

INTEGRATED PEST MANAGEMENT (IPM)

IPM for Multi-unit Housing

When owners of multi-unit buildings spray pesticides indoors, the spray may wipe out the cockroaches they see, but most will remain safely hidden, thriving on the plentiful food and water found throughout the building. Because the cockroaches will show up again, spraying becomes a never-ending cycle. Meanwhile, residents risk exposure to pesticides and still have to live with the pests.

Read on to find out about options that avoid the exposure hazards and work more effectively than routine indoor spraying.

IPM...THE COMMON-SENSE SOLUTION

IPM is a preventive way to manage pests and is widely used in agriculture, parks, schools, restaurants, office buildings—any place likely to have pest infestations. When managing pests inside buildings, we want to prevent pests from coming indoors and limit the food, water, and shelter they need to survive.

Instead of regularly scheduled spraying, IPM focuses on prevention through **sanitation, making repairs, and pest-proofing**. Some important aspects of IPM are **educating residents** about pest biology, **training maintenance staff** not to spray, using sticky traps to monitor pests, and **encouraging everyone to communicate** about infestations. IPM is a team effort involving those who live in the building, building managers and owners, maintenance staff, and pest management professionals or PMPs.

HEALTH HAZARDS OF PESTICIDES USED INDOORS

NO ONE WANTS PESTS IN THEIR HOME. Some pests such as cockroaches and rodents can contaminate food, carry diseases, and trigger asthma. Pests often sneak under doors or through torn screens in search of food, water, and hiding places. When people live close together as they do in multi-unit housing, insect pests thrive. Building owners mistakenly believe that frequent spraying is the best way to evict the pests.

Spraying increases exposure to pesticides. When building owners regularly spray pesticides indoors or outdoors, they overexpose residents, including children, pregnant women, and the elderly. Indoor levels of pesticides may be higher than those outdoors because pesticides build up in dust and settle into carpeting, furniture, and toys. Pesticides used indoors or tracked inside on shoes can remain for months or even years.

Children are more susceptible to pesticide poisoning than adults because their bodies and brains are still developing. Children eat, drink, breathe, and have more skin surface pound for pound than adults, so they absorb higher concentrations of pesticides. Exposure to pesticides, even at low levels, can lead to immediate reactions such as, headache, nausea or vomiting, dizziness, and hives. Long-term reactions can include asthma, low birth weight, birth defects, learning disabilities, cancer, and hormonal changes.

ENVIRONMENTAL HAZARDS

When faced with recurring insect infestations, building owners often ask their maintenance staff or vendors to spray on a regular basis. Over time, pests become resistant to pesticides—especially pyrethroids—the class of insecticides used both indoors and outdoors. *Pesticides are then used in higher concentrations and sprayed more often.* For over ten years, scientists have connected outdoor pyrethroid use with widespread toxicity in urban creeks throughout California. Most of the contamination results from use around buildings, including multi-unit housing. New surface water regulations adopted in July 2012 will change how pyrethroids are applied outdoors.

But pyrethroids used indoors are also a problem: when they're washed down drains, they enter wastewater treatment plants where their removal is incomplete and residues eventually end up in rivers and bays. Treatment plants have strict effluent limits to protect surface water. When the effluent contains pesticides—even at parts per billion—the treatment plant can be fined \$25,000 per day.

IPM WORKS!

IPM is much more thorough than routine spraying. Because IPM focuses on cleaning up and making repairs, it may seem costly at first. But the long-term benefits of IPM far outweigh spraying—the pests will be gone and residents will avoid exposure to pesticides.

☑ **IPM reduces pest numbers more reliably than spraying.** A project in Boston public housing compared IPM practices and conventional spraying, showing 50% fewer cockroaches when IPM practices were used. A similar project in Los Angeles showed 77% fewer roaches compared to spraying. The success of these projects resulted from educating residents and using preventive practices such as fixing water leaks. (And it's possible to reduce roach numbers to zero when building managers and residents cooperate.)

☑ **IPM saves money in the long run.** Building owners agree that IPM saves money. Utility bills drop when owners repair leaks and seal doors and windows. Cleaning costs decrease when residents put more effort into keeping their units clean. A 2004 study by Orkin and Virginia Tech found that IPM costs less than spraying, sometimes by as much as 60%. And spraying has its own costs—besides the expenditure for pesticides, the time and labor involved in applications add up.

☑ **IPM takes a longer time to yield results than spraying, but eliminates the food, water, and shelter that attracts pests.** If you sprayed a cockroach-infested unit the old-fashioned way, you might find a lot of dead roaches, but most—hidden in appliances and cabinets—would survive, scatter to adjacent units, and eventually come back. It's more effective to suck up hiding roaches with a vacuum cleaner and eliminate food and water sources, caulk cracks and holes, and monitor with sticky traps.

AN IPM POLICY PROTECTS RESIDENTS FROM UNSAFE USE OF PESTICIDES

In buildings with regularly scheduled spraying, some residents think of aerosol spray cans and foggers (bug bombs) as insurance and their only salvation

for persistent infestations. Residents might reconsider their own pesticide spraying habits if they were better informed about IPM practices. Even in instances when residents are informed and prefer IPM, the building owner is only required to respond to infestations rather than making repairs. And too often the response is with spraying and fogging.

FINDING VENDORS WHO DO IPM

In California, three programs train and certify pest management professionals to perform IPM services. Most pest control companies recognize that IPM solves pest problems more permanently than repeated spraying and they emphasize keeping pests out of buildings and working with residents on prevention. Building owners can request IPM services directly from their pest management provider or visit www.pcoc.org for more information.

RESOURCES

Read more about IPM approaches in California for household pests.

- **University of California Statewide IPM Program.** www.ipm.ucdavis.edu
- **Our Water, Our World.** www.ourwaterourworld.org | Supported by stormwater and pollution prevention groups



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