



# BED BUG GUIDELINE

## *Prevention and Extermination*

This guide provides information about how to spot and eradicate bedbugs.

## WHAT ARE BED BUGS?

Bed bugs are tiny wingless, blood-feeding parasites that go through three basic life stages; egg, nymph, and adult. A newly hatched nymph is the size of a poppy seed and very pale until it feeds. The adult is the size and shape of an apple seed, dark reddish brown in color and flat as a credit card before feeding. These insects tend to hide in undisturbed places including; where a person sleeps or sits for an extended period of time.

An average bed bug roughly lives for 10 months. Female bed bugs lay one to five eggs per day, will grow to full adulthood in 21 days and can survive for months without feeding. In heavily infested locations bed bugs can be found anywhere in the room.

Bed bugs feed on blood by inserting fine stylets from their beak directly into the skin in search of a tiny blood vessel and may move and bite repeatedly. At each point the beak releases saliva containing proteins and enzymes into the skin which may cause an allergic reaction in some people. Allergic reactions vary to small itchy red or white bumps, blisters or pustules.

## WHAT IS THE RISK OF HAVING BED BUGS?

Bed bugs have never been shown to transmit disease to humans. However, the most common symptom of bed bug bites are itchy welts on the skin. Risks can arise with the use of insecticides to treat the home, particularly when individuals attempt to eradicate bed bugs without the help or advice of a professional pest manager.

People with no pesticide application experience may result to using aerosol foggers and professional products to control bed bugs in their homes. The impact on public health from overexposure to pesticides used to control bed bugs is unknown however, we strongly discourage the use of “bug bombs” and foggers because of the harmful exposure and the risk of device explosions.





## WHO IS RESPONSIBLE FOR THE REMOVAL OF BED BUGS?

In most cases, a landlord or property manager is required by law to “maintain the dwelling they own without insect infestation” (MA: 105 CMR 410.550). If you are a tenant, contact your landlord so that they can hire a licensed exterminator to identify the insect and develop an extermination plan or IPM (Integrated Pest Management) to eliminate them.

Please note: If someone is renting a single family home, the owner is not responsible for extermination as long as they maintain upkeep of the home. In these cases, the occupant is required to hire a licensed pest management company.

## RESPONSIBILITIES OF BUILDING MANAGEMENT AND STAFF:

- Encourage tenants or guests to report bed bugs (unreported and uncontrolled infestation will spread quickly)
- Keep records of bed bug (or other pest) complaints
- Respond quickly to complaints
- Develop an aggressive protocol with elimination as the goal
- Institute a prevention program, centered on awareness

## TENANT RESPONSIBILITY:

- Cooperate with staff and management in preventing and controlling bed bugs whether your individual living space is infested or not.
- Know the signs of bed bugs and check constantly for signs of them in your living space
- Report infestation



# STEPS

## STEP 1: GETTING READY - INTERVIEW YOUR TENANT

The first step is to interview residents to determine possible sites of infestation. Ask the following questions:

1. Who in the family has been bitten by bed bugs? Are the bites visible?
2. Where do affected people sleep or rest for extended periods in the residence?
3. Are neighboring units infested with bed bugs?
4. Has any furniture, new or used been recently added to the residence?
5. Has someone in the family been on a trip or visit that required luggage?
6. Where was the luggage placed when returning from the visit?
7. Where is the luggage currently stored?
8. Does anyone else visit the residence with bags, coats or other items?
9. Are there pets in the house and, if so, where do they typically sleep or rest?
10. What control measures have been attempted?

## STEP 2: INITIAL INSPECTION

The purpose of the inspection is to determine if bed bugs are present and the level of infestation. If at any time a bed bug is found, advise the client of treatment options and initiate control procedures. A professional pest manager should be prepared to inspect cracks and crevices, dismantle furniture, remove baseboards, lift carpet, remove receptacles and outlet covers, and seal and contain infested items and furniture.

Begin the inspection where the affected person rests or sleeps (usually beds, sofas and chairs) looking for bugs, caste skins and fecal spotting. Inspection of the bed must be very detailed, and will include linens, blankets, pillows, mattress, box spring, headboard and frame. The bed will be disassembled, inspected and placed centrally on the floor. Bed bugs can hide in very small cracks and crevices, including holes drilled for screws. Box springs and bed frames include stitching, under edge guards, behind the dust cover ("ticking") and all joints and crevices must be examined.

Next, expand the search to include all furniture, base boards, carpeting, appliances and curtains, etc.

### PLEASE NOTE

In multi-unit housing, if bed bugs are located in one unit, all adjacent units (including those directly above and below) should be inspected.



### **STEP 3: HOW TO FIND A RELIABLE PEST CONTROL PROFESSIONAL**

The best way to get rid of bed bugs is to hire a professional pest control company with experience in bed bug control.

A commercial pesticide license is required to treat all private or public properties used for human occupation with four or more units (Massachusetts Pesticide Control Act Chapter 132 B of the Massachusetts General Law). Only pesticides labeled in the Commonwealth of Massachusetts for use against bed bugs may be legally applied.

Before contacting a pest control company, you should know where your problem areas are and what pests you have, so you can hire the right people. If you've seen pests in your home, make a note of what they look like and all the places you've seen them. This will allow the company you hire to give you the best possible service.

Doing your research can save you money and prevent pests from taking over your home. Before you hire a pest control professional, you want to have some information to give them so they can best service you. If possible google the insects characteristics and to identify them. This will help pest control when you call seeking their services.

In addition we recommend you follow the steps listed below:

- Call several licensed and insured pest management companies and get written estimates.
- Check references.
- Look for companies that offer both chemical and non-chemical control .
- Insist on pre-inspection as part of the estimate process.
- Technicians should be willing to talk with you about treatment options and guarantees.
- An effective bed bug control plan should take multiple treatments and inspections. Make sure these are covered in the estimate.
- Compare warranties and guarantees.

## **STEP 4: BEST PRACTICES FOR CONTROLLING BED BUGS**

Pesticides alone should not be used to control bed bugs. The most effective program for eliminating bed bugs is one that utilizes an Integrated Pest Management (IPM) approach. An IPM is the use of all possible methods in a logical combination that minimizes risk of pesticide exposure, safeguards the environment, and maximizes effectiveness. In addition, it is recommended that facilities have a pest management plan in place to deal with pests before they are a problem.

IPM methods include:

- Inspect infested areas, plus surrounding living spaces
- Identify the pest
- Keep records include dates and locations where pests are found
- Clean all items
- Reduce clutter where bed bugs can hide
- Carefully use pesticides according to the label directions
- Conduct follow up inspections and treatments
- Raise awareness through education on prevention of bed bugs

A large facility may need several cycles of inspections, cleaning, and pesticide application before bed bugs are fully eliminated. Simply discarding beds and bedding is **NOT** a sound approach to bed bug management. Bed bugs can spread quickly to walls, molding, light fixtures, electronics and floor boards. If you decide to discard furniture and belongings make sure you destroy or deface the items to prevent others from unknowingly collecting infested items.

## STEP 5A: ROOM PREPARATION

Preparing a room for bed bug treatment is essential to eradicating the infestation. Pest managers prefer to conduct an inspection before any cleaning or extermination begins. This gives the pest manager a look of the full extent of the problem. Once bed bugs are located and the size of the problem has been determined, room preparation must be done. The following are suggested room preparation steps:

- Remove all bedding, drapes/curtains from the room and place them into bags for transport to the laundromat.
- Empty drawers and closets and place belongings into plastic bags. Place all clothing and coats into bags for transport to the laundry.
- Bag plastic toys, books, electronics, and anything that cannot be washed should be bagged separately for inspection.
- The room should be empty of all cloth and plush items. If possible, the pillows of plush furniture should be removed and laundered.
- Move furniture at least 18 inches away from the walls.
- Remove outlet covers and switch plates on all walls.
- Picture frames should be removed from the walls and cleaned or treated.
- People and pets must leave the area during treatment and wait the stated amount of time before reentering, usually four hours
- Cover fish tank with a towel or plastic cover.
- All clothing, linens and other items must be cleaned (free of bed bugs) and kept isolated until the client is moved to a new room, location, or until the bed bug problem is eliminated.
- Make sure the pest control professional can inspect and treat all furniture.
- Remove clutter - It is impossible to get rid of bed bugs without getting rid of clutter.





## STEP 5B: VACANT UNIT PREPARATION

Bed bugs in vacant units are not only a control issue but a legal issue because you cannot guarantee that unit is completely free of bed bugs (other than by using chemical fumigation).

So, how can you rent it out again? If you are only using conventional treatment to address a vacant infested unit, consider the following:

- Bed bugs become inactive when there is no host present and may not contact insecticide treated surfaces
- There is no reliable bed bug monitoring device to use when a host is not present
- Bed bugs may move to adjacent units looking for food

The best solution is to have the unit treated intensively. Your pest management company can drill the wall voids and remove the baseboards and crown molding to treat these locations with dust. They can also apply a thorough treatment of insecticides to crack and crevices. Adjacent units can also be monitored. If no bed bugs are found after three inspection/treatments, made two weeks apart (yes, six weeks), and all of the treatment efforts and inspection results have been documented, it may be safe to rent the unit again.

However, be prepared to respond immediately if the new resident files a complaint. Alternatively, the apartment could be inspected by a scent detection canine (bed bug sniffing dog). Using a trained dog to detect bed bug infestations is an excellent method for determining if bed bugs are still present or not. These dogs can tell the difference between a live and dead infestation, and they can usually detect even a single bed bug egg. However, there are currently only a few dogs available for this purpose. So, hiring an experienced bed bug dog and handler for apartment inspections purposes will be expensive.





## STEP 6 - EXPECTATION OF CONTROL

While you can expect the bed bug population to be greatly reduced after the initial treatment, it is not reasonable to expect that the population is gone. In fact, bed bugs may be even more obvious the first 24 hours after treatment because they are sick and wandering out into the open. Do not treat these bugs with insecticide, within the next two days the bed bugs should start to die in large numbers.

However, even if bed bugs appear to be gone a week after the initial treatment, follow-up treatments need to be made within two weeks to kill any nymphs that may have hatched during the treatment interval. After the treatment and two follow-ups, if the tenants have not seen any bed bugs nor received any bites, the population can be considered controlled.

Unfortunately, there is no guarantee that the bed bugs are completely gone, so the resident should continue to be on alert for bed bugs. If an infestation is large, many follow-up treatments may be required, but no one can predict how many. In a cluttered environment where populations have been established for a year or more the building may need to be fumigated.

In these cases, suppression of the population, so that the tenant is not being bitten constantly, may be the best that can be achieved even if the follow-up visits continue indefinitely. In these cases, it is very important that the apartment management and the resident have realistic expectations of what the control measures will and will not do.



# FREQUENTLY ASKED QUESTIONS

## WHAT PESTICIDES CAN I USE?

Bed bugs are becoming resistant to common pesticides. Pesticides available in stores for use in homes will mostly only kill bed bugs when they are sprayed directly on the bugs.

Also, never apply pesticides on top of mattresses or couches or where children and pets play. We recommend that you leave pesticide applications to a licensed pest control operator.

## ARE BUG BOMBS OR INSECTICIDE FOGGERS EFFECTIVE?

No, these products can spread hazardous chemicals throughout your home and are not effective against bed bugs. Bug bombs and foggers actually make the problem worse because they can cause bed bugs to scatter to other areas of the house.

## DO I NEED TO THROW AWAY MY MATTRESSES AND FURNITURE?

No, throwing your mattress or furniture away will not solve a bed bug problem. If you have bed bugs in your mattress or couch, they are also living in other places in your house.

Any new furniture that you bring into your home will also get bed bugs. Ask your pest control operator if there is anything you need to throw away. Even if furniture such as a couch has bed bugs, the pest control operator may be able to treat it.

If you do need to throw something away, spray paint or write “Bed Bugs” on the item in large letters so that no one picks it up and brings it into their home. Do not get new furniture until the pest control operator has finished treating your home and you are sure that bed bugs are gone.

## HOW CAN FRIENDS AND FAMILY MEMBERS AVOID BRINGING BED BUGS FROM MY HOME TO THEIRS?

Bed bugs can travel from one house to another on a person's clothes or in purses, bags, suitcases, or backpacks. Until you have eliminated bed bugs in your home, we recommend that friends and family members take the following steps when visiting your home:

- Do not bring in purses, bags, suitcases or backpacks
- If possible, avoid sitting on soft furniture such as couches
- They should remove, wash and dry their clothes immediately upon returning home. If they do not have their own washer and dryer, bag clothes in a tightly sealed bag until they can be washed and dried.



## **HOW DO I CONTROL BED BUGS?**

- Do not bring discarded bed frames, mattresses, box springs or upholstered furniture found on the street into your home.
- Check all used or rented furniture for bed bugs.
- While 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 the hot settings.

## **HOW MUCH TIME DOES A LANDLORD HAVE TO PROVIDE A PEST MANAGEMENT PROFESSIONAL?**

The ordinance allows landlords up to 10 days to have a pest management professional come to inspect your apartment.

## **HOW CAN I TREAT BED BUG BITES?**

Wash the area of the bite with an antiseptic soap to reduce infection, and resist the urge to scratch. Contact your health provider if the bite becomes infected.

## **HOW EASILY DO BED BUGS SPREAD FROM PERSON TO PERSON?**

Bed bugs are not contagious in that they cannot be transmitted from person-to-person. However, bed bugs can hide and live in a person's bedding, clothing, luggage, and furniture. When these items enter a home or are transported to another area, they can transport the bed bugs with them.

## **HOW LONG DOES IT TAKE FOR A BED BUG INFESTATION TO BECOME APPARENT?**

Bite marks may take as long as 14 days to develop in some people.

## **HOW ARE BED BUGS SPREAD?**

Because bed bugs can be found in homes and a variety of public places, they can easily be transported from place to place by people. They can hide in the seams of luggage, overnight bags, bedding, and in the folds of clothing. They can also be transported in furniture. Most people do not realize they are transporting bed bugs as they travel from location to location, infecting areas as they go. Bed bugs are experts at hiding, can stay hidden for long periods of time, and can stay alive even without a blood meal.

## **WHO GETS BED BUGS?**

Everyone is at risk for getting bed bugs when visiting an infected area. Anyone who travels frequently and shares living and sleeping quarters where other people have previously slept has a higher risk of being bitten and or spread a bed bug infestation.

## **HOW LONG CAN A PERSON CARRY BED BUGS?**

Bed bugs can continue to live in areas of infestation as long as they are reproducing and are able to feed periodically on humans if they are not treated by a pest control professional. They do not live on humans but they get on humans to feed.



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