BIRD. Contact the SCC Vector Control District at 408-792-5010 if you are being bothered by mosquitoes, would like to report possible mosquito development sources, have any questions concerning WNV or would like a free brochure. Mosquito eating fish are also available free of charge to county residents.

We cannot prevent WNV from entering Santa Clara County, but with your help we can reduce the threat it poses to you, your family, neighbors, and clients.

Changes to the Civil Penalty Code

California Code of Regulations 6130

There have been some changes to the code section that governs civil penalty actions by county agricultural commissioners. The violation classes and the fine amounts for each category have changed. These changes went into effect May 25, 2004.

Violation classes use to be designated as "serious", "moderate", and "minor". These have been changed to "Class A", "Class B", and "Class C".

Class A violations are a repeat of Class B violations or violations that created an actual health or environmental hazard. A new addition to this category is a violation of a lawful order of the commissioner pursuant to sections 11737, 11737.5, 11896, or 11897 of the Food and Agricultural Code. This means a violation is automatically placed in Class A if someone violates a cease and desist order issued by a commissioner. The new fine range for this designation is \$700 - \$5,000!

Class B violations are a repeat of Class C violations, or violations, which posed a reasonable possibility of creating a health or environmental effect. The new fine range for this designation is \$250 - \$1,000.

Class C violations are not defined in either Class A or Class B. The fine range for this designation is \$50 - \$400.

From the Question File:

Recent questions from pest control companies...

If I apply unrestricted pesticides along a right-of-way for a city, do I need a written recommendation?

That depends whether your business made the decision to use a particular pesticide in the right-of-way or if the city made the decision to use the material. If your business made the decision, then you definitely need a registered PCA to write a recommendation. If the city made the decision to use the material and hired you to apply it, then you don't need a PCA recommendation. However, make sure you get something in writing showing the city was the one that made the pesticide decision. Having something in writing alleviates any doubt as to who made the pesticide recommendation and you will have a written record to substantiate your use records.

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