What is Integrated Pest Management (IPM)?

IPM is a pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of practices:

- regular pest population monitoring
- site or pest inspections
- an evaluation of the need for pest control
- resident education
- structural, mechanical, cultural, and biological controls

Techniques used to incorporate IPM include such methods as:

- improve sanitation
- pest-proofing disposal of garbage
- building maintenance
- other non-chemical tactics, such as steel wool, traps, screens for floor drains, and insulation for hot and cold water pipes

Least-hazardous pesticides should be selected only as a last resort, thus minimizing the toxicity of and exposure to any pesticide products that are used.

Why is IPM Important?

Unfortunately, the wide availability of pesticides and the perception that they are the only way to control pests, can lead to excessive pesticide use in places like day care centers, schools, homes, office buildings, parks, and yards. If spraying alone really worked, why would the pests (and the exterminators) keep coming back? IPM is an economical method of pest control that deals with the root causes and not just the symptoms of pest problems.

Pesticides and Human Health: Is There a Concern?

Pesticides are substances designed to kill, control or repel pests, weeds, insects, rodents and molds. If used irresponsibly they can result in serious injury or even death.

Many pesticides currently in widespread use have been linked to long term health problems, including cancer, birth defects, endocrine disruption, asthma, neurological disorders, and immune system deficiencies.

A growing body of evidence indicates that children are especially vulnerable. For example, in September 2002, Environmental Health Perspectives published a study with findings that suggest “exposure to household pesticides is associated with an elevated risk of childhood leukemia.”

According to the US EPA, Office of Research and Development’s Asthma Research Strategy, “pesticides are listed as one of four environmental pollutants that may influence the induction and exacerbation of asthma.”

Are Pesticides Necessary?

Many people, confronted with pests in their homes, school or child care center turn first to pesticides. But pest control doesn’t have to be toxic! Pests survive and thrive only if they have access, food, water and shelter. IPM (endorsed and promoted by the Environmental Protection Agency and the Illinois Department of Public Health) includes non toxic steps to control pests, such as traps (indoor rodents) and least-toxic baits (insect pests) and uses the least-hazardous pesticides only as a last resort. Pesticide “bombs” and routine sprays are avoided altogether.
Starting IPM: Thinking Like a Pest

It might not sound nice, but thinking like an insect or rodent will help you solve pest problems. Pests have different definitions of acceptable food and hiding places than a human does. Pests will eat garbage, garden waste, and even the glue in cardboard boxes. Pests will live in false ceilings, dumpsters, under stoves, and behind refrigerators. And obviously, pests are significantly smaller than we are. They can enter a building through small cracks and openings, such as those under a door or in a window screen. Even larger pests like rats can squeeze through an opening as small as ½ inch. Viewing your day care from this perspective will help you identify potential and current sources of pest problems.

IPM is Common Sense Pest Control

The most effective way to control pests is to address the cause of the pest problem directly. For example, sealing up openings that allow pests to enter a building is an effective and safe method of pest management. Also, by eliminating the habitat or food source that attracts a pest in the first place, the pest problem can be controlled or prevented.

Many areas are perfect environments for pests. Therefore it is not surprising that pest problems are common. Addressing the causes of the pest problems, such as access, food, water, and places to hide, can eliminate or significantly reduce pest problems. Methods to address the cause of pest problems include:

- **Exclusion**: eliminating pests’ access to a building or area by plugging holes, cracks, and other entryways.
- **Sanitation**: cleanliness and better garbage management practices
- **Habitat modification**: changing the environment to make it less inviting to pests. For example, reducing clutter which provides pests’ easy places to hide.
- **Maintenance**: addressing problems like leaking pipes or faucets that provide a favorable habitat or food source to pests.

With safer, more effective alternatives available, why risk using and storing pesticides? Try common sense, non-toxic methods first. Turn to least hazardous toxic pesticides only as a last resort and avoid routine spraying, bombing, and fogging altogether.

Hiring and Working with a Pest Control Company for IPM Services

When looking for a pest control company, look carefully for the IPM services. The services you should expect will include, among other things:

- Development of a pest monitoring program, including regular inspections of potential problem sites, use of glue boards and traps, pest identification and record keeping.
- A site assessment and recommendations for structural repairs, physical and/or cultural changes to prevent and control pests.
- Regular communication with staff regarding pest control practices and pest monitoring results.
- Application of least-hazardous effective pest controls which may or may not include applying pesticide products. **Pesticide applications shall be by need and not by schedule.**
- Parents and staff must be notified of pesticide applications. The contractor shall work with the day care center to ensure full
compliance with Illinois’ notification requirements.

- The contractor shall not apply any pesticide without obtaining approval from the appropriate personnel at the day care center.
- Pesticide applications should be scheduled for when the building and grounds are not occupied.
- The contractor shall work with the day care center to ensure that toys and other items mouthed or handled by children are removed from the area before pesticides are applied as is required by Illinois law.
- The contractor will schedule applications for times when occupants will not return to the treated area for at least 2 hours after a pesticide application or as specified on the pesticide label, whichever time is greater, as is required by Illinois law.
- Evaluation of control measures and reporting of results.

A good IPM contractor will conduct an initial site inspection assessment before submitting a bid for services. In hiring a contractor, you are responsible for ensuring that Illinois law regarding pesticide use in daycare centers is followed. You must communicate upfront with the contractor about your needs and pest problems.

### Integrated Pest Management (IPM) Resources

#### Manuals and handbooks

*Integrated Management of Structural Pests in Schools* and *A Practical Guide to Common Pests in Schools*. These are both available free from IDPH. Call 217/782-5830 or download a copy from [www.idph.state.il.us](http://www.idph.state.il.us) under “A-Z topics”, hit “P” for pests.


#### Video

*Integrated Pest Management in Schools: A Better Method*  

#### Websites

- [www.spcpweb.org](http://www.spcpweb.org)  Safer Pest Control Project’s website  
- [schoolipm.ifas.ufl.edu](http://schoolipm.ifas.ufl.edu)  University of Florida’s School IPM website  
- [ipm.uiuc.edu/urban/index.html](http://ipm.uiuc.edu/urban/index.html)  University of Illinois Urban IPM website  
- [www.entm.purdue.edu/entomology/outreach/schoolipm](http://www.entm.purdue.edu/entomology/outreach/schoolipm)  Purdue University’s School IPM website
www.ipminstitute.org  IPM Institute of North America’s website

http://www.epa.gov/pesticides/ipm/index.htm  US Environmental Protection Agency School IPM website

Contacts
Safer Pest Control Project (SPCP)
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Illinois Dept. of Public Health (IDPH)
Fred Riecks, Structural Pest Control Program, 525 W. Jefferson St., Springfield, IL 62761
ph: 217/782-5830    fax: 217/785-0253  www.idph.state.il.us

Illinois Dept. of Agriculture (IDA)
Tom Walker, Bureau of Environmental Programs, Illinois State Fairgrounds, Springfield, IL 62706

University of Illinois Cooperative Extension Service (CES)
Phil Nixon, Dept. of Nat. Resources, 103 Vegetable Crops Bldg, 1103 S. Dorner, Urbana, IL 61801

US Environmental Protection Agency (EPA)
Donald Baumgartner, Region 5, Pesticides and Toxics Branch, 77 West Jackson Boulevard, Pesticides
Program Section, DRT – 8J, Chicago, IL 60604-3590

IPM Technical Resource Center (and toll-free School and Day Care IPM Hotline)
Al Fournier, Dept. of Entomology, 1158 Smith Hall, Purdue University, W. Lafayette, IN 47907
ph: 1-877-668-8IPM  www.entm.purdue.edu/entomology/outreach/schoolipm

References:
1. Ecobichon, D.J.: Toxic Effects of Pesticides. Casarett and Doull’s Toxicology. The Basic Science of
(carbamate), atrazine (triazine) and nitrate (fertilizer) mixtures at groundwater concentrations, Toxicology
Windows of Exposure to Household Pesticides and Risk of Childhood Leukemia. Environmental Health