



Pesticides

According to a recent survey, 75 percent of U.S. households used at least one [pesticide](#) product indoors during the past year. Products used most often are insecticides and disinfectants. Another study suggests that 80 percent of most people's exposure to pesticides occurs indoors and that measurable levels of up to a dozen pesticides have been found in the air inside homes. The amount of pesticides found in homes appears to be greater than can be explained by recent pesticide use in those households; other possible sources include contaminated soil or dust that floats or is tracked in from outside, stored pesticide containers, and household surfaces that collect and then release the pesticides. Pesticides used in and around the home include products to control insects (insecticides), termites (termiteicides), rodents (rodenticides), fungi (fungicides), and microbes (disinfectants). They are sold as sprays, liquids, sticks, powders, crystals, balls, and foggers.

In 1990, the American Association of Poison Control Centers reported that some 79,000 children were involved in common household pesticide poisonings or exposures. In households with children under five years old, almost one-half stored at least one pesticide product within reach of children.

EPA registers pesticides for use and requires manufacturers to put information on the label about when and how to use the pesticide. It is important to remember that the "-cide" in pesticides means "to kill." *These products can be dangerous if not used properly.*

In addition to the active ingredient, pesticides are also made up of ingredients that are used to carry the active agent. These carrier agents are called "inerts" in pesticides because they are not toxic to the targeted pest; nevertheless, some inerts are capable of causing health problems.

Health Effects From Pesticides

Both the active and inert ingredients in pesticides can be organic compounds; therefore, both could add to the levels of airborne organics inside homes. Both types of ingredients can cause the effects discussed in this document under "Household Products," however, as with other household products, there is insufficient understanding at present about what pesticide concentrations are necessary to produce these effects.

Exposure to high levels of cyclodiene pesticides, commonly associated with misapplication, has produced various symptoms, including headaches, dizziness, muscle twitching, weakness, tingling sensations, and nausea. In addition, EPA is concerned that cyclodienes might cause long-term damage to the liver and the central nervous system, as well as an increased risk of cancer.

There is no further sale or commercial use permitted for the following cyclodiene or related pesticides: chlordane, aldrin, dieldrin, and heptachlor. The only exception is the use of heptachlor by utility companies to control fire ants in underground cable boxes.

Reducing Exposure to Pesticides in Homes

Read the label and follow the directions. It is illegal to use any pesticide in any manner inconsistent with the directions on its label.

Unless you have had special training and are certified, never use a pesticide that is restricted to use by state-certified pest control operators. Such pesticides are simply too dangerous for application by a non-certified person. Use only the pesticides approved for use by the general public and then only in recommended amounts; increasing the amount does not offer more protection against pests and can be harmful to you and your plants and pets.

Ventilate the area well after pesticide use.

Mix or dilute pesticides outdoors or in a well-ventilated area and only in the amounts that will be immediately needed. If possible, take plants and pets outside when applying pesticides to them.

Use non-chemical methods of pest control when possible.

Since pesticides can be found far from the site of their original application, it is prudent to reduce the use of chemical pesticides outdoors as well as indoors. Depending on the site and pest to be controlled, one or more of the following steps can be effective: use of biological pesticides, such as *Bacillus thuringiensis*, for the control of gypsy moths; selection of disease-resistant plants; and frequent washing of indoor plants and pets. Termite damage can be reduced or prevented by making certain that wooden building materials do not come into direct contact with the soil and by storing firewood away from the home. By appropriately fertilizing, watering, and aerating lawns, the need for chemical pesticide treatments of lawns can be dramatically reduced.

If you decide to use a pest control company, choose one carefully.

Ask for an inspection of your home and get a written control program for evaluation before you sign a contract. The control program should list specific names of pests to be controlled and chemicals to be used; it should also reflect any of your safety concerns. Insist on a proven record of competence and customer satisfaction.


Dispose of unwanted pesticides safely.

If you have unused or partially used pesticide containers you want to get rid of, dispose of them according to the directions on the label or on special household hazardous waste collection days. If there are no such collection days in your community, work with others to organize them.

Keep exposure to moth repellents to a minimum.

One pesticide often found in the home is paradichlorobenzene, a commonly used active ingredient in moth repellents. This chemical is known to cause cancer in animals, but substantial scientific uncertainty exists over the effects, if any, of long-term human exposure to paradichlorobenzene. EPA requires that products containing paradichlorobenzene bear warnings such as "avoid breathing vapors" to warn users of potential short-term toxic effects. Where possible, paradichlorobenzene, and items to be protected against moths, should be placed in trunks or other containers that can be stored in areas that are separately ventilated from the home, such as attics and detached garages. Paradichlorobenzene is also the key active ingredient in many air fresheners (in fact, some labels for moth repellents recommend that these same products be used as air fresheners or deodorants). Proper ventilation and basic household cleanliness will go a long way toward preventing unpleasant odors.

National Pesticide Information Center (NPIC)

EPA sponsors the NPIC (800) 858-PEST/800-858-7378 to answer your questions about pesticides and to provide selected EPA publications on pesticides. See their web site at - <http://npic.orst.edu/>  or, read their brochure - <http://npic.orst.edu/brochure.pdf>

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