

## 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.





# Disinfectants in Schools

~a conversation~

Disinfectants make things cleaner and healthier. What's the big deal? They aren't harmful.



OK, so what IS a disinfectant?

Are you sure? Did you know disinfectants are pesticides regulated by the EPA? They can harm people if they spill, splash, or are improperly mixed.

Great question! A disinfectant is a pesticide used to destroy fungi, bacteria, and some viruses found on non-living surfaces.



## Disinfectant Examples

- Pine Oil
- Some surface wipes
- Germ-killing sprays
- Bleach (Sodium Hypochlorite)



When not used properly, disinfectants can damage the eyes, skin, and lungs. Children can be particularly sensitive to the chemicals in disinfectant products.

Is there anything I should know about using disinfectants safely?



## DOs

- ✓ Read the label and follow the directions every time you use a product, even if familiar with it.
- ✓ Wash your hands right after using disinfectants.
- ✓ Point containers away when opening, pouring, or pulling wipes from canisters.
- ✓ Note the amount of time a surface must remain wet in order for the product to work.

## DON'Ts

- ✗ Never let young children use or have access to disinfectant products.
- ✗ Never put disinfectants in food or drink containers. Store in original containers and clearly label anything that contains a pesticide.
- ✗ Never mix disinfectants with other cleaning products. Mixing bleach and ammonia will produce a toxic gas.

Got it! Where can I get more information?

**npic**  
NATIONAL PESTICIDE INFORMATION CENTER  
1.800.858.7378

Call NPIC for general questions about pesticides, including the potential risk to humans, pets, or the environment.

**POISON Help**  
1-800-222-1222

Call poison control if someone breathes in, swallows, or gets pesticide in the eyes or on the skin.





# WHAT YOU CAN DO TO MANAGE ANTS

## TEACHERS

- Keep classrooms clean by allowing food and beverages only in designated areas, then cleaning thoroughly.
- Ask students to remove food from lockers, cubbies, and desks daily.
- Keep any food, including pet food, stored in sealed containers.
- Take classroom pets home during severe ant infestations.
- Clean up the teachers' lounge before heading home every day.
- Communicate with custodial staff about special needs or ant sightings.

## FOOD SERVICE STAFF

- Store food in containers with tight lids made of plastic, glass, or metal.
- Keep indoor garbage in lined, covered containers and empty daily.
- Clean food spills promptly.
- Clean food-soiled dishes, utensils, and surfaces by the end of each day.
- Maintain clean shelves in storage areas.
- Communicate with maintenance staff about repairing leaks, and custodial staff about emptying garbage daily and vacuuming up ant trails.

## CUSTODIAL STAFF

- Vacuum up ant trails using a strong vacuum or wipe up with soapy water.
- Empty garbage daily from classrooms and food service areas.
- Place outdoor garbage containers on hard, cleanable surfaces and at least 50 feet away from building entrances.
- Wash all garbage containers regularly – wash those outdoors at least monthly and keep area around them clean.
- Collect litter from school grounds at least once weekly.
- Have recyclables collected at least once weekly.
- Communicate pest management roles to staff and students, including removing food or food wrappers from lockers, cubbies, and desks on a daily basis.
- Clean floors and vacuum carpets daily in areas where food is served, and at least weekly in other areas.
- Eliminate spills in storage and receiving areas and maintain clean shelves.

## MAINTENANCE STAFF

- Caulk cracks and crevices.
- Weatherstrip doors and windows.
- Fix leaky pipes under sinks.
- Apply a sticky substance such as Tanglefoot® around trunks of trees and large shrubs infested with honeydew producers. Trim any branches that contact buildings.



## WHAT IS INTEGRATED PEST MANAGEMENT (IPM)?

Integrated pest management is a widely accepted approach toward pest management that results in effective suppression of pest populations while minimizing hazards to human health and the environment.

## FOR MORE INFORMATION

Visit DPR's school IPM Web site at [www.schoolipm.info](http://www.schoolipm.info). For additional information about ants see the link to UC IPM's Pest Note #7411.

## CHEMICAL CONTROL OPTIONS *(Least-hazardous)*

**DUSTS** – Injected into wall voids and cracks and crevices. Active ingredients include boric acid, diatomaceous earth, and silica aerogel. The ants die by drying out.

**BAITS** – Exempt from notification and posting requirements if bait is confined in a self-contained trap (bait station), or formulated as gel or paste applied to cracks and crevices. Active ingredients include abamectin, boric acid, fipronil, and hydramethylnon. Using aerosols or other sprays often reduces the effectiveness of baits. The ants you see foraging are only the tip of the iceberg – if you kill these with a fast-acting spray, thousands more will soon replace them. This is why it's important to use slow-acting baits that reach the queens via mouth-to-mouth feeding of the workers. Think about management as an area-wide project.

**NOTE:** Dusts and liquid insecticides are not exempt from Healthy Schools Act (HSA) requirements.



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916-445-4300

# WHAT YOU CAN DO TO MANAGE ROACHES

## TEACHERS

- Keep classrooms clean by allowing food and beverages only in designated areas, then cleaning thoroughly.
- Take classroom pets home during roach infestations – their food and water support visiting roaches.
- Ask students to remove food from lockers, cubbies, and desks on a daily basis.
- Eliminate cockroach hiding places by removing out-of-date notices from walls and reducing clutter.
- Clean up the teachers' lounge before heading home every day.
- Communicate with custodial staff about special needs or roach sightings.

## FOOD SERVICE STAFF

- Store food in containers with tight lids made of plastic, glass, or metal.
- Store and seal food waste (from prep and serving areas) in plastic bags before removal.
- Remove waste at the end of each day.
- Keep indoor garbage in lined, covered containers.
- Clean food spills promptly.
- Clean soiled dishes, utensils, and surfaces by the end of each day.
- Keep shelves in storage areas clean.
- Take supplies out of boxes and store on pallets or open metal shelving – keep pallets away from walls.
- Communicate with custodial staff about emptying garbage daily, cleaning behind appliances – including refrigerators, ice-makers, and vending machines – and washing floors and vacuuming carpets daily in areas where food is served.

## CUSTODIAL STAFF

- Vacuum roach hiding places using a strong vacuum with a crevice attachment. Vacuum twice, about five minutes apart. During the first pass, the roaches will scatter because of the air current. They'll resettle by the time you vacuum again.
- Empty garbage daily.
- Place outdoor garbage containers on hard, cleanable surfaces at least 50 feet away from building entrances.
- Wash all garbage containers regularly – wash those outdoors at least monthly and keep area around them clean.
- Collect litter from school ground areas at least once weekly.
- Have recyclables collected at least once weekly.
- Keep drains clean – this also prevents infestations of drain flies.
- Empty and thoroughly clean lockers and desks at least twice per year (e.g., winter break and at the end of each school year).
- Annually clean under and around rarely moved furniture (e.g., staff desks, bookcases, filing cabinets).

## MAINTENANCE STAFF

- Repair cracks and crevices in walls, floors and pavement.
- Seal openings around potential cockroach runways (electrical conduits, heating ducts, plumbing).
- Caulk permanent bulletin boards, mirrors and other wall fixtures.
- Cover floor drains with screens.
- Seal all permanently installed furniture and cabinets at points of attachment, under counter tops, and inside to prevent harborage of pests in the gaps.



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## FOR MORE INFORMATION

Visit DPR's school IPM Web site at [www.schoolipm.info](http://www.schoolipm.info). For additional information about cockroaches see the link to UC IPM's Pest Note #7467.

## CHEMICAL CONTROL OPTIONS *(Least-hazardous)*

**INSECTICIDAL DUSTS** – Injected into wall voids and cracks and crevices. Active ingredients include boric acid, diatomaceous earth, and silica aerogel. The roaches die by drying out.

**IGRs** – These prevent immature roaches from reproducing and stimulate mature roaches to feed (good idea to place near bait). Available products contain the active ingredients hydroprene or pyriproxifen.

**BAITS** – Exempt from notification and posting requirements if bait is confined in a self-contained trap (bait station), or formulated as gel or paste applied to cracks and crevices. Good sanitation encourages roaches to be more interested in baits. Active ingredients include abamectin, boric acid, fipronil, hydramethylnon, and imidacloprid.

**NOTE:** Dusts and insect growth regulators (IGRs) are not exempt from Healthy Schools Act requirements, although the ones described here are considered least hazardous when used according to label directions. **Don't be tempted to spray roaches – they'll scatter and then return with a vengeance.**



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