

Key messages about bed bugs

- Learn to identify the signs of bed bugs.
- If you live in multifamily housing, contact the management immediately to prevent a general outbreak.
- Dirty living conditions do not cause bed bugs but cleaning and removing clutter will help in controlling them.
- Anyone can get bed bugs. Seek help immediately if you find them.
- Sealing cracks and small holes will help to reduce hiding places and prevent bed bugs from crawling between apartments.
- Cooperate with your neighbors, landlord and pest management provider. Getting rid of bed bugs needs to involve everyone.
- **Do not use spray pesticides from a grocery or hardware store.** Do not use pesticide bombs or foggers to control bed bugs. They can make conditions worse, by causing bed bugs to disperse into other rooms, developing pesticide-resistant bugs, and exposing humans to unnecessary risk.
- It is hard, but not impossible to get rid of bed bugs. The advice in this guide will help.

www.idph.state.ia.us/
www.ipm.iastate.edu/ipm/
www.cdc.gov
www.epa.gov

Bed Bugs

Inspection – Prevention – Control

A Guide for Property Owners, Managers, and Tenants



City of Cedar Rapids
Code Enforcement Office
319-286-5831



Public Health
Prevent. Promote. Protect.
Linn County, Iowa

Linn County
Public Health
319-892-6000

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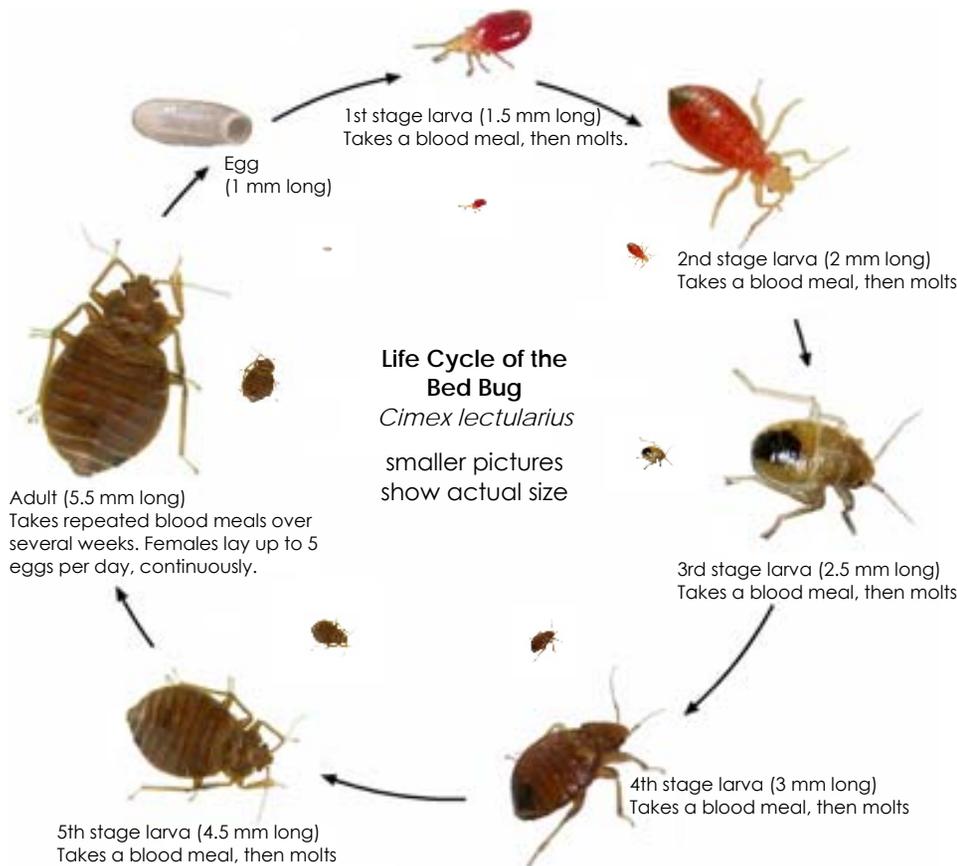
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NOT BED BUGS: (Left) A carpet mite. (Center) Spider mites. (Right) A cockroach nymph (magnified).



Bed bugs at various stages of growth. Unfed bugs (top row) are lighter in color, shorter, and flatter.



(Left) Unlike mosquito bites, bed bug bites often appear in rows. Welts usually appear immediately, but can take up to 14 days to appear.

(Below) Bed bug adult shown actual size. For pictures of all phases of the bed bug life cycle shown actual size, see the inside front cover.

What landlords and building managers can do

- Provide tenants with information about bed bugs. Share this guide.
 - Monitor to prevent infestation.
- BED BUGS ARE HERE – MONITORING SAVES YOU \$\$\$!**
- Encourage everyone to report bed bugs as soon as they know of a problem.
 - Notify tenants, and inspect all units adjacent to, above and below apartments found to have bed bugs.
 - Consult with a pest management professional to treat for bed bugs. Be wary of companies that make unrealistic claims that bed bugs can be controlled with one visit.
 - Help tenants if they cannot move furniture themselves or need help to get rid of clutter.
 - Give advance notice of the planned use of pesticides.
 - Inspect upon vacancy and if necessary treat units to ensure they have no bed bugs or other pests before renting.
 - Even where pest control is the tenant's responsibility, an infestation of more than one unit in your building will require a coordinated, building-wide control effort.



Recognizing a bed bug



(Above left) Bed bug eggs, nymphs and adult. (Center) Bed bug adult shown about 7 times actual length. (Right) Bed bugs are flat when viewed from the side.

From its appearance

A newly hatched bed bug is semi-transparent, light tan in color, and the size of a poppy seed. Adult bed bugs are flat, have rusty-red-colored oval bodies, and are about the size of an apple seed. Bed bugs can be easily confused with other small household insects, including carpet beetles, spider beetles and newly hatched cockroaches (nymphs). For help in positively identifying bed bugs, contact the ISU Linn County Extension office at 319-337-9839.



(Above) Blood stains, droppings, and eggs on a mattress edge. (Below) Fecal deposits on a wall near a bed.

See inside back cover for more identifying pictures.

From its markings, droppings and eggs

Blood stains, droppings and eggs can be found in several locations including:

- Mattress seams and tufts, sheets, pillow cases and upholstered furniture.
- Cravices and cracks in furniture.
- Baseboards of walls.



Recognizing a bed bug (continued)

From its bite

Some people do not react to bed bug bites. But for those who do, bite marks may appear within minutes or days, usually where skin is exposed during sleep. They can be small bumps or large itchy welts. The welts usually go away after a few days.

Don't mistake mosquito bites for bed bug bites (or vice versa). Except for the bite pattern (bed bug bites appear in rows or clusters), they look similar.



Bed bug bites often appear in rows, unlike mosquito bites or other insect bites. Bites often concentrate in a single area.



How bed bugs grow and reproduce

Bed bugs are most active when we sleep. They crawl onto exposed skin, inject a mild anesthetic and anticoagulant, then suck up a small amount of blood. Most people never feel the actual bite.

Bed bugs need a blood meal to grow and lay eggs. A female lays 5-7 eggs per week and if fed, will lay more than 200 eggs in its life. Eggs take about 10 days to hatch. Bed bugs are fully grown in 2 to 4 months and can live as long as a year.

Seal cracks and crevices

Repair cracks in plaster, repair or remove any loose wallpaper and tighten light switch covers.

Apply caulk to seal crevices and joints in baseboards and gaps on shelving or cabinets.



Get rid of infested items



Usually, it is not necessary to get rid of furniture or bedding at the first signs of bed bugs. Cleaning and enclosing is often adequate.

Box springs should only be discarded if they cannot be covered and are heavily infested.

Use plastic sheeting (shrink /pallet wrap) or place securely in plastic bags any items to be thrown away. Label with a sign that says "infested with bed bugs."



Clean – de-clutter – disinfect

Get rid of clutter in sleeping areas. Clutter gives bed bugs a place to hide.

Wash all items showing bed bug stains in hot water (120°F) and dry on the highest setting for at least 20 minutes. For items that can't be washed, 20 minutes in a HOT clothes dryer will kill bed bugs.

Wipe off dead bugs, blood stains, eggs and droppings with hot soapy water.

Vacuum carpets, floors, bed frames, furniture, cracks and crevices daily, using the brush and crevice tools. Empty the vacuum or seal and dispose of its bag outside of your home after each use.

After treatment, enclose infested mattresses and box springs in a cover that is labeled "for bed bugs" for at least a full year. Periodically check for rips or openings and tape these up.

Covering mattresses

Cover mattresses and box springs with covers made for bed bug control. Even if there are bed bugs (eggs, etc) still on the mattress, an effective cover will cause them to starve and die.

Heat and cold

Bed bugs (including eggs) can be killed by keeping furniture below freezing for three days – or by raising the temperature in the furniture to above 120°F, for instance by placing it in a closed car in the sun on a hot day.



Clutter in sleeping areas gives bed bugs a place to hide



Wash areas where fecal deposits, bugs, or eggs are present, and vacuum cracks and crevices.



The heat from a hair dryer can be used to flush bed bugs out of hiding and kill them



The health effects of bed bugs

Bed bugs are not known to spread disease – but they are still a health concern!

- Bites can be itchy and irritating. Welts usually heal in a few days, but can sometimes itch for weeks. A physician should be consulted to rule out other causes for the lesions and to offer treatment as needed.
- Bed bugs cause social and psychological anxiety, and can lead to loss of sleep.

Some people become so desperate that they use improper or excessive amounts of pesticides that can lead to poisonings. **ALWAYS FOLLOW THE PESTICIDE LABEL.**

Respond to bed bugs immediately – for your health, and that of your family and neighbors.

Preventing bed bugs from infesting your home

Bed bugs can enter homes by latching onto used furniture, luggage and clothing, and by traveling along connecting pipes and wiring.

- Never bring bed frames, mattresses, box springs or upholstered furniture found on the street into your home.
- Check all used or rented furniture for bed bugs.
- When traveling, inspect the bed and furniture. Keep suitcases off the floor and bed, and inspect them before you leave.
- If you suspect you have been around bed bugs, immediately wash and dry your clothing on hot settings or store it in a sealed plastic bag until you can.
- Seal cracks and crevices with caulk, even if you don't have bed bugs. This will help prevent bed bugs and other pests from coming in. **THIS IS ESPECIALLY EFFECTIVE IN MULTI-FAMILY COMPLEXES.**



Don't bring discarded upholstered furniture home.

Check luggage for bed bugs before you bring it home.



Getting rid of bed bugs

If you have bed bugs, you shouldn't feel ashamed. Anyone can get bed bugs. Notify your landlord and neighbors. The sooner everyone responds, the more successful everyone will be.

Choosing and working with a pest control company

Bed bug infestations usually require the services of professional exterminators. Tenants whose landlords do not promptly respond to bed bug complaints can call the appropriate government office listed on the front of this pamphlet, and may also hire their own professionals.

To get rid of bed bugs, you must choose the right company, be clear about what you want done, and monitor performance.

To choose a good professional...

- Find a company through dependable referrals, directories, professional associations and check to make sure they are licensed at www.iowaagriculture.gov/pesticides.asp, or call 515-281-5321.
- Interview several companies before choosing. Ask about their training, and their approach to controlling bed bugs. Make sure they follow the procedures described in this guide.
- Agree on a service plan and its cost. Expect at least two treatment visits and a third follow-up visit to confirm that bed bugs have been eliminated. Severe infestations or cluttered apartments may take more visits to eliminate bed bugs.

A good company will...

- Inspect your property before giving you a price quote or begin any pesticide application.
- Give you a written inspection report, and an action plan of how to prepare for treatment and prevent further infestation.
- Base quotes on inspection findings, not flat fees. The cheapest services are rarely the best.
- Visit often until the job is done.
- Employ qualified, well-trained pest management professionals.
- Educate you on how to prevent bed bugs.
- Work with you until the bed bugs are gone.
- Treat you with respect.

Trap and kill bed bugs

- Force bed bugs out of cracks and crevices with a putty knife or an old playing card, or with hot air from a blow dryer on low setting. Catch them with sticky packing tape or crush them in paper towels. The heat from blow dryers will kill bed bugs after 30 seconds of continuous contact.



- Use double-sided tape, or duct tape sticky-side-out, around your bed leg to monitor bed bug activity – it won't stop all bed bugs from getting on your bed, but it will help you identify whether they are present. Pull the bed away from the wall and other furnishings so they can't enter your bed that way.



- Sticky traps made for cockroaches don't work for bed bugs, since the bait is not attractive to them.



What you can do without a professional

- Everyone should learn how to identify bed bugs and inspect for them.
- De-cluttering will help to reduce bed bug habitat and aid in pest management.
- Monitor for bed bugs by placing double-sided tape around the legs of your bed and in other areas. This won't stop all bed bugs.

Tools you can use



- Bright flashlight
- Magnifying glass
- Blow dryer
- Paper towels
- Small mirror, ideally one with a handle, available from hardware stores
- Vacuum with crevice tool, brush and plenty of vacuum bags
- Putty knife, playing card or credit card as a crevice tool
- Garbage bags
- Plastic packing tape, cockroach sticky traps or mouse glue boards
- Bucket of soapy water and sponge

About the use of pesticides

Bed bug infestations usually require the use of pesticides.

It is not advisable for homeowners or tenants to attempt to treat for bed bugs. Most of the necessary pesticides are only for sale to and use by professional pest management companies. If homeowners try to control these bugs with over-the-counter products, the bed bugs will likely become dispersed, resulting in treatment that is more difficult at a later date.

Ask the professional to:

- Use the least toxic pesticide labeled for bed bugs that will be effective.
- Follow all instructions and warnings on product labels.
- Tell you when it's safe to re-enter a treated room.
- Never spray the top of mattresses or sofas.

Pesticides must be labeled and will direct you what surfaces can be treated.

ALWAYS FOLLOW THE PESTICIDE LABEL!

To report or ask about pesticide exposures, call the
Poison Control Center 24 hours a day:

1-800-222-1212

For more information about pesticide products, call the
National Pesticide Information Center at 1-800-858-7378

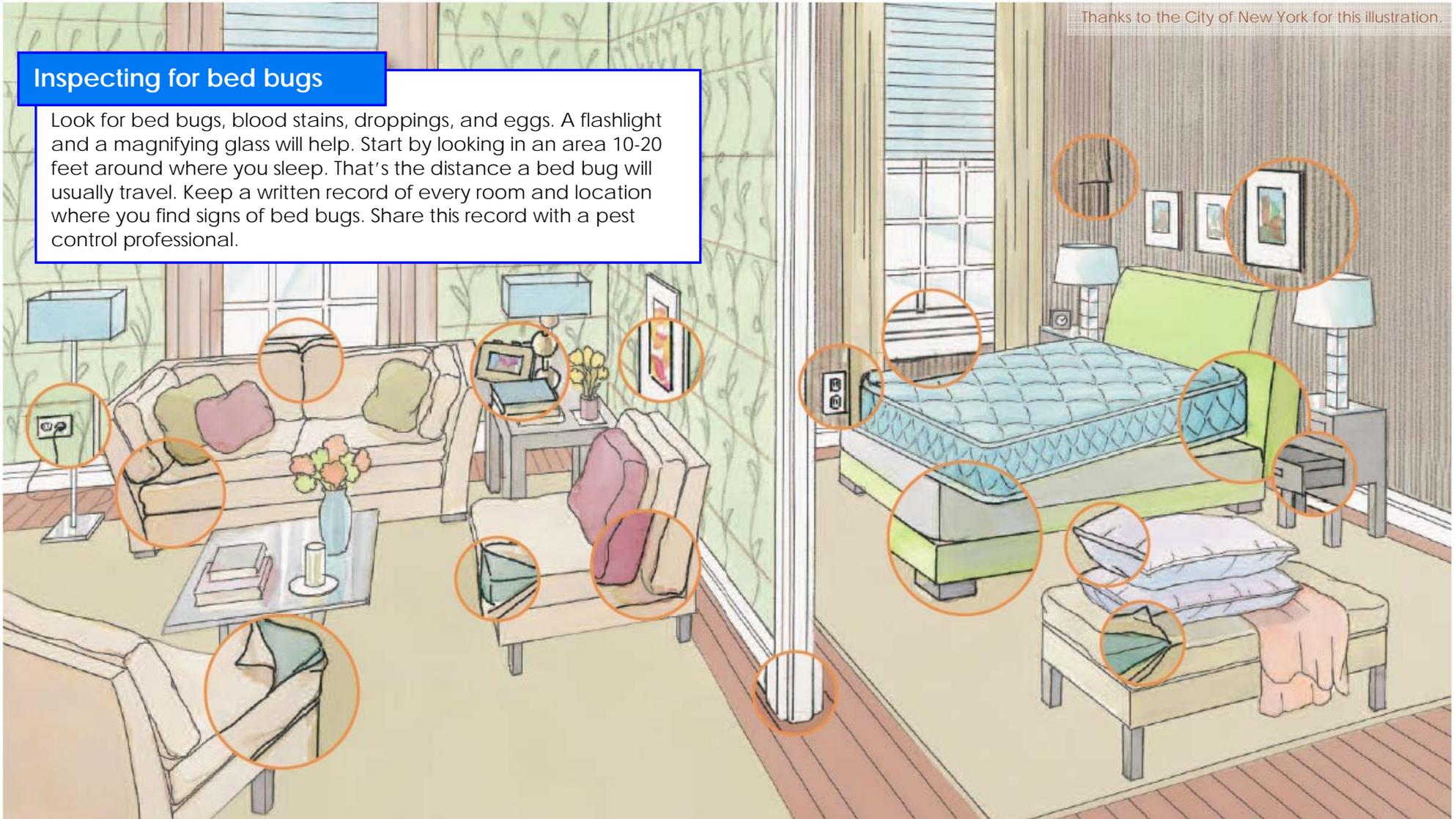
To find out if someone is licensed by the State of
Iowa to apply pesticides, go to:

www.iowaagriculture.gov/pesticides.asp

(515) 281-5321

Inspecting for bed bugs

Look for bed bugs, blood stains, droppings, and eggs. A flashlight and a magnifying glass will help. Start by looking in an area 10-20 feet around where you sleep. That's the distance a bed bug will usually travel. Keep a written record of every room and location where you find signs of bed bugs. Share this record with a pest control professional.



- Check mattresses, box springs, bed frames, bedding, and upholstered furniture.
- Check the seams, tufts, and any rips in the covers of mattresses and box springs.
- Look beneath the bed and along the bed frame and headboard.

- Use a flashlight to check cracks and crevices in bedroom furniture, floorboards, baseboards, windows and door frames.
- Swipe a putty knife or playing card into crevices to force bed bugs out, or use a blow dryer. Crush bugs with a paper towel when they come out.

- Remove drawers from furniture and check the inside, top, bottom, joints, and even screw holes.
- Using a putty knife or playing card (etc), check paintings, posters, pictures, and mirrors.
- Check cracks in plaster and peeling wallpaper.

- Inspect the face plates of electrical outlets and light switches (by eye only – don't insert anything into areas with wires.)
- Look in phones, clocks, smoke detectors, and toys.
- Look inside any luggage that has recently entered the home.