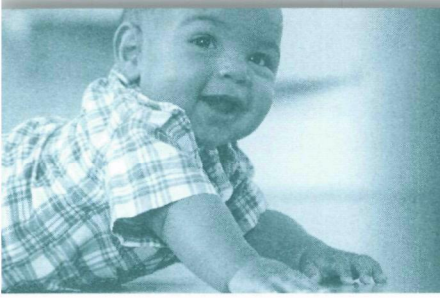

Pesticides and Their Impact on Children: Key Facts and Talking Points

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While pesticides have benefits for society and can be powerful tools for controlling pests, they are also inherently toxic and can severely harm children's health if stored or used improperly.

The following data-driven talking points can be useful when talking with child care providers, families and others about the risks associated with pesticides and the importance of pesticide poisoning prevention.

Why are we talking about pesticides?

- 50 percent of the 2 million poisoning incidents each year involve children younger than six years old, and 90 percent of these incidents occur in the home.
- The American Association of Poison Control Centers data reports more than 70,000 calls made to poison centers with concerns about potential exposure to common household pesticides.
- Among households with children under the age of five, close to half stored at least one pesticide product within reach of a child.
- Nearly 75 percent of households with no children under the age of five stored pesticides in an unlocked cabinet within a child's reach — a significant figure since 13 percent of all pesticide poisonings occur in homes other than that of a child.

Why are children especially vulnerable?

Due to key differences in physiology and behavior, children are more susceptible to environmental hazards than adults.

Differences in Physiology

- Children's nervous, immune, digestive and other systems are still developing. Developing systems are less able to detoxify and excrete these pollutants compared to adults.
- Children's systems provide less natural protection than adults.
- Children breathe in more air than adults, inhaling almost 2 times as many pollutants.

Differences in Behavior

- Children spend more time outdoors on grass, playing fields, and play equipment where pesticides may be present.
- Children crawl on the floor and therefore have full body contact with carpets.
- Children's hand-to-mouth contact is more frequent, exposing them to toxins through ingestion.

Did you know?

Decaying cockroaches and mouse dander are among the top triggers in asthmatic children. People with roaches in their homes are 1.5 times more likely to have asthma. People with rodents in their homes are 2 times more likely to have asthma.

For more information on pesticides or pesticide poisoning prevention, refer to EPA's Pesticides Program Web site at www.epa.gov/pesticides, or call the National Pesticide Information Center at 1-800-858-7378.

How can pesticide poisoning affect a child's health?

Pesticide poisoning is especially harmful to children since their brain and nervous systems are at early critical stages of development. Because their bodies are still growing, children have fewer natural defenses and can develop serious health effects if overexposed to pesticides. There are two categories of health effects of pesticide exposure. **Acute exposure** refers to an intense exposure over a short period of time; for instance, a child sitting in the room during a spraying. Low-dose and **long-term exposure** is exposure that occurs over a period of time.

Acute exposure to pesticides may cause short-term effects such as:

- Headaches;
- Dizziness;
- Muscle twitching;
- Weakness;
- Tingling Sensations; and
- Nausea.

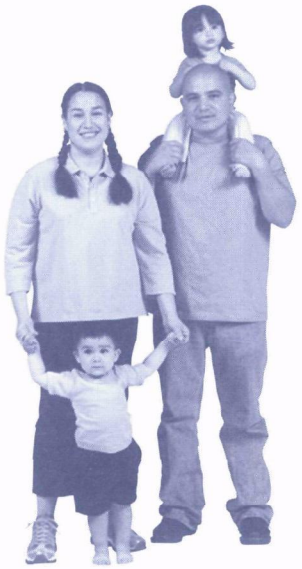
Long-term exposure to pesticides may cause serious health effects such as:

- Birth defects;
- Learning disabilities;
- Behavioral changes;
- Organ damage;
- Forms of cancer, including leukemia, breast cancer, and brain tumors; or
- Asthma symptoms.

What can we do?

One of the most effective ways you can help prevent pesticide poisonings is by adopting Integrated Pest Management (IPM) practices to reduce children's exposure to pesticides. IPM is a safer method of pest management that makes use of a variety of control techniques and focuses on eliminating the causes of pest infestations instead of merely treating the symptoms. Since children spend so much of their day at home and in school, IPM provides an opportunity to create a safer learning environment—to reduce children's exposure to pesticides as well as eliminate pests. IPM involves the following six steps.

- **Keep Pests Out** — If pests can't get inside, then you won't need to use any pesticides to kill them.
- **Starve and Dry Pests Out** — Every creature needs food and water to survive. Eliminate your pests' access to these things and they won't hang around for long.
- **Eliminate Safe Havens for Pests** — Roaches can live in any nook and cranny. Anywhere you see a small crack leading to a spot that people can't access, make sure to seal it up.
- **Monitor for Pests** — Monitoring is key to successful IPM. It lets us know when there is a problem so we can address it early.
- **Create an IPM Plan and Keep Proper Records** — An IPM plan is a document that indicates how you plan to monitor for pests and what you will do if pests suddenly arrive. Having this tool will help you avoid the urge to use dangerous pesticides.
- **Treat Existing Pest Problems** —To get rid of existing pests, use traps, vacuums, gels and baits. If pesticides are necessary, use spot treatments rather than area-wide applications.



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EPA 735-F-09-004