Integrated Pest Management for Bed Bugs

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www.stoppests.org
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Outline

- Introduction to IPM
- Bed Bugs
Pests cause problems

- Trigger/cause asthma and allergies
- Bite
- Contaminate food
- Lead people to overreact and ignore pesticide labels
- Transmit disease
- Hitchhike in belongings
- Violate housing codes

**IPM makes homes healthier!**

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Priority pests

- **Cockroaches** cause asthma in infants, trigger asthma attacks, and contaminate food.
- **Rodents** such as mice and rats carry diseases, bite, destroy property, may cause fires, and may trigger asthma attacks.
- **Bed Bugs** and their bites are a nuisance and are expensive to eliminate.

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What is IPM?

• **Integrated**: Uses multiple approaches that work together.
  – Inspection, monitoring and identification
  – Establishment of threshold levels
  – Employment of multiple control measures
  – Evaluation of effectiveness
• **Pest**: What the multiple approaches work to fight.
• **Management**: Use of the most economical means with the least possible risk to people, property, and the environment.

What all pests need

• Food
• Water
• Shelter
The IPM team

Resident

- Monitors unit for problems
- Reports presence of pests, leaks, and mold
- Helps and educates neighbors
- Notifies management of disabilities or when assistance is needed to participate in an IPM program
- Gives PMP access to unit
- Prepares unit for PMP visit according to instructions
- Follows lease regarding
  - Housekeeping
  - Sanitation
  - Trash removal and storage

Team members teach each other and document what they see and do.
Maintenance Staff

Inspection & monitoring
- Monitor common areas for pests
- Report observations, problems, and actions

Control
- Seal cracks
- Fix leaks
- Eliminate moisture problems
- Install barriers to pest entry and movement
- Keep common areas clean and sanitary (especially trash chutes and dumpsters)
- Possibly assist with unit preparation

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Resident Support Service Staff

- Get assistance for residents who are unable to prepare their unit for the PMP due to financial or physical limitations
- Educate residents about:
  - Pests
  - Proper housekeeping
  - Reporting presence of pests, leaks, and mold
- Enforce lease provisions regarding:
  - Housekeeping
  - Sanitation
  - Trash removal and storage
- Encourage residents to allow PMP into unit

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Pest Management Professional

• Qualifications to consider
  – Green Shield, GreenPro, or Ecowise (in CA)
  – Association membership: National Pest Management Association
  – PMP certification: Associate Certified Entomologist (ACE) or Board Certified Entomologist (BCE)
• Follows contract to get paid
  – Notifies PHA of upcoming visits
  – Communicates with staff and residents
  – Inspects and monitors for pests
  – Identifies pests
  – Recommends pest-proofing strategies
  – Applies effective and compatible pesticides
  – Documents everything: observations, pesticide usage, suggestions
  – Follows-up quickly when needed

The results of the team approach

• An inspection and monitoring system that finds pests
• A reporting system that identifies areas of improvement
• Units are prepared to receive effective treatment
• Communication that empowers all
• Fewer pests and a healthier environment

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Bed bugs are health hazards

Bed bugs do not transmit disease, but they are a pest of public health significance. They

• cause secondary infections after people scratch their bed bug bites;
• result in stress, loss of work, loss of sleep, and financial burden;
• are unwelcome in our homes and workplaces.

What is a bed bug?

• A blood-sucking insect
• Most active at night
• Usually feeds at night

Adult bed bug feeding on a human

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Bed bug life cycle

Bed bugs at various stages of growth.

Bed bug behavior

- Hide in cracks and crevices, often in groups.
- Cannot fly, jump, or burrow into skin…they crawl.
- Hitchhike on bags, furniture, wires, or pipes.

Bed bug crawling into a screw hole to hide.
Can be confused with...

- Ticks
- Cockroach nymphs
- Other kinds of bug bites

Signs of bed bugs

- Bites
- Blood spots
- Shed skins
- Dead bed bugs
- Live bed bugs

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Where bed bugs live

Beds, sofas, bedside tables, recliners, picture frames...

= Hot Spot

Where to look

1. Beds
2. Bedding
3. Baseboard/carpet edges
4. Furniture
5. Upholstered furniture
6. Walls and ceilings
7. Clothing
8. Appliances

(in order of most to least often infested)
How do bed bugs spread?

• Through walls along wires and pipes
• On anything coming from an infested unit (furniture, backpacks, laundry...)

How to prevent getting bed bugs

Advice for residents:
• Keep coats, backpacks, purses, and bags off beds, recliners, and sofas.
• Don’t bring home used furniture.
• Look for signs before sleeping.

Advice for staff:
• Always inspect
• Do not set belongings or equipment on furniture
• Keep clothing simple or wear covers
• Kill any bed bugs on fabric using a dryer

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How to prevent staff from getting bed bugs

• In units:
  – Avoid sitting or placing items on potentially infested surfaces
  – Wear a protective layer when moving infested items
• In the main office/community areas:
  – Replace furniture with fabric and many joints with plastic or metal items
  – Have residents set their belongings in plastic totes during meetings

Got bed bugs? Now what?

If found and controlled early in the infestation, the spread of bed bugs can be stopped.

The first responses should be to:
  – Report the problem—keep records
  – Not throw the mattress out—cover it
  – Not spray or bomb—leave this to the PMP
  – Prevent carrying the bed bugs to other places
Got bed bugs? Now what?

- Make sure residents understand and are able to follow site-specific instructions from the PMP
- If there is an infested item, the PMP may have the resident:
  - Encase
  - Destroy, dispose, and replace with metal or plastic
  - Heat treat in a dryer then isolate in bags or containers

Items to offer residents

- Fabric mattress encasements
- ClimbUp interceptors
- Dissolvable laundry bags
Management Methods

- Inspections
- Monitors
- Non-Chemical Treatment Methods
- Pesticides

Non-Chemical Treatment Methods

- Disposal of Infested Items
- Isolation in Plastic Containers or Bags
- Using Metal Furniture
- Laundering
- Steaming
- Mattresses and Box Spring Encasements
- Freezing
- Vacuuming
- Ambient Heat Treatment
Prevention and control: Targeted chemical use

• Sanitation first!
• Maintenance staff and residents should not spray. Spraying should be a last resort and done only by a PMP.

• Read the ENTIRE pesticide label before buying, using, storing, or disposing of a product.
• The label is the law!
• Follow the label directions closely.

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Evaluating Pesticides

• Risk = Toxicity + Risk of Exposure
• Signal words are linked to toxicity:
  CAUTION = slightly toxic
  WARNING = moderately toxic
  DANGER = severe skin or eye irritation
  DANGER-POISON = highly toxic
• Pesticide search tool: www.epa.gov/pesticides/bedbugs/

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A review of what you should do

• Take preventative action through education, PPE and furniture choice
• Have a system in place for identifying infestations
• Hire a qualified contractor
• Ensure units are prepared for the contractor’s treatments

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Questions?

- Government sponsored: [www.epa.gov/pesticides/bedbugs/](http://www.epa.gov/pesticides/bedbugs/)
- Dr. Gale Ridge: Gale.Ridge@ct.gov