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

**Trainer’s Note**

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

• Review the types of exposure and how each can happen.

• Discuss how Personal Protection Equipment (PPE) can protect workers from exposure.

• Review the important points.

• Have workers take the True/False quiz to check their 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 here.

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| **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. |
| 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

**Verbal Quiz**

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**

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| --- | --- |
| Answer Key | |
| 1 | T |
| 2 | T |
| 3 | F |
| 4 | F |
| 5 | T |