

# Prevention and Safe Removal of Bedbugs

Bedbug infestations have become a serious problem in housing throughout the country. Public Housing properties are not immune to infestations, anyone or any home can get bedbugs. Bedbugs live on human and animal blood and typically hide and live in cracks and crevices in dark and undisturbed locations close to their hosts. They can live for long periods of time and although visible to the naked eye, they may be difficult to detect.

## Bedbug Prevention Action Plan

- Inspect in and around sleeping and resting areas at home once a month.
- Look for signs of bedbug activity, active infestations will have fecal spotting, live or dead bedbugs, shed skins and bedbug eggs.
- Avoid used furniture and mattresses, especially discarded furniture and mattresses. Used furniture and refurbished mattresses may have bedbugs and bedbug eggs that are difficult to see.
- Inspect for the signs of bedbugs when traveling away from home. Look for live or dead bedbugs, shed bedbug skins or bedbug eggs and fecal spots on mattresses, clothing or dark cracks and crevices. Wood, metal or plastic furniture, sofas, chairs, tables and many other items may be infested with bedbugs.
- If contact with an active bedbug infestation is suspected away from home, segregate and isolate in sealed plastic bags any exposed luggage, clothing and personal effects until inspection and decontamination can be completed.
- Bedbugs prefer to live in cracks and crevices in areas like baseboards, moldings, window/door frames, and cracks/seams in walls and furniture, especially headboards and bed frames and screw holes.
- Seal baseboards, cracks, crevices, heat, plumbing and electrical services shared between apartments with pest-proofing sealants.
- Encase mattresses and box springs. Seal box springs in an appropriate zippered encasement to prevent bedbugs hiding inside from escaping; this location is commonly affected in bedbug infestations and yet difficult to inspect.
- Thoroughly vacuum apartment, furniture and all belongings and use crevice tools and other attachments where feasible. Place the contents of the vacuum in a tightly sealed disposable bag and remove.

**EARLY DETECTION IS CRITICAL** Early identification and reporting of infestations by residents to building management and neighbors limits the spread of bedbugs. As soon as possible contact Property Manager and/or pest management company. Report the suspected activity as soon as possible. The longer you wait the more likely the problem is to spread and the more difficult and costly it will be to control.

## Bedbug Removal Action Plan

The following sequence of steps has been outlined by the Armed Forces Pest Management Board in order to facilitate control of bedbugs in housing.

- Using a vacuum cleaner (preferably HEPA-filtered), remove the bugs and their cast skins from all observed and suspected harborage sites during the initial inspection, and periodically afterward (once weekly is a suggested self-help action). The vacuum bag should

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be removed immediately afterward, sealed tightly inside a larger plastic bag, and that bag incinerated or placed in the next normal trash collection.

- Launder all infested cloth items in hot water, 120 degrees Fahrenheit or hotter for at least 10 minutes, with soap or detergent, then dry in a warm or hot dryer of at least 140 degrees for at least 20 minutes, or dry clean to kill all bedbug life stages present.
- Enclose each mattress and box spring in a sealed plastic cover, like those sold commercially. These types of encasements should be of high quality and bedbug puncture proof to limit exposure to house dust mites or bedbugs.
- Place and seal all recently laundered cloth items (*e.g.*, bed linens, clothing) inside new large plastic bags or tightly closed bins to prevent any bedbugs from re-infesting them.
- Seal shut all cracks, crevices, and entry points to wall voids, using a high-quality silicone-based sealant, especially within a 20 foot radius of any spot where bedbug bites have been reported, or where the bugs have actually been collected.
- Additional or alternative physical control measures against bedbugs may include: heat, cold, steam, physical mashing and sticky insect monitors.
- A residual insecticide should be applied, according to label directions, to each infested site and preferably to a small area around each site. Such applications often involve treating cracks and crevices. When planning and conducting any such treatments, consider examining, if not treating, the opposite side of any involved wall, floor or ceiling.
- Electrical outlet boxes, and similar voids that cannot be readily sealed, should be treated with an appropriately labeled insecticidal dust.
- Consider including some type of insect growth regulator (IGR) as a concurrent or adjunctive treatment (*e.g.*, as a tank mix).
- Limited use of an aerosol or ULV pyrethroid may facilitate the detection of hidden bedbugs by causing them to move around more, and may also potentially increase their exposure to any previously applied residual insecticide. DO NOT use any over-the-counter “foggers.” They are not very effective and may cause bedbugs to scatter.
- Fumigation or heat (or cold) treatment of batches of furniture, clothing or other items within chambers may be warranted and affordable in specific cases, but whole-structure fumigation to control bedbugs is seldom practical or economically feasible. And such treatments provide no residual effects at all.
- Re-inspection of infested structures and sites should be done about 10-21 days after any initial treatment, and (if needed) again about 10-21 days later, to detect, and to precisely target the treatment (if needed) of any continued infestation.<sup>1</sup>

Carefully reintroduce cleaned items. Isolate and contain items that have been properly cleaned, laundered or heat treated. Heavy duty plastic bags or air tight containers may be used for this purpose. Clear bags and containers are preferable.

## **NEVER USE THE FOLLOWING PRODUCTS FOR BEDBUG TREATMENT:**

- **Insecticide “bombs”, total release foggers, camphor, kerosene, diesel, gasoline, alcohol or other similar products. These products can cause serious health problems. They are dangerous if misused and can cause fires and explosions. These products are not appropriate for bedbug management.**

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Additional information about bedbug prevention and treatment may be found by accessing the following resources:

- **Armed Forces Pest Management Board:** *Bedbugs - Importance, Biology and Control Strategies*  
<http://www.afpmb.org/sites/default/files/pubs/techguides/tg44.pdf>
- **Environmental Protection Agency:**  
<http://www.epa.gov/pesticides/bedbugs/>
- **Healthy Homes Training:** *What's Working for Bedbug Control in Multifamily Housing?: Reconciling best practices with research and the realities of implementation.*  
[http://www.healthyhometraining.org/ipm/NCHH\\_Bed\\_Bug\\_Control\\_2-12-10.pdf](http://www.healthyhometraining.org/ipm/NCHH_Bed_Bug_Control_2-12-10.pdf).
- **National Pest Management Association Bedbug Hub:**  
<http://pestworld.org/pest-world-blog/the-bed-bug-hub-one-stop-shop-for-bed-bug-information>
- **National Pest Management Association Best Practices Website:**  
<http://www.bedbugbmps.org>
- **New York City Health Department:**  
<http://www.nyc.gov/html/doh/downloads/pdf/vector/bed-bug-guide.pdf>
- **Public Housing Environmental Conservation Clearinghouse (PHECC)**  
<http://www.hud.gov/offices/pih/programs/ph/phecc/pestmang.cfm>
- <http://www.stoppests.org>
- *Bedbug Handbook*. L.J. Pinto, R. Cooper, and S.K. Kraft
- *Bedbug Handbook: The Complete Guide to Bedbugs and Their Control* (Mechanicsville, MD: S.K. Pinto & Associates, 2007).