Bugged by Bugs? Try IPM

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Why is a good pest management program important for all schools?

- Reduces kids' exposure to pests…and to pesticides that are used (and sometimes over-used) to control them
- Many states now restrict use of pesticides in schools
- Integral component of your school IAQ program

Why be concerned about pests in schools?

- Asthma mgmt. – what pests can trigger asthma attacks?
- Bites and stings
- Disease
- Missed school days (head lice)
- Allergic reactions

What are common school pests?

Ants	Centipedes	Mosquitoes
Bats	Scorpions	Rodents (mice, rats)
Bedbugs	Spiders	Weeds
Bees	Chiggers	Lice
Wasps	Mites	Ticks
Beetles	Cockroaches	
Birds	Fleas	
Caterpillars	Flies	

Too long a list?

Cockroaches:
- **Make asthma worse in sensitive people with asthma.**
- **May also cause asthma.**
- **Carry disease.**
- **Contaminate food.**

Plus they are disgusting!

Rats and mice:
- **Carry serious infectious diseases.**
- **Damage food and property.**
- **Start fires by gnawing on wires.**

Plus mice may cause an asthma attack in people who are sensitive to them.

The Connection between Asthma and Pests

- Asthma: the leading cause of school absenteeism due to a chronic condition (~14 million missed school days/yr.)
- Pests are the #1 asthma trigger in the inner city. "Cockroach allergen is the primary contributor to childhood asthma in inner-city environments." Kenneth Olden, former Director, NIEHS
- Information gap: Fewer than 1 out of 10 asthmatics know that roaches can trigger their attacks. (National Survey on Environmental Management of Asthma, Sept. 2004)

Do we really need to hate all bugs?

What Are Pesticides?

- Pesticides are chemicals used to kill or control pests, including insects, rodents, bacteria, mold, mildew, fungi, and weeds.
- Examples of pesticides:
  - Weed Killer
  - Bug Spray
  - Insect Repellent
  - Flea and Tick Collar
  - Bug "Bomb"
  - Ant and Roach Traps
  - Disinfectants and Bleach

How are pesticides used in schools?

- Regular scheduled "treatments" as preventive measure – can include use sprays in classrooms, bathrooms and kitchens.
- Turf and landscape maintenance (for playing fields, lawns and gardens
- Disinfectants and sanitizers in bathrooms and kitchens
- Treated wood on play-sets
- Requirements for head lice treatments

Why is it important to reduce kids exposure to pesticides?

What does the "cide" in pesticide mean?

Potential Health Effects of Pesticide Exposure

- **Acute Exposure**
  - Asthma attacks
  - Flu-like Symptoms: nausea, headache, stomach ache, upper respiratory distress
  - Death
- **Long-Term Exposure**
  - Asthma
  - Risk of cancer
  - Risk of neurological damage
  - Impact to hormonal and reproductive systems
  - Permanent chemical sensitivity

Children's risk from exposure to pesticides is greater than adults'

Windows of Susceptibility in Development

Differences in Physiology

Differences in Behaviors

Children's Increased Vulnerability

A brain has only one chance to develop

Neurological disorders, including developmental delays, are associated with exposure to pesticides

Behaviors Increase Their Exposure

- Children spend more time outdoors on grass, playing fields, and play equipment where pesticides may be present
- Activities that increase exposure:
  - exploring
  - playing on treated floors, lawns, and play equipment
  - putting hands and objects in mouths

Children breathe in more air than adults, inhaling almost 2x as many pollutants

Pesticide concentrations are much higher in a child's breathing zone than an adult, even 24 hours after application

Differences in Physiology

- Children's developing systems are less able to detoxify pollutants compared to adults.
- Children drink more fluids than adults
- Kids absorb chemicals through their skin than adults – (greater surface area of skin relative to weight).

How are kids and staff exposed to pesticides in schools?

What is the state of play re pesticide use in schools?

30+ states have passed laws restricting use of pesticides in schools.
National legislation has been introduced.

Resources

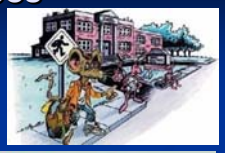
- Best course of general info: IPM Institute of North America
  - Info on starting your IPM program
  - Planning and communication
  - Model policies
  - IPM standards (recommended practices for use in buildings and on school grounds)
  - IPM Star Program

Resources, cont'd.

- You won't get IPM if you don't ask for it. How to contract for IPM services:
  - GreenShield
  - Quality Pro
  - Eco-Wise

EPA Resources

- IPM in the School Environment
- NIOSH Fact sheet on IPM
- Join our Pest Patrol:
- a Backyard Activity Book for Kids
- GreenScapes



NGOs and others

- Beyond Pesticides – www.beyondpesticides.org
  - Look for **Safer Schools: Achieving a Healthy Learning Environment through Integrated Pest Management** - documents the IPM practices of 27 school districts in 19 states. Includes a how-to guide to help schools to adopt IPM programs, a list of school IPM contacts, a list of states that have IPM or pesticide policies and a 2-page IPM checklist for schools.
- National Pest Management Association – www.pestworld.org and www.pestworldforkids.org
- U. Fla. National School IPM website and list serve ("schoolbugs") http://schoolipm.ifas.ufl.edu/Florida/list.htm

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