

# Practical Toxicology

Lab 2

**Organophosphate poisoning**

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**Organophosphate poisoning** is a condition caused by exposure to organophosphates, which are chemicals used as insecticides, medications, and nerve agents. Organophosphates inhibit cholinesterase activity, leading to acute symptoms such as salivation, lacrimation, urination, diarrhea, vomiting, bronchospasm, bradycardia, miosis, muscle tremors, and confusion. Some symptoms may take weeks to appear<sup>1</sup>. Organophosphate poisoning can also cause nerve damage and hormonal disruption<sup>3</sup>. Organophosphates are toxic to humans, animals, plants, and insects.

# **Risk factors for organophosphate poisoning include**

Living or working on or near farms

Consuming contaminated food or water

Breathing in the poison

Contact with the skin

Employment in agriculture, pest control, and some industries

## **organophosphate poisoning include**

:Increased saliva and tear production,  
sweating, and body secretions

Small pupils

Diarrhea, vomiting, nausea, and colic

Headache, weakness, and confusion

Coughing and difficulty breathing



**Organophosphate poisoning can occur due to exposure to these chemicals in high doses or over a long time. Common causes of organophosphate poisoning include**

Accidental or intentional ingestion of agricultural pesticides

Ingestion of contaminated fruit, flour, or cooking oil

Wearing contaminated clothing

Exposure in farming areas of the developing world

Exposure to nerve agents

**Organophosphate poisoning** is a condition caused by exposure to organophosphates or carbamates, which are chemicals that inhibit the enzyme acetylcholinesterase and cause excessive cholinergic activity.

**Diagnosis** is usually based on a history of exposure and consistent symptoms, such as pinpoint pupils, muscle cramps, respiratory distress, and seizures. Treatment involves resuscitation, supportive care, decontamination, and use of atropine<sup>1</sup>

## **The treatment for organophosphate poisoning involves:**

Decontamination of the body with soap and water to remove the toxin

Supportive therapy such as oxygen, intravenous fluids, and airway control

Atropine to counteract the respiratory effects of the toxin

Oximes such as pralidoxime to reverse the neuromuscular effects of the toxin

Diazepam to control seizures<sup>1</sup>

Thanks for Listening