



## Health & Safety Notes

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# Keeping Children Safe from Pests and Pesticides

California State Licensing regulations for child care state that child care settings should take measures to be free from rats and insects. The national standards in *Caring for our Children* tell us that the potential health hazards to children caused by the presence of pests should be reduced. What does this mean to the child care provider? Since pesticides can also pose a health threat to young children, finding ways to reduce or eliminate exposure to pests while reducing or eliminating exposure to pesticides is an environmental concern that every early care and education professional needs to address.

### Why control pests in child care?

Diseases that are spread by insects and rodents can be passed to young children. Normal behaviors in young children such as crawling, mouthing toys and other objects along with natural curiosity and exploration make toddlers particularly vulnerable to diseases carried by pests. Common pest-related hazards in child care settings include:

- Flies and cockroaches may spread disease.
- Mosquitoes may carry disease.
- Cockroaches can cause allergies and asthma attacks.
- Yellow jacket stings are painful and can be life threatening to those with allergies.
- Spiders may inflict painful bites and some may pose a health risk.
- Mice and rats may contaminate food, trigger asthma attacks, carry disease and cause structural damage to buildings, pipes and electrical wiring.
- Termites cause structural damage to buildings and wood furniture.

### Why are children vulnerable to pesticide exposure?

The behaviors that make young children vulnerable to diseases carried by pests (crawling, mouthing

toys, etc.) can also expose children to the pesticides that have been applied to control pests. Pound for pound, children eat, drink and breathe more than adults. Thus, if pesticides are in their environment, they can have higher exposures than adults. Combined with the fact that their brains, immune systems and organs are immature and still developing, children can suffer both short-term and long-term health problems from pesticide exposure.

### What health risks are associated with pesticide use?

With the exception of poison baits, as little as 1 percent of pesticides applied indoors reach the targeted pest (AAP, 2003). As a result, pesticide residues are left on surfaces and in the air of the treated building. Outdoor application of pesticides may fall on non-targeted organisms, outdoor furniture and play areas and be tracked indoors. Acute symptoms such as nausea, headache, dizziness and respiratory irritation may occur from exposure to pesticides. Studies have shown that children who are exposed to pesticides also have a higher incidence of chronic health problems such as neurological disorders, leukemia and other cancers and have a greater risk of developing asthma (IPM Institute, 2004).

### Integrated Pest Management

Integrated Pest Management (IPM) is a pest control program that minimizes pesticide exposure. Despite the convenience and availability of pesticides, there are many ways to control pests without the use of chemicals. IPM controls pests by combining biological, mechanical, cultural, physical and chemical methods in a way that minimizes health and environmental risks. IPM provides the least toxic alternative. It is based on inspection and knowledge of the pests' biology and habits to determine the methods that would best control the pests with the lowest possible exposure to pesticides. Chemicals

are only used as a last resort. IPM is endorsed and promoted by the Environmental Protection Agency.

## Why are education and communication important?

The common sense strategies of IPM require the combined efforts of teachers, kitchen staff, parents, custodians and groundskeepers. Education and communication are essential to promote the necessary changes in habits and attitudes. A licensed IPM professional can suggest the best strategies for controlling pests in your child care setting.

**Cultural controls and sanitation.** Modify the activities in the child care facility to make the environment less hospitable to pests.

- Restrict food consumption to certain areas.
- Empty trash cans at the end of the day rather than letting them sit over night.
- Store food in containers with tightly fitting lids.
- Clean dishes, utensils, and surfaces soiled with food as soon as possible after use and at the end of each day.
- Clean garbage cans and dumpsters regularly.
- Collect and dispose of litter daily.

**Physical controls.** Use barriers or other materials to exclude pests from an area.

- Caulk cracks and openings.
- Fill in access holes in walls.
- Seal around electrical outlets.
- Use trash cans with tightly fitting lids.
- Empty and thoroughly clean cubbies and storage areas at least twice a year.
- Reduce clutter in which pests can hide.
- Keep vegetation, shrubs and wood mulch at least one foot away from structures.
- Keep window and door screens in good repair.
- Use physical traps. Be aware that in the child care setting, traps can be a hazard and must be placed out of reach of children. This includes sticky traps, snap traps and fly traps.

**Biological controls.** Identify the problem or pest before taking action.

- Look for the root of the problem, not just the symptoms of a pest problem.
- Inspect and monitor pest populations.
- It is very important to reduce pests' access to food, water and shelter.

**Chemical controls.** As a last resort, the careful use of pesticides may be necessary.

- Always use a licensed professional with experience in IPM when applying chemicals.
- Use bait, traps or gels in cracks, wall voids, and in spots that are out of reach of children. Avoid sprays, powders and "bomb" applicators.
- Schedule pesticide application for times when the building and grounds are not occupied.
- Use spot treatments as needed, rather than area-wide applications or regularly scheduled applications.
- Store all chemicals in a locked cabinet.

## Attitude Adjustment

Increase your tolerance for pests that are just a nuisance and don't spread disease. To control these pests, always make use of non-chemical strategies first. Pests that do not pose immediate health threats but are a nuisance include:

- **Weeds** may invade playing fields or playgrounds or be aesthetically displeasing. Pull by hand.
- **Ants** may gather in eating and play areas. Keep areas clean. Use non-toxic alternatives.
- **Fruit flies** may appear in kitchens. Keep food and garbage covered.
- **Meal moths** may infest food storage. Dispose of infested food. Store food in containers with tightly fitting lids.
- **Head lice** may appear on children. Have parents consult their health care provider for treatment.

## References and Resources

IPM Institute. 2004. *IPM Standards for Schools: A Program for Reducing Pests and Pesticide Risks in Schools and Other Sensitive Environments*. [www.ipminstitute.org/school.htm](http://www.ipminstitute.org/school.htm).

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by Bobbie Rose, RN (02/06)