http://www.epa.gov/pesticides/about/consumer_faq.htm
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About Pesticides

Frequently Asked Questions: Consumers

General | Consumers | Applicators | Farm and Agricultural Workers
Mosquito Control

Documents marked as **(PDF)** are formatted in Adobe Acrobat's Portable Document Format. Free Acrobat Reader software is available to enable you to read these files.

Emergency Information

Poison Control Center

- 1-800-222-1222

National Pesticide Information Center
EXIT Disclaimer

- 1-800-858-7378

Human Exposure

Spills

Food and Water

1. Where can I obtain information about pesticide residues on raw and processed foods?
2. How much pesticide residue is allowed on fruits and vegetables?
3. Should I wash my fruits and vegetables?
4. Should I wash the food I grow?
5. What steps can I take to reduce my exposure to pesticide residues?
6. My neighbor applied a pesticide. I am concerned that the pesticide is now also on my property [e.g., vegetable garden, private well, etc.]. What can I do?
7. What exactly does "organically grown" mean?
8. Where can I have my drinking water tested for pesticides?
9. How can I find out about pesticides in drinking water wells? (1.24 MB, PDF)

Pest Management

1. How do I find and select a reputable exterminator?
2. How do I report a complaint about an applicator/exterminator?
3. What can I do if I think my neighbor's pesticide application has drifted over to my property?
4. I'm chemically sensitive, how can I be notified if my neighbors have applied pesticides?
5. Are there alternatives to chemical pesticides for home use?
6. What types of pesticides should I use?
7. Can I use farm pesticides in my home?
8. Where can I get information on a specific pesticide?
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Using Pesticides Safely

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5. Can I use "bug bombs" safely?
6. How can I use insect repellents safely?
7. Do I need to take precautions with Chromated Copper Arsenicals wood preservatives?
8. My neighbor is going to use a pesticide. How can I find out the limitations on its use?
9. How do I read a pesticide label?
10. How can I get rid of pesticides I don't want anymore?

Health Effects

Food/Water

1. Where can I obtain information about
2. How much pesticide residue is allowed on fruits and vegetables? The United States Department of Agriculture (USDA) and United States Food and Drug Administration (FDA) both monitor foods for pesticide residues and publish annual reports. Copies of the USDA Pesticide Data Program annual reports are available from the USDA.

EPA sets limits on how much of a pesticide residue can remain on food. You can search a database of pesticide residue limits to learn what the residue limits are for your favorite foods.

3. Should I wash my fruits and vegetables?
4. Should I wash the food I grow?
Yes, if you use pesticides in your garden, you should wash any produce you grow. Although the amounts of pesticides remaining in fruits or vegetables are likely to be low, it is always a good idea to limit as much as possible unnecessary exposure to pesticides.

5. What steps can I take to reduce my exposure to pesticide residues?
Washing, peeling, and trimming fruits and vegetables often will help reduce or remove any pesticide residues. For more information, read the fact sheet "Healthy, Sensible Food Practices."

6. My neighbor applied a pesticide. I am concerned that the pesticide is now also on my property [e.g., vegetable garden, private well, etc.]. What can I do?
Ask your neighbor which pesticide they applied and ask to read the label on the container. The label contains a great deal of information. If you still have questions or are concerned, you can call the National Pesticide Information Center (1-800-858-7378) or your State Lead Agency.

7. What exactly does "organically grown" mean?
"Organically grown" refers to food grown and processed using no synthetic fertilizers or pesticides. Pesticides derived from natural sources (e.g., biological pesticides) may also be used in producing organically grown food. For more information, read the fact sheet, What "Organically Grown" Means. The U.S. Department of Agriculture has issued standards for labeling of organically-grown crops.

8. Where can I have my drinking water tested for pesticides?
The answer depends on whether your water comes from a well on your property or public water supply company, and the type of pesticide contamination you believe may be present.

a) If your water is from a public water supply, contact your water supplier or the state drinking water office located in your state environmental agency. They can tell you whether your water is regularly tested for that type of pesticide and how much, if any, has ever been found.

b) If you have a private well or if your water has not been tested for that type of pesticide, contact your state pesticide program. They can assist you in determining whether testing is warranted, choosing the type of analysis to be performed, identify laboratories capable of performing the analysis, and determining the significance of testing results.

9. How can I find out about pesticides in drinking water wells?
The publication Pesticides in Drinking-Water Wells (PDF) (1.24 MB, About PDF) provides a step-by-step explanation of how pesticides can enter drinking-water wells, the types of health concerns that pesticides can pose, and advise on testing your water supplies.

Pest Management

1. How do I find and select a reputable exterminator?
Shop around. Ask to see a current pesticide applicator's license. Ask for the names of chemicals that the applicator would be using, the rates of application of products he is suggesting. Ask if there are less toxic alternatives. Ask about Integrated Pest Management (IPM).

Exterminators are listed in the yellow pages of your telephone book, but to help ensure that you contract with a reputable company contact your local Better Business Bureau or state pesticide agency and ask for a list of licensed pest control companies in your area. The state regulatory agencies can also provide information about whether they have received complaints about a pest control company, and information on pesticide applicator certification and licensing.

Ask the company to use the least toxic pest control method that will provide acceptable control. Contracts should be written to provide expected results. Pest management objectives specific to your site should be jointly developed, agreed upon, and written into the contract. Any special health concerns (such as those for old or young persons, for pets, or for individuals with allergies, etc.) should be noted and reflected in the pesticides that can be used, or excluded from use. (r1)

The Citizen's Guide to Pest Control and Pesticide Safety (PDF) (54 pp, 2.37 MB, About PDF) also has advice (see pages 36-38).

2. How do I report a complaint about an applicator / exterminator?
Contact your State Pesticides Office.

3. What can I do if I think my neighbor's pesticide application has drifted over to my property?
Ask your neighbor which pesticide they applied and ask to read the label on the container. The label contains a great deal of information. If you still have questions or are concerned, you call the US EPA or your State Lead Agency.

4. I'm chemically sensitive, how can I be notified if my neighbors have applied pesticides?
There is no federal law requiring pesticide notification. However, some communities have Chemical Registers and Notification Laws. Check with your community for additional information.

5. Are there alternatives to chemical pesticides for home use?
How can you safely solve your pest problems? The key is to be willing to ask questions. Learning about the the pest you have and options that are available to control specific pests is the first step. In most cases, there are several things you should do before even thinking about chemical pest control. Pests need food, water, and shelter. Often, the problem may be solved just by removing these key items. Some of the recommended ways of reducing or preventing pest invasions include the following:

- Fix leaky plumbing and looking for other sources of water, such as trays under house plants.
- Make sure food and food scraps are tightly sealed and garbage is regularly removed from the home; don’t leave pet food and water out overnight.
- Close off entryways and hiding places (caulking cracks and crevices around cabinets or baseboards, for example).

Once these and other preventive steps are completed, traps or bait stations can be used against some pests. These are often effective with low risk, as long as they are kept out of the reach of children and pets. Other relatively low risk pesticides are available for some pests. Consult your local cooperative extension service office for recommendations suitable for your area.

6. What types of pesticides should I use?
Using pesticides is a choice. You may not need to use pesticides at all. The most effective strategy for controlling pests may be to combine methods in an approach known as Integrated Pest

Management (IPM) that emphasizes pest damage management by the most economical means, and with the least possible hazard to people, property, and the environment. If you do choose to use a pesticide, you need to know which pests are giving you problems. Then you must find the appropriate pesticide in your yard and garden store by reading the label of each to make sure that you pick the one that matches your specific pest problem.

7. Can I use farm pesticides in my home?
No. Many pesticides were designed specifically for use by certified applicators in agriculture. They are very effective outdoors, and break down into less toxic substances in sunlight, rain and other weather conditions. Because these weather conditions do not exist indoors, farm pesticides used in the home may "persist" (stay in their highly toxic form) much longer. This could lead to very serious injuries to humans and pets. Detailed information about where the pesticide can be used is found on the product label.

8. How can I get information about a specific pesticide?
The product label contains most information the applicator needs to know to use the product safely. The National Pesticide Information Center (NPIC) provides objective, science-based information about a variety of pesticide-related subjects, including pesticide products, recognition and management of pesticide poisonings, toxicology, and environmental chemistry. NPIC also lists state pesticide regulatory agencies, and provides links to their Websites. NPIC can be contacted at: 1-800-858-7378 or by email at npic@ace.orst.edu. EXIT Disclaimer

Other sources of information are Cooperative Extension Offices or your EPA regional office.

9. How can I care for my lawn in an environmentally-appropriate way?
The publication, Healthy Lawn, Health Environment (PDF) (1M, About PDF), is all about caring for your lawn in an environmentally friendly way.

10. What is DEET?
DEET (chemical name, N,N-diethyl-meta-toluamide) is the active ingredient in many insect repellent products. It is used to repel biting pests such as mosquitoes and ticks, including ticks that may carry Lyme disease. The Reregistration of the Insect Repellent DEET fact sheet includes information for consumers on using this product safely. More information about using insect repellents safely is available in general fact sheet about how to use insect repellents safely.

11. How can I control mosquitoes?
Eliminate any standing water around your residence, including water in potted plant containers, garbage cans, gutters and drains. Mosquitoes will develop in any puddle that lasts more than four days. Make sure window and door screens are "bug tight." Replace outdoor lights with yellow "bug" lights. Wear headnets, long sleeve shirts, and long pants if venturing into areas with high mosquito populations, such as salt marshes or wooded areas. Use mosquito repellents when necessary, according to their label instructions.

12. Is it necessary to get a license to apply pesticides?
EPA classifies pesticides into two categories: general use pesticides and restricted use pesticides. Restricted use pesticides, which make up about a quarter of total pesticides used, may be applied *only by or under the direct supervision of trained and certified applicators*.

Applying Pesticides Safely

1. How can I handle pesticides safely?
2. How do I apply pesticides in my yard and garden safely?
3. What precautions should I take when applying pesticides?
Safely using pesticides depends on using the appropriate pesticide and using it correctly. The label on the pesticide container provides instructions for use of the pesticide. It also includes warnings that are intended to let the user know how to prevent harmful exposure. Precautions may include wearing protective clothing, keeping children and pets out of the treated area for certain periods, and so on. It is very important to Read the Label First before using a pesticide.

4. How can I protect my children from pesticides?
The publication, Read the Label First: Protect Your Kids (PDF) (2 pp, 1 MB, About PDF), includes information about the importance of reading and following label directions, keeping pesticides in

their original container, storing products, and knowing where to call for help. All see the fact sheet, 10 Tips to Protect Children from Pesticide and Lead Poisonings around the Home.

5. Can I use "bug bombs" safely?
Information about using "bug bombs" safely is detailed in the fact sheet, Safety Precautions for Total Release Foggers.

6. How can I apply insect repellents safely?
EPA has a fact sheet about insect repellent safety that will answer many general questions that you may have about using these products. You may also want to look at EPA's fact sheet about mosquito control for information about West Nile Virus and other mosquito-related issues.

7. Do I need to take precautions with Chromated Copper Arsenicals wood preservatives?
Please read the detailed information in this fact sheet, What You Need to Know about Wood Pressure Treated with Chromated Copper Arsenate (CCA).

8. My neighbor is going to use a pesticide. How can I find out the limitations on its use?
Read the label on the pesticide container, which will detail exactly where the pesticide can and cannot be used. The EXTOXNET Pesticide Information Profiles database is an excellent search engine for information on specific pesticides. EXIT Disclaimer

9. How do I read a pesticide label?
EPA has created a label with pop-up text that explains the basic statements found on pesticide product. The pesticide label is your guide to using pesticides safely and effectively.

10. How can I get rid of pesticides I don't want anymore?
Follow any specific disposal instructions on the label of the pesticide or bring it to a local hazardous waste collection center. EPA and local governments sometimes hold special pesticide collection days (click on your home state on the map in this link) when you may drop-off unwanted pesticides free of charge for proper disposal. If all else fails, small amounts of pesticides, i.e., less than one liquid gallon at a time, may be wrapped in a plastic bag and disposed of in household trash if allowed by your local government. For more information, see Safe Disposal of Pesticides.

Health Effects

1. Are pesticides safe?
All pesticides should be handled and used with care. The safety of a pesticide depends on how the product is used. Label instructions are designed to minimize risk to the user, but they do not eliminate all risk. In addition, some pesticides are more hazardous than others; the hazard may be from ingestion, getting the substance on the skin or in the eyes, or inhaling it.

2. How can I know if I will have a problem from a pesticide exposure?
Pesticide exposure may or

may not cause a problem. Irritation or even burns can occur when a caustic or an acidic pesticide is spilled on the skin or splashed in the eyes. Effects on internal organs can occur if a sufficient amount of pesticide is absorbed from the lungs, mouth or across the skin, and it may be possible to have long-term effects from repeated small exposures which by themselves do not cause obvious harm.

There are also situations where pesticide exposure does not cause problems. For example, some pesticides cannot be absorbed across the skin. Or, the body may be able to metabolize and excrete small amounts of pesticides without adverse effect. Additionally, some pesticides have relatively low toxicity for humans.

Unless the pesticide exposure is massive (as when a child eats rat poison) or causes immediate serious symptoms, predicting the likelihood of future effects requires professional judgment. When in doubt, consult with any one of these sources:

- National Poison Control Center EXIT Disclaimer
  1-800-222-1222 (emergency only), 202-362-3867 (for administrative and materials requests), 202-362-8563 (TDD)

- National Pesticide Information Center EXIT Disclaimer
  1-800-858-7378, 541-737-0761 (fax)
- Cooperative Extension Offices EXIT Disclaimer
- The EPA regional office where you live.

3. We just bought a house with creosote-treated timbers in the basement. Is that safe? And if it isn't, what can we do now? What about using preservative-treated wood in outdoor landscaping and gardens?
Wood preservatives are pesticides that are applied to wood to protect it from wood-destroying fungi and insects. Three common wood preservatives are creosote, pentachlorophenol and the "arsenicals" (CCA - copper-chromated arsenates or "wolmanized" wood). Creosote and pentachlorophenol have been used on railroad ties, telephone poles and occasionally on construction timbers.

The water solubility of these pesticides affects their uses. The arsenical preservatives are water-soluble solutions which are usually forced into the wood with pressure. Creosote and pentachlorophenol are only somewhat soluble in water. They may be applied to wood by pressure or directly to wood surfaces.

EPA does not recommend the use of creosote- or pentachlorophenol-treated wood in the interiors of homes because these chemicals may volatilize from the wood into the indoor air. They can be irritating to the respiratory tract and EPA considers both to be "probable human carcinogens" based on scientific studies. The sale of CCA-treated wood is being phased out. See more detailed information in the EPA fact sheet about CCA and its use of a wood preservative.

You can reduce exposure to these pesticides if treated wood is already present in your home by painting the wood with two coats of shellac, varnish or an oil-based paint. This prevents off-gassing of the pesticides. If you remove the wood, it should be disposed of in a landfill, not burned, either outdoors or in wood stoves. A respirator which prevents inhalation of dust should be worn when cutting preservative-treated wood with a saw.

Treated wood is not recommended for applications:

1. in which it comes into contact with drinking water (e.g., cistern) or food (e.g., cutting boards), including animal feed and water;
2. in which it can be chewed by animals (e.g., fence posts or stalls);
3. in animal brooding or farrowing facilities; or
4. in beehives.

Although wood preservatives can kill plants, and they obviously should not be ingested, the hazards of using preservative-treated wood in garden structures are not entirely clear. Each case is unique because the degree to which preservatives can migrate through soil and be taken up by plants varies with the amount of preservative on the wood surface, the soil type and moisture, the type of plant, and the distance of the plant from the treated wood.

There is no simple test to determine if plants have taken up preservatives from wood. Plants near treated wood which are not thriving may indicate that leaching is occurring. Lining raised beds with plastic or painting treated wood with two coats of an oil-based paint or shellac may impede leaching.

4. Pesticides are tested on anim

als. How relevant is that for humans?
Although animals are not "little people in fur," and results from animal tests have to be interpreted carefully, they can be very relevant for humans. Pesticides usually cause toxicity to cells or molecules, and the cells and molecules of humans and animals can be very similar. Thus, if a pesticide affects a cellular or biochemical process in animals, it is likely to do so in humans as well.

5. I think I'm chemically sensitive, but I've been told by my doctor that it's "all in my head." Is multiple chemical sensitivity real? And what can I do?
Clearly the symptoms of people who consider themselves chemically sensitive are real, and their suffering is not "in their head."

At this time medical doctors do not consider "multiple chemical sensitivity" (MCS) a recognized

disease or condition, because as yet there are no diagnostic criteria for it. This means there is no set of signs and symptoms which are always found in persons who believe they are chemically sensitive, and no objective blood or other laboratory test for MCS. Another reason medical doctors are skeptical is that MCS patients react to extremely tiny amounts of chemicals, and the only mechanism that is now known to cause a reaction to such tiny amounts is antibody formation (i.e., allergy). Yet some MCS patients react to chemicals that do not induce the formation of antibodies.

However, so many people have sought help for problems with multiple chemicals that there have been a number of scientific conferences on the subject. While some medical doctors consider MCS to be primarily psychological in origin, others are keeping an open mind.

If you seem to have reactions to many chemicals, make sure you've seen an allergist. It is possible to be allergic to many chemicals, and once they've been identified, you can avoid them. Many people are unaware that they have food allergies, for example. Also, it is common for an allergy to one chemical to make you more sensitive to other chemicals. Controlling primary allergies can reduce reactions to multiple irritants.

Even if medical doctors cannot seem to help you, there are a number of very effective things you can do for yourself:

1. Make a point of practicing good health habits, including regular exercise, adequate rest and a balanced, nutritional diet.
2. Avoid alcohol and cigarettes.
3. Avoid large quantities of vitamin supplements or untested herbs and pills. They can cause allergies themselves or actually be toxic. But to get an adequate diet, some supplementation may be necessary. Consult a certified nutritionist for advice.
4. Avoid highly stressful situations. They are known to aggravate allergic reactions and other illnesses.
5. Keep a diary in which you identify conditions that make you feel better, then try to reproduce those conditions. Remember to change only one thing at a time so you can find the specific conditions that seem to help.

6. Are children more sensitive to pesticides?
See fact sheet, "Why Children May Be Especially Sensitive to Pesticides."

7. What should I do if someone seems sickened as a result of pesticide use?
8. What should I do if someone in my family has swallowed a pesticide?

- Call 911 if the person in unconscious, having trouble breathing, or having convulsions.
- Check the label for directions on how to give first aid.
- Call the Poison Control Center at 1-800-222-1222 for help with first aid information.
- The National Pesticide Information Center (NPIC) (1-800-858-7378) also can provide information about pesticide products and their toxicity. EXIT Disclaimer
- EPA's publication, Recognition and Management of Pesticide Poisoning, provides information about symptoms caused by poisoning with specific pesticides and treatment information.

9. How do I find out how toxic a certain pesticide is?
EPA rates pesticide toxicity to humans on a scale of 1 to 4. Pesticides in category 1 are considered highly toxic, and their labels must bear the key word DANGER. Pesticides displaying the word "DANGER" should be applied by certified applicators only. Pesticides in category 2 are less toxic, and will bear the key word "WARNING. Pesticides in categories 3 and 4 are the least hazardous, and bear the key word CAUTION. Other hazards may also be listed on the label such as toxicity to aquatic life and birds. To protect yourself and the environment, use any pesticide strictly according to its label instructions. The National Pesticide Information Center (NPIC) (1-800-858-7378) also can provide information about pesticide products and their toxicity. EXIT Disclaimer

10. What is going on with the West Nile Virus?
West Nile virus is primarily transmitted by mosquitoes, although other means of transmission have recently become known. The key to preventing infection still is avoiding mosquito bites. There is helpful information about mosquitoes and the use of insect repellents on the EPA Web site. EPA has also included several links to other government agencies and organizations that deal with mosquito-related issues and the West Nile virus.

In addition, the National Pesticide Information Center (NPIC) provides objective, science-based information about pesticidesÂ-including mosquito repellents and insecticides that are used in controlling mosquitoes. NPIC also provides information on federal, state, and local mosquito control programs. The NPIC Web site also offers a West Nile Virus Resource Guide with information on West Nile Virus, contacts at local, state, and federal agencies, and maps and statistics. Visit NPIC on the Web at http://npic.orst.edu/ EXIT Disclaimer or contact NPIC via a toll-free telephone number, 1-800-858-7378, or by e-mail at npic@ace.orst.edu.

The Centers for Disease Control also provides a wealth of information about the West Nile Virus, as well as providing links to state and local authorities that you may contact with your questions. CDC's site also includes maps and statistics about the West Nile Virus.