
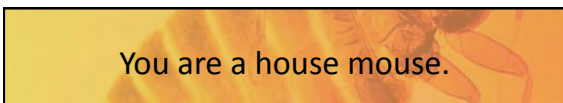


Bed Bugs 101

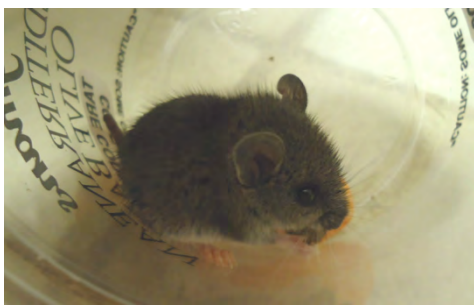
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stoppests@cornell.edu www.StopPests.org [facebook.com/StopPests](https://www.facebook.com/StopPests)



You are a house mouse.



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Pest management must include managing introductions



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Find pests that get in before an infestation grows

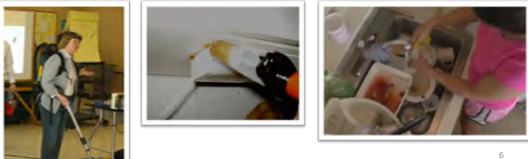


and...

5

Take action

Use more than one control method
Methods must be economical and pose the least possible risk to people, property, and the environment



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Integrated Pest Management (IPM)


1. Inspect and monitor
2. Identify
3. Determine the scale of response
4. Respond
 - Non-chemical control
 - Changing people's behavior
 - Chemical control
 - Biological control
5. Evaluate effectiveness

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What is a bed bug?

- A blood-sucking insect
- Flat
- Range in size from a sesame seed to a apple seed
- Light brown to mahogany red depending when they last fed



Adult bed bug feeding on a human

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Bed bugs are health hazards

Bed bugs do not transmit disease, but they are a pest of significant public health importance

- Cause secondary infections after people scratch their bed bug bites
- Result in stress, loss of work, loss of productivity, loss of sleep, and financial burden
- Are unwelcome in our homes and workplaces

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Bed bug life cycle



Fed

Unfed

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Bed bug behavior

- Most active at night
- Hide in cracks and crevices, often in groups
- Cannot fly, jump, or burrow into skin... they crawl
- Hitchhike on coats, bags, furniture, wheelchairs...





Bed bug crawling into a screw hole to hide

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What bed bugs eat and drink


Blood




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Can be confused with...

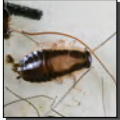
- Ticks
- Cockroach nymphs
- Other kinds of bug bites
- Allergic reactions to chemicals




Tick




Mosquito Bites



Cockroach Nymph



Bat Bug



Spider Beetle

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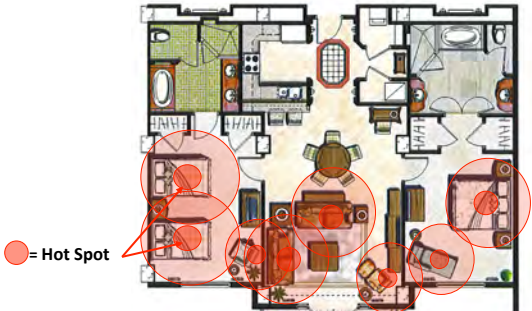
Signs of bed bugs

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



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Where bed bugs live



● = Hot Spot

Advice for staff, health aides, and contractors

- 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 fabric-covered furniture that has many crevices with plastic or metal items
 - Have residents set their belongings in plastic totes during meetings

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Interview

- Find out where people sleep
- Find out where people put the things that come in/out of the unit
- Note financial, physical, or cognitive limitations that could influence treatment
- Use a flashlight and look around sleeping areas and areas where introduction is likely

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Inspection

- Always use a flashlight
- If bed bugs are found, inspect all adjacent units
- Two types
 - Visual
 - Scent detecting canine



Monitoring

- Trap and kill bed bugs
- Determine how bad the infestation is
- Two types
 - Passive
 - Active



Passive, moat-style interceptor

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Include the resident in the plan

- Encourage patience and cooperation
- Give them an idea of the treatment timeline

<p>Ask residents to NOT:</p> <ul style="list-style-type: none"> • fog/bomb, • use their own pesticides, • throw away items, • change too much until a professional arrives to inspect or treat 	<p>Give them control options:</p> <ul style="list-style-type: none"> • vacuum with a pantyhose, • clothes dryer for 30 minutes on high heat, • encasements and interceptors, • isolate belongings in plastic totes/bags • protect the community <small>22</small>
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Treatment options

<ul style="list-style-type: none"> • Pesticides <ul style="list-style-type: none"> • Spray • Dust • Fumigation • Heat <ul style="list-style-type: none"> • Dryer • Steam • Container • Whole unit 	<ul style="list-style-type: none"> • Freezing with Liquid CO₂ • Vacuuming • Isolation <ul style="list-style-type: none"> • Encasements • Clear bags • Closed plastic containers • Interception devices
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Questions?

<p>In-house options (minimum training)</p> <ul style="list-style-type: none"> • Encasement • Monitoring • Quick (15 min) visual inspection • Steam • Clothes Dryer • Vacuum • Heat chamber (FL model) • Diatomaceous Earth (APPLICATOR'S LICENSE) • Resident training/support 	<p>Leave it to the experts</p> <ul style="list-style-type: none"> • Canine inspection • Whole-unit heat treatment • Pesticide application • Thorough inspection • Active Monitoring
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IPM resources

Websites

- NH Bed Bug Action Committee: www.nhbedbugs.org
- The Northeastern IPM Center's IPM in Multifamily Housing website and blog: www.stoppests.org
- The National Pesticide Information Center: <http://npic.orst.edu/>

Resource

- Pest Prevention by Design Guidelines



STOP Pests
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