



Bed Bug Resource Guide
From: Halt Pest Control, Inc.
Short Term Rental (Airbnb and Other Platforms)
Industry Vulnerabilities

This Guide was developed using industry standards, best practices, information, and statistics. I did not make this up.

Introduction

My name is Robert McMaster I have been in the Pest Control industry for over 30 years. Halt Pest Control has been in business since 1990. We provide Pest Management services for residential, commercial, industrial, and multi-family locations. We are members of the National Pest Management Association, Oregon Pest Management Association, and are a Quality Pro Company. We are one of the largest providers of pest management services to the multi-family / property management/ commercial property management industries, hotel/motels - what I call the Shared Walled industry. Short term rentals and homesharing rentals fit this category. "Airbnb" is used generically in this Guide and really applies to any of the other short-term rental platforms such as VRBO, Trip Advisor etc.

Vacation Rentals and Airbnb homesharing rentals are in a particularly vulnerable industry.

According to the 2011 NPMA Bed Bug survey 25% of all travelers have checked their room for Bed Bugs. 80% of travelers are concerned and aware of the possibility of encountering Bed Bugs. Particularly with the advent of social media and online reviews, a Bed Bug review is a kiss of death. Most travelers will change accommodations if they read online that Bed bugs have been present.

A 2015 NPMA and University of Kentucky Bed Bug survey found that the top 3 places Bed Bugs are treated are Apartments/Condominiums (95%) and Hotels/Motels (75%). Short term rentals, such as Airbnb rentals, are very similar to these types of locations.

Bed Bug treatments in 2017 represented \$655 Million dollars, and that figure is expected to climb to 1 Billion in the next few years.



Basic Biology (*Cimex lectularius*) Literally Means Bed Bug.

Bed Bugs have been with us since we came out of caves. They evolved from Bat Bugs which are very similar in biology to Bed Bugs. Bed bugs have cryptic behavior, meaning they spend most of time trying to be hidden so that they won't be squished. Bedbugs are found not just in beds. They can be in chair cushions, sofas, behind electrical outlets, cracks and crevices around baseboards, or even behind picture frames. In other words, they can be live pretty much anywhere. In general, the highest populations are located near a host and where a host is sleeping. Bed Bugs take particular advantage of transient behaviors; they are the ultimate hitch hikers and move readily about. Recent research shows bed bugs are attracted to dirty laundry as well. Travelers, visitors, and even kids coming home from college, or staying in areas bed bugs have been established can easily move bed bugs about. Bed bugs are hard to detect because of their size and shape. They are a flat broad oval, mahogany colored, and adults are about $\frac{1}{4}$ inch. Nymphs can be even smaller. The eggs are about the size of a grain of sand.



Bed Bugs practice traumatic insemination by injecting females in abdomen through the exoskeleton; this has been implicated in bed bug dispersal. Female bed bugs lay one to five eggs per day, or an average of 540 eggs in a lifetime. They typically lay their eggs in cracks or rough surfaces. Bed bug nymphs grow to full adulthood in about 21 days and go through 5 stages of development or molts before they reach maturity. A bed bug will molt once during each stage of development, though a blood meal is required for a molt. Adult bed bugs can live for several months without a blood meal and under extreme conditions.

Resistance

Bed Bugs have developed resistance to most modern chemistry. DDT was the first modern chemistry developed in the 1940 in a family of chemistry called organochloride. Since then, Bed Bugs have become resistant to this type of chemistry. No suitable substitute chemistry was available so there was a great deal of overuse, and resistance was soon established. Modern chemistry mimics this old chemistry, particularly pyrethroids. Treatments for Bed Bugs using newer products that mimic older products are not as effective against Bed Bugs. When looking at the genetics it is expressed by ability to internally neutralize chemistry and also thickened cuticle or exoskeleton. This narrows our choice of materials and it harder to get rid of them as we must use specific chemistry that bed bugs are less resistant to, rotate chemistry using different family and formulations. However, no magic bullet chemistry that exists today that is always 100% effective all the time.



Industry Strategies for Treatments

Industry reports show Bed Bugs are the most difficult pest to treat by far. There is a high rate of re-treats and re-infestations.

There are two basic treatment strategies most commonly used. Like most things there are upsides and downsides to most treatment strategies.

- A. Chemical treatments:** This method involves placing specific pieces of chemistry in areas bed bugs harbor, travel, or reside. Chemical treatments have a longer life span but may take several treatments over a longer period of time. Industry averages three treatments to control bed bugs. The number of treatments can be higher depending on amount of bed bugs and amount of clutter.
- B. Heat:** This method involves a one-time application of high heat. Bed Bugs are very vulnerable to heat all life stages. The disadvantage to this treatment is it can drive Bed Bugs into harborage just to later return.
- C. Chemistry:** 96% of industry Bed Bug treatments use chemistry. The number of heat applications has lessened over time. Hybrid treatments can also be used, and involve chemistry and heat only in the most infested rooms.

Costs for Treatments:

Costs depend on level of infestation, number of rooms and clutter. For chemical treatments costs average across nation for 1-bedroom apartment/condominium severe infestation:

- A. Between \$600 and \$899. Pacific Northwest averages slightly higher as costs can go to \$1200 or more. Price per unit goes down slightly if more than one unit is treated.
- B. Heat prices generally start at \$1200 for a 1 bedroom or studio apartment.
- C. If the infested area or room is connected to another living space, such as many Airbnb units are, all areas should be treated. A larger treatment area means rates would increase.

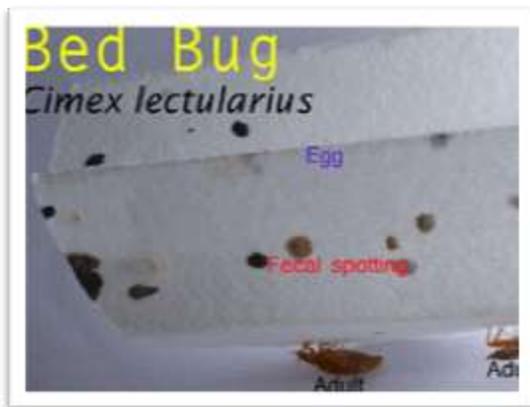
What YOU Can Do

1. **Educate yourself online.** Our website haltpestcontrol.com is a good source for Bed Bugs facts, statistics, overview and good pictures.

2. **Reduce clutter:** most hotels and motels and short stays like Airbnbs are good about this.
3. **Consider practicalities as you buy furniture.** A simple Hollywood style metal bed frame is best, as it provides less harborage for Bed Bugs than wooden slat bed or futon frames. Use a simple Hollywood style head board as well.
4. **Install Bed Bug proof mattress and box covers,** preferably **Protecta Bed** or **Mattress Safe** covers. These two products have been reviewed and tested by pest management industry specialists. Halt Pest Control can provide and secure these covers to ensure they're applied correctly.
5. Detection devices, climb ups, pit fall traps and Volcano types of traps are by far the best way to catch Bed Bugs early. These can be provided by Halt Pest Control, and are included in the Bed Bug Prevention Program.



6. Always inspect the bed and mattress between guests. Guests are not likely to detect Bed Bugs since Bed Bugs are cryptic. Signs to look for can include Bed Bug feces, which appear as small black or dark brown stains.



7. Please do not try and treat Bed Bug infestations yourself. Data shows this only makes infestations worse or drives Bed Bugs into adjacent living spaces.

What Halt Pest Control Can Do

1. Our Bed Bug Prevention Program includes all of the following:
 - a. Install detection devices, climb ups, pit fall traps and Volcano types of traps, which are by far the best means of early detection.
 - b. Bed Bug Proof mattress and box spring covers can be included for an additional charge, and can be installed by Halt to ensure installation is correct.
 - c. Periodic or baseline inspections with report.
 - d. Biannual preventative treatments.
 - e. Information regarding treatment, aftercare, and prevention.
2. If treatment is needed, Halt can provide a quote for extermination based on level of infestation, size of the unit, and the general environment. Inspection is always needed prior to treatment to ensure we can develop the best plan to eliminate the Bed Bugs. A fully trained and licensed technician would carry out treatments.

What to Do If You Have a Bed Bug Infestation

1. Bed Bugs are a very difficult pest to exterminate and it is very important that you call a professional right away if you see signs of an infestation. Do not attempt to treat the infestation without a professional.



2. Halt Pest Control provides bed bug inspections at low rates and can sometimes schedule an appointment as soon as the following day. You can reach us at 503.524.8548, or at haltpestcontrol.com