

## Bed Bug Treatment Facts & List

Bed bugs have been making an overwhelming come back in the past few years and have proven to be a very challenging pest in homes, hotels, dorms, apartments and many other types of structures. Bed Bugs are crypto-biotic (they hide until they forage to feed), are prolific breeders, and act as a health threat by parasitizing man and other animals. What's worse is that Bed Bugs are quickly becoming resistant to the insecticides PMP's apply, ultimately making them extra difficult to control.

### What You Need to Know!

\* Do you travel for work or play? Immigration of bed bugs from hotels back to the home is common in suitcases. Bed bugs will hitch a ride rather easily in luggage, book bags and other types of carry bags. Another thing to consider is that college dormitories are notoriously infested and pose a threat to structures that experience student transients and foreign exchange students.

\* Have you acquired any used furniture recently? Items such as those acquired from a local flea market, Goodwill, antiques from yard sales or elsewhere may be infested.

\* Do you wake up from sleep with new bites? This will allow you to exclude other biting insects as a probability for bites. Please note too that insects may not be identified from their bite marking. One indicative characteristic of bed

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bug bites is that they tend to follow a bee-line pattern along veins.

\* Have you moved recently? Approximately 47% of all moving vans are infested! In addition, most furniture stores will voluntarily pick up and remove old bedding when the purchase of a new bed is delivered. The vehicles used to transport new or used bedding may be the origin of infestation. Insist that new mattresses remain in sealed plastic and remove plastic just prior to bringing into your home.

\* Do you detect/identify defecation markings (small black spots) on bedding, furniture or wall areas resulting from bed bugs? Can you also detect areas indicative of blood spots on bedding areas resulting from the client involuntarily crushing well-fed bedbugs while sleeping? Crushed bed bugs may appear in, near or around bedding, walls, furniture and headboards. Often at least a 30X magnification hand lens, a good flash light and significant time are required for this inspection process.

\* Does the structure type have adjoining units? Approx 20% of infested structures have infested adjoining units. If an adjoined structure type such as a multi-level hotel, condo or apartment is known to be infested, the units on each side, and the units directly above and below may need treatment, or at the very least a thorough inspection.

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\* Does the structure have the possibility of animal pests that may serve as intermediate hosts and transport for bed bugs? For example, a rodent infestation in a multi-unit complex may spread and worsen an original point of infestation of bed bugs. The common bed bug prefers to feed on humans, but will also feed on rodents, birds and other animals.

\* Is there a re-infestation potential for you? Examples of a possible threat of re-infestation include but are not limited to: mattress delivery, transport of materials, clothing, bags, bedding materials, child daycare, schools, frequenting college dormitories and/or hotels, clothing stores, movie theaters or other infested structures, etc.

As Treatment Protocol: 7 Steps to Success  
Preparation:

\*Clients and their pets should vacate the premises while commercial applicators and/or technicians are performing inspection and/or the treatment process.

\* Before beginning, all items should be removed from the floor. Remove shoes and other items from closet floor areas as well as the underside of bed areas. Move Furnishings 2-3 Feet away from wall areas to access the carpet and/or flooring perimeter edge.

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- \* Remove drawers from dressers and night stands, and the items within them to access deep into furniture for treatment purposes.
- \* Take all pictures and headboards off of wall areas to access where bed bugs may hide behind them.
- \* Gather all appliances, lamps, etc to inspect and/or treat or discard. Remove all wall outlet switch plate covers in preparation for treatment.
- \* Remove mattresses and box springs from bed framework and lean up against the wall area to access both sides for treatment. Next remove the mattress box spring batting on the underside to inspect and treat inside the wood framing.
- \* Hotel and motel rooms designated for treatment should be taken out of service for a minimum of 48 hours.

Treatment: Due to the endurance of bed bugs (their ability to resist insecticides), their crypto-biotic behavior (well hidden), and their prolific breeding behavior. PMP's need to eliminate and/or remove as many bed bugs at the time of treatment as possible. This requires discarding heavily infested objects, thoroughness in the treatment and inspection process, highly efficacious product choice, and timely follow-up. PMP's should treat suspected as well as known areas of bed bug infestation. Insecticidal foam, dusts and insecticides labeled for use and applied as a course

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broadcast spray are highly efficacious in the effort to mitigate even the most severely infested accounts.

Step 1: After removing linens, broadcast spray the mattress and box spring with a product labeled for such use. Apply the spray pattern as a fine fan spray to the entire surface area of the outside of the mattress and box spring, focusing your efforts along the seams. When choosing a product, it is important to use an alcohol-free / non-petroleum based (water-based) insecticide. It is important to apply only water-based products to human and pet bedding areas due to the threat of hypersensitive reactions caused by inert ingredients in petroleum-based products.

Step 2: Treat all cracks & crevices, screw holes and voids inside furniture with an insecticide labeled for such use. Treat behind picture frames where the wall anchor attaches. This is a common area of infestation. A product that produces insecticidal foam is recommended for these procedures because it will penetrate deep into the voids and screw holes, flushing out all hiding bed bugs and eggs.

Step 3: Apply an insecticidal dust into wall voids via wall outlets behind outlet covers. Only a dry formulation should be used in these areas where electricity is present. For moderate

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to severe infestations it is advisable to loosen and remove carpet edge from tack strip along the perimeter. Apply an insecticidal dust or insecticidal foam along the tack strips under carpet along the perimeter edge and behind the baseboard. A gap is often present in this area and allows for a hiding place for bed bugs until they decide to come out and feed.

Step 4: After placing the carpet back, apply an insecticide (labeled for bed bugs and broadcast spray applications) as broadcast spray to all carpet, rugs and porous mat areas, or other porous surfaces such as concrete. Be careful never to broadcast apply an insecticide to smooth surfaces such as wood, laminate flooring, ceramic tile, linoleum and parquet flooring surfaces. These areas may retain residues that may harm children or pets even when they appear to be dry following treatment. Also consider that curtains may need to be treated with a color-safe and water-based product and applied as a fine broadcast spray application.

Step 5: Treat all other known or suspected areas of infestation identified at the time of inspection or treatment. For example, if bed bugs or their eggs are located in, near or around the ironing board and wall mount, then treat that area in a thorough fashion.

Step 6: Be sure not to allow tenants access into

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the treated structure until the products have dried and it is safe for re-entry. Drying time will vary depending upon humidity and controlled conditions inside the structure such as air flow and conditioning. Fans will promote the drying process.

Step 7: Mattress encasements should be applied to all mattresses and box springs on each bed in treated accounts once spray applications have dried thoroughly. A mattress encasement is crucial for inspection purposes following initial treatment and will clearly show signs of existing infestation such as fecal spots or bed bugs themselves. A mattress encasement will also allow the client to maintain a bed that was damaged by an infestation of bed bugs.

### Additional Steps to Follow:

- \* Place all throw pillows, stuffed animals and other plush items in a normal dryer on high heat.

- \* Wash all bed sheeting

and clothing on normal cycle and high heat dryer cycle (185 degrees) sufficient to kill 100% of eggs and eliminate future hatch. Garments may need to be treated with a product labeled for such use. Garments that may not be treated should be washed and dried on high heat.

Garments that may not be dried on high should be taken to a dry cleaner. Be careful not to return laundered clothing and sheeting to hamper basket

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or bags used to transport clothing after cleaning, as these items may be infested with bed bugs or eggs.

\* Discard all cardboard hangers, cardboard boxes, or other discard able containers and items that may harbor bed bugs.

\* Service carts used to maintain hotel and motel rooms may also need to be treated, and items in them may need to be discarded.

### Number of Treatments and Treatment Intervals:

A minimum of 2-3 visits to the treated account to inspect and/or treat should be performed. The first visit is to conduct a thorough inspection, determine the rate of infestation, and secure the account. The second visit is to perform the initial treatment and hopefully mitigate the infestation. The third visit is to follow up on the performance of the initial treatment, evaluate the efficacy and inspect for ongoing infestation potentials. If an ongoing infestation occurs in, near or around "hot-spots", additional treatment should be applied to these areas. Help prevent resurgence of bed bugs into the treated structure by educating the client about signs of reoccurrences other than bodily harm. Inform your client of re-infestation potentials to reduce the possibility of bed bug resurgence into the structure.

### Product Choice and Important Things to Know



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about Insecticides:

When choosing a product to apply for bed bugs, select an insecticide that contains an insecticidal synergist (eg: PBO or MGK264), otherwise your efforts to mitigate the infestation may be negated. Bed bugs are highly resistant to most insecticides and may survive under treated conditions where other insects would simply die. A synergist will allow the insecticide to kill both susceptible and resistant bed bugs, ensuring efficacy following treatment. If the product you choose to use does not contain an insecticidal synergist, it is recommended you add it to your spray mixture.

University research shows that insect growth regulators (IGR's) have recently proven to not be as effective on bed bugs as originally assumed. IGR's actually increase the fecundity (egg production) of the female bed bug by nearly 50%, causing her to lay twice as many viable eggs that hatch into fresh new bed bugs. It is common for PMP's to apply an IGR in efforts to control other resistant pests such as German cockroaches, which ultimately increases the efficacy of control. However, bed bugs react in an opposite fashion to IGR's and the infestation worsens. It is recommended to only use an insecticide and synergist mixture, without an IGR for best results.

Bed Bugs