

Pesticide Exposure & Testing Summary:

1. Pesticides are agents used to control, repel or kill pests.
2. Pesticides are designed to be toxic to the organism that they are working against, but **pesticide exposure** is often toxic or fatal to humans highlighting the importance of **pesticide testing**.
3. It is estimated there are around 10,000-20,000 physician-reported poisonings of agricultural workers each year in the US (EPA).
4. The health effects of pesticide exposure depend on the type and the length of exposure.
5. The EPA is responsible for the regulation of pesticides in agricultural settings through the Worker Protection Standard (WPS).
6. Employers are advised to read a guide to help comply with WPS regulations. A link to that document is provided under our Business Owner Briefing.

Related Examinetics Services

- Benzene Exposure
- Hazardous Material (HAZMAT) exam

Overview

Pesticides are agents used to control, repel or kill pests. Pests are nuisance organisms that cause harm to humans or other animals, destroy crops and compete for food or space. Pesticides are categorized according to the pest that they are designed to control. Herbicides are used to control plants; insecticides kills insects; and fungicides control molds and fungi.

Health hazards associated with pesticide use

Why is pesticide testing so important? According to the EPA, there are around 10,000-20,000 physician-reported poisonings of agricultural workers annually in the US. The health effects of pesticide exposure on humans depends on the type and length of exposure. One class of pesticides known as organophosphates is widely used in the agricultural setting. Acute exposure produces symptoms including nausea, dizziness, vomiting, abdominal pain, skin and eye problems. Acute or chronic pesticide exposure is associated with respiratory, neurological, dermatologic and reproductive symptoms. It also may cause depression, memory disorders and carcinogenic effects.

Regulatory issues

The EPA is responsible for the regulation of pesticides in agriculture through the Worker Protection Standard (WPS). Together with OSHA regulations, WPS works to ensure that agricultural workers, the general public, and the environment are protected against pesticide exposure. A link to WPS compliance information is posted under our “Business Owner Briefing.” The WPS outlines the responsibilities of agricultural employers to ensure that:

- Workers are fully aware of the health risks of pesticide exposure, and that there is adequate communication regarding their use. Appropriate measures include WPS safety posters, emergency contacts, and proper labeling.
- There is adequate training for agricultural workers and others that are involved with handling pesticides.
- There are decontamination procedures and emergency services access in the event of a pesticide exposure event.
- There are application restrictions, monitoring, pesticide testing, warning signs and Restricted Entry Intervals for the contaminated site.

There is provision of Personal Protective Equipment (PPE) and training for their use, maintenance and decontamination.