



Agricultural Tailgate Safety Training

Agricultural Safety Program

Training Module: Pesticide Exposure

Objective: To know the types and causes of pesticide exposure and how to prevent exposures.

Trainer's Note: Discuss how personal protective equipment can protect the applicator from the different types of exposure. The modules: Pesticide Protective Equipment and Reading Pesticide Labels can provide additional information.

Background

There are four ways toxic materials can be taken into the body. They are: oral, dermal, inhalation, and ocular exposures, with dermal being the most common type of exposure. These types of exposures are explained in the chart below.

Type of Exposure	Definition	Cause of Exposure
Oral Exposure	Swallow or ingest a pesticide	<ul style="list-style-type: none">• Not washing hands before eating, drinking, smoking or chewing tobacco.• Mistaking a pesticide for food or drink.• Accidentally applying pesticides to food.• Splashing pesticide into the mouth through carelessness or accident.
Dermal Exposure	Having pesticide on your skin.	<ul style="list-style-type: none">• Not washing hands after handling pesticides or their containers.• Splashing or spraying pesticides on unprotected skin.• Applying pesticides in windy weather.• Wearing inadequate personal protective equipment while handling pesticides or their containers.
Inhalation Exposure	Breathing in a pesticide.	<ul style="list-style-type: none">• Prolonged contact with pesticides in closed or poorly ventilated spaces.• Breathing vapors from fumigants and other pesticides.• Breathing vapors, dust, or mist while handling pesticides without appropriate protective equipment.• Inhaling vapors immediately after a pesticide is applied.• Using the wrong respirator, or an improperly fitted respirator, or using filters, cartridges, or canisters that are "full" of chemicals, dust, etc.

Type of Exposure	Definition	Cause of Exposure
Ocular Exposure	Pesticide gets in the eye.	<ul style="list-style-type: none"> • Splashing or spraying pesticides in eyes. • Applying pesticides in windy weather without eye protection. • Rubbing eyes with contaminated gloves or hands. • Pouring dust, granules or powder formulations without eye protection.

Exposure is considered:

Acute: One-time case of pesticide exposure. For example: a spill on the body. Exposure is usually easy to determine.

Chronic: Low-level exposure over a longer period of time. Exposure is usually difficult to determine.

A combination of the two exposures can be dangerous. For example, daily exposure to a pesticide through contaminated clothing combined with an acute exposure like spilling a pesticide on your skin poses the greatest risk because the body may not be able to deal with the acute exposure.

Avoiding Exposure:

In order to avoid exposure, it is important to avoid the causes of exposure. For example, by wearing the proper eye protection you can prevent a pesticide from getting in the eyes.

To avoid exposure:

- Wear proper personal protective equipment (Refer to the module: Pesticide Personal Protective Equipment).
- If you do start to breathe pesticide mist or dust, move away from that area as quickly as possible and get into fresh air.
- Use a closed handling system.
- Maintain and clean personal protective equipment.
- Wash exposed body parts often to reduce dermal exposure.
- Read pesticide labels thoroughly (Refer to module: Reading Pesticide Labels).

Review the Following Points:

- Dermal exposure to a pesticide means that it gets on the skin.
- Ocular exposure to a pesticide means that it gets in the eye.
- Oral exposure to a pesticide is swallowing or ingesting it.
- Inhalation exposure is inhaling a pesticide.
- Using improper personal protective equipment can lead to exposure to the pesticide.

True or False Answer Key
1. T, 2. T, 3. F, 4. F, 5. T