



OPERATIONS

OCCUPANCY &  
MARKETING

FINANCE &  
ACCOUNTING

MAINTENANCE

RISK  
MITIGATION

IN THIS  
SECTION

## BED BUGS

- Learn basic bed bug facts
- FAQ's that you need to know the answers to
- What you should do first

In the past 10 years, bed bugs have begun making a comeback across the United States. International travel and commerce have facilitated the spread of these insect hitchhikers that have been found on airplanes, ships, trains and buses. Residents inadvertently bring bed bugs home with them when they go away for vacation and/or business. Moving from one apartment community to another can also help spread the problem. Bed bugs are most frequently found in dwellings with a high rate of occupant turnover. Apartment complexes certainly fall into that category along with hotels, motels and college dormitories to mention a few.

The bed bug diet consists only of blood. Bed bugs feed like mosquitoes by extracting blood from their meal source whether it is humans, rodents or birds.

Eradicating bed bugs is more difficult and more costly than dealing with other types of pests. Because bed bugs do not have chewing mouthparts and ant and roach baits have no impact. Aerosol bug bombs for fleas or flying insects are not effective. Bug bombs should never be used for bed bugs since they will cause the bed bugs to scatter to different areas of the same room or to adjacent rooms.

Traditional pest control methods, which emphasize the routine application of pesticides, often ignore the root causes of infestations and allow bed bug populations to persist. Effective management and treatment involves the commitment of both the resident and landlord. An Integrated Pest Management Plan promotes the prevention of infestation through education, inspection, and other preventative measures.



### KEY MESSAGE

Bed bugs are a growing problem everywhere and you must be knowledgeable to take preventative and corrective actions.

Consistent information to landlord and tenant, early detection of an infestation, and application of treatment to targeted sites will help prevent spreading the bed bug problem, make for happier tenants and a better "bottom line."

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## BED BUGS

### Inspection/Prevention

Eradicating bed bugs is costly, so prevention and early detection are essential. It is highly recommended that maintenance and apartment staff be properly trained to identify bed bugs and their common hiding places. An inspection of a unit should be conducted prior to occupancy and can be conducted periodically throughout a lease term.

“...prevention and early detection are essential...”

Since bed bugs can be brought into a building by "hitch hiking" on the belongings of residents, landlords should provide a copy of the Central Ohio Bed Bug Task Force's, "Bed Bug Identification and Guidelines for Residents" handout to residents, prior to taking occupancy. This will empower residents to take an active role in preventing bed bugs from entering the premises and properly notifying a landlord if bed bugs are later discovered.

### Bed Bug Basics/Fact or Fiction

Susan C. Jones, PhD., The Ohio State University Department of Entomology, has provided a basic informational tutorial:

Bed bugs are making a comeback! Although infestations were common in the U.S. before World War II, the advent of long-lasting pesticides drastically reduced the number of infested buildings in the U.S. However, bed bugs remained at high population levels in many areas of the world. Bed bugs are excellent hitchhikers that can be easily transported in furniture, personal items, luggage, bedding, etc. Several reasons for the resurgence of bed bugs in the U.S. in the past decade have been suggested: increase in international travel and commerce, high tenant turnover, changes in pesticide use, and insecticide resistance.

Fact or Fiction - how much do you know about bed bugs? Are the following statements true or false?

- ▶ Bed bugs are only a problem in low-income neighborhoods. False! There is an unnecessary stigma associated with bed bugs. The truth is that bed bugs prefer human blood, and they will feed on anyone, regardless of their cleanliness or socio-economic status.
- ▶

#### FOR MORE INFORMATION

See  
[www.centralohiobedbugs.org](http://www.centralohiobedbugs.org)  
or call your OCCH Asset  
Manager at 614-224-8446

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- ▶ Bed bugs carry disease. False! There is no conclusive evidence that bed bugs transmit disease.
- ▶ Any insecticide will kill bed bugs. False! Pesticides and other treatments effective against pests, such as cockroaches are not necessarily effective against bed bugs. For example, boric acid kills cockroaches. It is ineffective against bed bugs because it is a stomach poison that must be fed upon. (Remember, bed bugs only feed on blood). Some pesticides will kill bed bugs that are out in the open and if the insects are sprayed directly. However, the majority of bed bugs in an infested building are hiding and will not be killed by these contact pesticides.
- ▶ Household aerosol bug bombs meant for flying insects will kill bed bugs. False! Bug bombs will not kill the majority of bed bugs in an infested room. These insecticides cause bed bugs to scatter as the bugs attempt to avoid the irritating effect of the spray. The scattering effect from bug bombs makes the bed bug infestation much worse! Never use bug bombs for bed bugs!

### Bed Bug Basics: Identification

1. What are bed bugs? Bed bugs are parasitic insects. Human blood is their preferred food, but they will feed on rodents, bats, birds and pets, if humans aren't available.
2. How do bed bugs grow and develop? During its life cycle, a bed bug hatches from an egg into a nymph (immature) and molts (sheds its old skin) five times before becoming a full sized adult, about the size of an apple seed. Eggs are glued onto a surface by the adult female bed bug. All nymphal stages and adults require blood meals.
3. What do bed bugs look like? Adult bed bugs are small but visible to the naked eye. An adult bed bug is from 1/4 - 3/8 inches long and reddish brown. Bed bugs have an oval shape with a flattened body when unfed; their body becomes swollen after they have fed. The young nymph (immature) that has just hatched from the egg is less than 1/10 inches long and nearly colorless, but it becomes red after taking a blood meal. There are five nymphal stages, with each stage slightly larger than the preceding one. Nymphs typically are yellowish brown to reddish brown.
4. How do bed bugs move about? Bed bugs cannot fly, but they can walk very fast. They are able to cling tightly to surfaces, and they can fit into very small cracks and crevices where they often hide during the day.
5. Where are bed bugs found? Bed bugs can be found in places that are frequented or occupied by humans. Bed bugs are most commonly found in dwellings with a high rate of occupant turnover, such as hotels, hostels, dormitories, apartment complexes, movie theaters, and the like. Bed bugs also can infest private



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dwellings. Bed bugs can infest airplanes, ships, trains, and buses.

6. Where do bed bugs hide? Bed bugs will hide in mattresses and box springs, bed frames, dressers, upholstered furniture and other furniture, cracks and crevices, electrical outlets, carpet tack strips, baseboards, window and door casings, drapery pleats, wall hangings, ceiling moldings, seams in wallpaper, etc. Bed bugs prefer to contact fabric, wood, and paper surfaces-- all of which are common in human dwellings.
7. What are the tell-tale signs of bed bugs? The most obvious signs of bed bugs are small black spots (feces) that are deposited in and near bed bug hiding places. Shed bed bug skins and egg shells and live bed bugs also may be found. Blood stains typically occur when a bug is squashed. Itchy red welts may be the result of bed bug bites, but other insects and arthropods and other medical conditions can produce similar bite reactions. It is important to confirm whether the bites were caused by bed bugs by conducting an inspection and finding bed bugs or their evidence.
8. When do bed bugs feed? Bed bugs typically bite at night. However, they also can feed during the daytime.
9. What do bed bug bites look like? Bed bug bite reactions vary from person to person. Humans often exhibit a range of reactions to the bed bugs injected saliva. Some exhibit no reaction whatsoever and others experience a raised itchy red welt at the site of the bite. Bed bug bite reactions often appear as two or more bites in a row. They often occur on exposed areas of the body, such as the face, neck, arms and shoulders. Bed bug bites may resemble bite reactions caused by other insects and other medical conditions.
10. How do I treat bites? Consult your physician. Anti-itching medications and antibiotic salves that are applied to the skin may be helpful.

### Prevention

1. How are bed bugs spread? Bed bug nymphs and adults are adept crawlers, and they hitchhike from place to place by tucking away in clothing, shoes, backpacks, purses, briefcases, luggage, used furniture, mattresses, bedding, etc. Bed bugs can also spread by laying eggs on these items. Bed bugs can easily crawl to multiple units in a building such as in hotels, dorms, and apartments and spread beyond the site of the initial infestation.
2. How can I protect myself and my family from bed bugs? Knowing what to look for can keep you from carrying bed bugs into your home. Be on the lookout for the tell-tale signs of bed bugs when traveling or buying used furniture and bedding and other used items. In a work setting, where bed bug exposure is possible, follow the safety precautions prescribed for your work place.



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### Eradication

An integrated pest management (IPM) approach of sanitation and non-chemical and chemical measures is required to combat a bed bug infestation.

- ▶ Use a variety of sanitation and non-chemical measures including:
  - ▶ Minimize clutter
  - ▶ Launder all bedding, clothing, etc. in hot water (at least 120F) and dry on a hot setting for at least 15 minutes
  - ▶ Encase mattresses and box springs in special encasements that have a sealed zipper
  - ▶ Caulk or seal cracks and crevices
  - ▶ Vacuum rigorously. Use crevice tool / attachment for seams.
  - ▶ Chemical treatment requires a licensed pesticide applicator who should:
    - ▶ Apply insecticides to targeted sites. Use a variety of insecticides
    - ▶ Rotate insecticide
    - ▶ Conduct at least one follow-up inspection with insecticide treatment as necessary

Do not consider an infested unit in a building in isolation. Bed bugs move quickly and can easily spread beyond the site of the initial infestation, especially in hotels, dorms, and apartment buildings. Be sure to inspect, and treat if necessary, all units that share a common wall (above, below and on both sides) with the infested unit.

### Beginning the Search

A bed bug infestation can be recognized by:

- ▶ Dark (sometimes rusty) spots of excrement on sheets and mattresses and walls.
- ▶ Fecal spots, eggshells and shed skin may be found near the bugs hiding places.
- ▶ Blood stains from crushed bugs or
- ▶ An offensive, sweet, musty odor from the bed bug scent glands may be detected when infestations are severe.
- ▶ Additional information and photographs can be found at the Central Ohio Bed Bug Task Force Web site ([www.centralohiobedbugs.org](http://www.centralohiobedbugs.org)) or The Ohio State University Department of Entomology Fact Sheet (<http://ohioline.osu.edu/hyg-fact/2000/2105.html>).



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### They're Great at Hiding

Bed bugs do a great job of hiding so it is important to closely examine many areas of a room. An initial inspection prior to occupancy and periodic inspections for bed bugs of an occupied unit by maintenance staff is strongly recommended. Concentrate on:

- ▶ Mattresses and box springs. Examine the mattress seams and undersides of box springs. Note: the muslin wrap on the bottom of the box spring may need to be removed. Seek consent of resident prior to doing so
- ▶ Bedding, including sheets, comforters and blankets
- ▶ Upholstered furniture around seams, edges of cushions and undersides of chairs
- ▶ Wood furniture on the undersides and interiors of chests where drawers slide
- ▶ Bed frames around metal joints and lips
- ▶ Window and door frames
- ▶ Cracks and crevices
- ▶ Carpet tack strips at the wall
- ▶ Baseboards
- ▶ Remove and inspect behind outlet and switch plates.
- ▶ Inspect smoke detectors, thermostats
- ▶ Drapery pleats or other window coverings
- ▶ Loosened wallpaper
- ▶ Check ceiling/wall junctions/ceiling moldings

If bed bugs are found in a unit, all adjoining units should be immediately inspected. Make sure inspection results are documented.

### Don't Be Part of the Problem

- ▶ Make it a habit to visually check yourself for bed bugs crawling on your person before entering and exiting a unit. Check your tool bag/box or anything else you take in or out of a unit. If you have co-workers with you, check each other. There are some non-toxic sprays that you can use that are effective for killing unseen hitchhikers. Make sure that any such spray be approved by your company prior to using.
- ▶ A bright LED-type flashlight is essential for locating bed bugs.
- ▶ Consider having a 10 power magnifying glass with you.
- ▶ Bring a supply of tie-type plastic garbage bags with you to contain infected areas.



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- ▶ Use a bagless vacuum cleaner. Empty contents into a plastic bag and seal after every use.
- ▶ If the vacuum uses a bag, seal the bag in a plastic bag immediately upon finishing and throw away. **DO NOT REUSE THE BAG!**
- ▶ Remove any wild animal roosts and bird nests that may be on or around the home or apartment. Bed bugs like these areas of harborage.
- ▶ Do not allow residents to retrieve abandoned furniture/mattresses/box springs at the dumpster or from a "set out."
- ▶ Keep alert for any bed bugs during normal routine maintenance and notify your company's manager immediately if bed bug activity is spotted.

### Complaint By Resident

Act quickly on any bed bug complaint by a resident. Inspect the resident's unit as soon as possible as well as adjacent units if bed bugs are discovered. Follow manual and company protocol and seek professional help.

### Bed Bugs Discovered; Now What?

This problem cannot be overlooked. Ignoring signs of bed bugs will increase the cost of extermination, increase the invasiveness of extermination, and increase potential liability. If bed bugs are discovered, notify your manager immediately. Your company should seek prompt professional help from a licensed exterminator. The Ohio Department of Agriculture licenses pesticide companies. You can discover if an applicator company is properly licensed by going to:

1. [www.agri.ohio.gov](http://www.agri.ohio.gov)
2. Click on Pesticide Regulation; search for pesticide company
3. Click on online services

Be sure the company you select is experienced in bed bug eradication. You may want to talk with fellow landlords who have dealt with bed bugs. Unfortunately, single treatments are rarely effective and multiple treatments may be required. Depending on the severity of the bed bug problem and the company you select, provide a written notice to resident(s) notifying them when the bed bug treatment will be performed and what the tenant(s) needs to do to prepare for the treatment.

Although treatment protocol varies from company to company, attached exhibit "Notice to Residents", provides common requirements. It is highly recommended that the notice provide the tenants name, proper address and the date the notice was delivered.



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Maintain a copy of this notice in tenant's file. Over the counter chemicals are available to treat bed bugs but apartment staff may be prohibited from using certain chemicals unless the employer is licensed by the state of Ohio. Also improper treatment may cause the problem to spread and become worse not better. It is important to inspect adjacent units (beside/below/above) and treat as necessary.

The Central Ohio Bed Bug Task Force is composed of industry, education, public safety and health professionals in the Columbus, Ohio area. Visit [www.centralohiobedbugs.org](http://www.centralohiobedbugs.org) for more information.

INTERIOR



**Kelley Miller**  
Property Manager  
CPO Management

### How we do it...

“We have been successful in treating bed bugs through resident education, creating and implementing a personalized action plan with each resident.

We begin treatment immediately upon notification of an infestations. In association, we take a proactive inspection approach during our quarterly preventative maintenance inspections to identify any unreported infestations.”

