AEX 192.1.36

THE OHIO STATE UNIVERSITY EXTENSION

Tailgate Safety Training for Landscaping and Horticultural Services

Agricultural Safety Program, 590 Woody Hayes Drive, Columbus, OH 43210

Pesticide Exposure

Objective: Identify the types and causes of pesticide exposure and how to prevent them.

How to Use This Module

Pesticides are common and useful, but they can also be harmful, even toxic. For this module:

- Read about the types of exposure and how each can happen.
- Discuss types of personal protection equipment (PPE) and safe use with your supervisor.
- Review the important points.
- Take the True/False quiz to check your learning.

For more information on pesticide safety, see all the Tailgate Safety Training modules on pesticides.

Background

There are four ways you can be exposed to pesticides:

- Oral exposure — swallowing pesticide.
- Dermal exposure — getting pesticide on your skin, the most common type.
- Inhalation exposure — breathing in pesticide.
- Ocular exposure — getting pesticide in your eye.

Causes for each type of exposure are explained below.

Type of Exposure	Cause of Exposure
Oral exposure	• Not washing hands before eating, drinking, using tobacco. • Eating or drinking a pesticide by mistake. • Getting pesticide on food. • Splashing pesticide into the mouth. • Blowing out plugged nozzles with the mouth.
Dermal exposure	• Getting pesticides on bare skin. • Applying pesticides in windy weather. • Wearing inadequate PPE.

Type of Exposure	Cause of Exposure
Inhalation exposure	• Prolonged contact in poorly ventilated areas. • Not using proper PPE. • Breathing vapors after application. • Using the wrong respirator. • Using an improperly fitted respirator. • Using tainted filters, cartridges, or canisters.

Ocular exposure	• Getting pesticides in the eyes.
	• Not using proper eye cover when:
	  • Spraying pesticide
	  • Handling pesticide
	• Rubbing the eye with tainted gloves or hands.

Acute and Chronic Exposure

Exposure is acute if you are exposed to a large amount of pesticide once. A spill on the body is one example. It's usually easy to identify acute exposure.

Exposure is chronic if you have low-level exposure over and over. Chronic exposure may be hard to tell.

Either kind of exposure is dangerous. But a combination of acute and chronic exposure can be especially dangerous. For example:

- Wearing contaminated clothing can cause chronic exposure.
- A worker with chronic exposure might spill a pesticide on the skin.
- Now, the worker has both chronic and acute exposure.
- The body may not be able to deal with the acute exposure on top of the chronic exposure. The worker is at great risk.

To Avoid Exposure

- Read pesticide labels. Look for the types of PPE needed and emergency procedures.
- Wear proper PPE.
- Wear proper eye cover.
- Use respirators whenever needed.
- If you breathe a pesticide, move away from the area quickly. Get to fresh air.
- Use a closed handling system. This keeps the applicator separate from the pesticide and avoids exposure.
- Maintain and clean PPE.
- Launder clothing after handling pesticides.
- Wash exposed body parts often to reduce dermal exposure.
- In case of exposure:
  - ♦ Use showers, eyewash fountains, hand/face spray units, and other emergency equipment.
  - ♦ Call 911 if appropriate.
  - ♦ Report exposure.

For more information on pesticide safety, see all the Tailgate Safety Training modules on pesticides.

Review These Important Points

- In dermal exposure, pesticide gets on the skin.
- In ocular exposure, the pesticide gets in the eye.
- In oral exposure, pesticide is swallowed.
- In inhalation exposure, pesticide is breathed in.
- You can be exposed to a pesticide if you use improper PPE.

About These Modules

The author team for the training modules in the landscape and horticultural tailgate training series includes Dee Jepsen, Program Director, Agricultural Safety and Health, Ohio State University Extension; Michael Wonacott, Research Specialist, Vocational Education; Peter Ling, Greenhouse Specialist; and Thomas Bean, Agricultural Safety Specialist. Modules were developed with funding from the Occupational Safety and Health Administration, U.S. Department of Labor, Grant Number 46E3-HT09.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Agriculture or the U.S. Department of Labor.

Answer Key: 1 = T, 2 = T, 3 = F, 4 = F, 5 = T.

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Name_____

True or False?

1. Oral exposure can be caused by accidentally getting pesticide in the mouth. T F
2. Inhalation exposure can be caused by the wrong respirator or an improperly fitted respirator. T F
3. Ocular exposure can be caused by accidentally getting pesticide in the mouth. T F
4. Workers do not have to wash themselves after applying pesticide. T F
5. PPE can reduce exposure to pesticides. T F