

Organophosphates Are Still On the Market

Organophosphates are a group of chemicals that are commonly used as insecticides. Until the 21st century, they were among the most widely used insecticides available. Many are presently registered for use in the United State, and **all can potentially cause acute and subacute toxicity**.

Having been developed in World War II as chemical nerve agents, many retain serious toxicity characteristics. The US Environmental Protection Agency lists organophosphates as **very highly acutely toxic to bees, wildlife and humans**.

Of particular concern are the effects of these **pesticides on children** who are more susceptible to chemical poisoning due to their smaller size and less ability to process toxins. Recent studies suggest a possible link to adverse effects in the neurobehavioral development of fetuses and children, even at very low levels of exposure.

Three organophosphates have recently been in the news for their **effect on endangered species** as well as certain **aquatic species** including salmon and whales. Those pesticides, *chlorpyrifos*, *malathion* and *diazanone*, have polluted water ways including the ocean. They are used widely in agriculture as wells on forested lands and even in mosquito spraying.

Of the three, *chlorpyrifos* is probably the most concerning because of 1) its widespread agricultural use (food crops including apples, oranges, broccoli, strawberries, corn, wheat, and citrus), and 2) its serious human health effects, particularly for children.

.Notable Organophosphates

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- acephate (Orthene)
 - Aspon
 - Azinphos-Methyl (Guthion)
 - Carbofuran (Furadan, F formulation)
 - Carbophenothion (Trithion)
 - Chlorfenvinphos (Birlane)
 - Chlorpyrifos (Dursban, Lorsban)
 - Coumaphos (Co-Ral)
 - crotoxyphos (Ciodrin, Ciovap)
 - crufomate (Ruelene)
 - Demeton (Systox)
 - Diazinon (Spectracide)
 - dichlorvos (DDVP, Vapona)
 - dicrotophos (Bidrin)
 - Dimethoate (Cygon, De-Fend)
 - dioxathion (Delnav)
 - Disulfoton (Di-Syston)
 - EPN

- Ethion
- Ethoprop (Mocap)
- famphur
- fenamiphos (Nemacur)
- Fenitrothion (Sumithion)fensulfothion (Dasanit)fenthion (Baytex, Tiguvon)
- Fonofos (Dyfonate)
- isofenfos (Oftanol, Amaze)
- Malathion (Cythion)
- Methamidophos (Monitor)
- methidathion (Supracide)
- methyl parathion
- Mevinphos (Phosdrin)
- Monocrotophos
- Naled (Dibrom)
- Nerve Agents:
 - Sarin, soman, soman, VX
- oxydemeton-methyl(Meta systox-R)
- Parathion (Niran, Phoskil)
- Phorate (Thimet)
- phosalone (Zolonc)
- phosmet (Irnidan, Prolate)
- Phosphamidon (Dimecron)
- temephos (Abate)
- TEPP
- Terbufos (Counter)
- tetrachlorvinphos (Rabon, Ravap)
- Trichlorfon (Dylox, Neguvon)

What can we do to protect ourselves and the environment?

- **Be aware.** Read all labels carefully when making choices about insecticides. Do not buy any products containing organophosphates.
- **Buy organic.** Buy organic produce whenever possible. Wash all fruits and vegetables carefully before eating
- **Advocate.** Let your legislators and government agencies know that the continued use of these toxic products is not acceptable.

