

Recommended Pre- & Post- Infestation Procedures

Written by Petra Minoff & Rick Cooper

The news media has widely covered the resurgence of bed bugs in the US. This is common knowledge in hospitality circles. Hotel operators can not claim ignorance regarding the issue. The ostrich approach doesn't work anymore. As a responsible hotel owner, it is advisable to have an aggressive and pro-active approach for dealing with bed bugs in your facility.

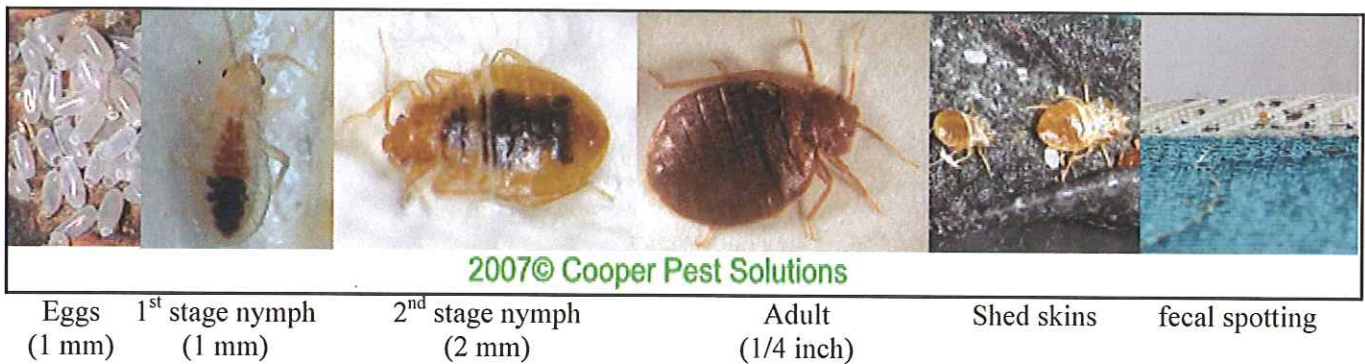
It is important to have well documented procedures for the prevention of bed bugs, as well as the reaction to infestations once they have been identified. It is also advisable to document that the activities are in fact being carried out according to the written procedures. We believe that in the event a legal case does occur, the court may look favorably upon the hotel owner if they can prove that they have taken all reasonable actions to avoid a bed bug problem.

Suggested Pro-Active Measures:

1. Education of key staff.

- a. Housekeeping and maintenance staff should be well versed in how to recognize the signs of a bed bug infestation. They should be very familiar with what the different life stages look like, as well as how to recognize shed skins and fecal spots/stains (see figure #1 below)
- b. All staff members should know what to do and what not to do so that the infestation is not spread from the infested room to other areas.
- c. Management staff should be trained in the steps that should be taken to handle guests and their belongings in the event that the guest was staying in a bed bug infested room.

Figure #1 Recognizing the various signs of bed bugs (developmental stages & other evidence)



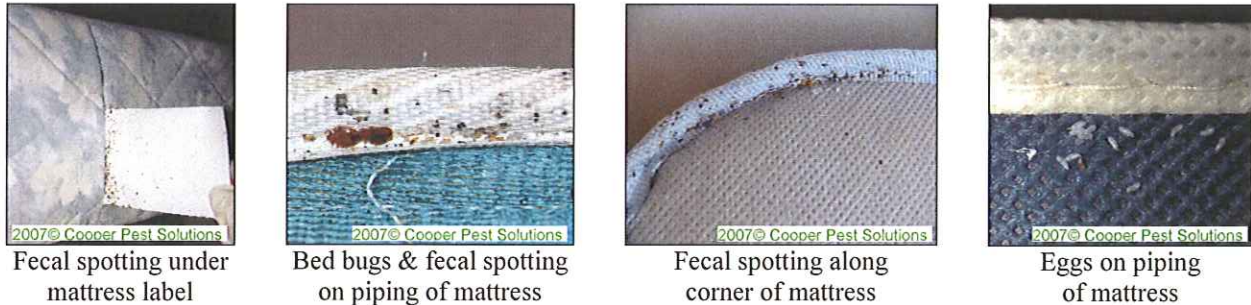
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2. Basic inspections:

Basic Inspection procedures should be incorporated into the housekeeping duties to look for obvious signs of bed bug activity in guest rooms (see figure #2). Daily inspection findings should be documented.

Figure #2 Routine housekeeping inspections for obvious signs of bed bugs



3. Periodic intensive inspections:

More intensive inspections should be conducted by maintenance staff teams or by trained pest management professionals periodically to identify low level infestations behind head boards, under box springs or in bed frames that will not be detected during routine daily housekeeping inspections (see figure #2).

Figure #2 Routine housekeeping inspections for obvious signs of bed bugs



4. Selection of Qualified Pest Management Company

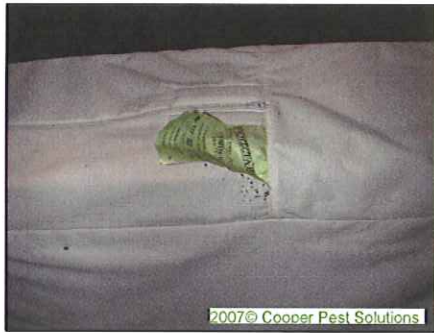
Care should be taken to ensure that the contracted pest management vendor is well qualified in handling bed bug infestations. Interviewing pest control companies, and verifying if they are knowledgeable about the commonly adopted monthly pre-infestation inspections, is a must. The pest control company should submit a written proposal on what a pre-infestation check up and their bed bug treatment procedure will include. Look for some of the following attributes:

- a. Responding promptly to emergency requests involving bed bugs.
- b. Inspections involving removal of headboards, mattress, box spring, dust cover beneath box spring, and all furniture.
- c. Not relying solely on the use of pesticides. Treatment efforts that rely solely on pesticides often fail due to the poor efficacy and the growing threat of pesticide resistance.

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- d. A multi-faceted treatment program that includes both chemical and non-chemical tactics such as the use of encasements, vacuums and/or steam along with the use of a variety of pesticides.
 - e. Recognition that nothing should be removed from the room without being sealed in plastic bags and then properly treated or disposed of.
 - f. Recognition of the importance of expanding the inspection/treatment to surrounding guest rooms that share a common wall with the infested guest room.
 - g. Recognition of the importance of a follow up inspection/treatment program for infested guest rooms.
5. Another important approach in being a proactive hotel operator is the use of mattress and box spring encasements. In addition to protection of the mattress, the use of encasements that have been specifically designed for bed bugs offer a number of very important benefits:
- a. **Aids in Early Detection of Bed Bugs**
The use of encasements restricts the movement of bed bugs to the outside of the encasement where they can be readily detected by housekeeping staff during routine inspections.



Evidence of bed bugs is easily detected by housekeeping once mattresses have been encased

Conversely if encasements are not used, bed bugs are likely to get inside of the mattress or box spring where they will not be detected by housekeeping staff during routine inspections and may even be missed by professionals during intensive inspections. The end result is that infestations that go undetected may be brought to your attention by a hotel guest prior to you having knowledge that the bugs were present.



Without encasements it may be necessary to look inside box spring to find evidence, requiring a much more detailed, time consuming inspection.

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b. Prevents the Infestation of Beds

Should bed bugs be introduced, they will naturally migrate to the mattress and box spring. However, if these have been encased prior to the infestation, the bugs can be prevented from getting into the mattress and box spring. Instead bugs will be restricted to the exterior of the encasements where they can be easily dealt with, thus protecting your mattress.



A properly encased mattress and box spring can prevent infestation from getting into the mattress and box spring

c. Effective Reactionary Tool

In the event that a bed bug infestation exists and the beds were not already encased, encasements can be used to either trap bed bugs inside the mattress and box spring, thus salvaging the bed or can be used to protect new beds from being infested should the infested bedding be discarded.

What if Bed Bugs are Detected in a Guest Room?

In the event that bed bugs are detected by housekeeping or maintenance staff, there are a number of measures that can be taken to reduce the likelihood of dispersing the bugs outside of the infested room. The following guidelines are intended to reduce the potential for bugs spreading outside of the infested guest room:

- 1) The housekeeping staff member (without leaving the infested hotel room) should contact the necessary entity within the hotel and inform them of the situation.
- 2) Hotel management should immediately contact their pest management vendor to arrange for inspection and treatment as quickly as possible.
- 3) Do not remove anything from the hotel room
- 4) If linens, or towels have already been removed from the room, the following actions should be taken:
 - a. Retrieve all of the linens and towels along with other linens and towels that were already in the linen cart and place in a large plastic bag that is then sealed tightly by tying a knot.
 - b. If the laundry cart has a canvas linen bag that can be subjected to laundering, it should also be removed and sealed in the plastic bag by tying a knot at the top of the bag.
 - c. Place the sealed plastic bag in another plastic bag and seal by tying another knot
 - d. The contents should be taken to the hotel laundry and the contents of the sealed bag should be dumped directly from the bag into a dryer.
 - e. The dryer should be run on a hot cycle for at least 15 minutes for a small load and at least 30 minutes if it is a large load.
 - f. The empty bags used to hold the clothing should be immediately discarded in an exterior garbage receptacle.
 - g. The linen cart should be inspected for any live bugs. If live bugs are visible they should be removed and destroyed or saved in a sealed container for positive identification by a trained pest management professional.
 - h. The linen cart should be taken out of service and placed in an out of the way location (preferably outside) until it can be inspected by a trained pest management professional. If possible the linen cart can be sealed by wrapping it in plastic sheeting (available at hardware stores).
- 5) The likelihood of getting bed bugs on your clothing is remote if you have not had any physical contact with the areas where the bed bug infestation was observed. However, if you believe you had physical contact with the area where bed bugs were present or are concerned about the possibility of taking bugs out of the room on clothing worn during the bed bug inspection the following measures can be followed:
 - a. A fresh set of clothes should be brought to the room.
 - b. The individual who identified the infestation can change their clothes in an area that is away from the infested area of the guestroom (i.e. bathroom).
 - c. Clothing that is removed should be sealed tightly in a plastic bag, tying a knot at the top of the bag.
 - d. Place the sealed plastic bag in another plastic bag and seal by tying another knot
 - e. The sealed bags should be removed from the room and taken directly to the hotel laundry.
 - f. The bagged contents should be dumped directly into a dryer and run on a hot cycle for at least 15 minutes.
 - g. The bags used to hold the clothing should be immediately discarded in an exterior garbage receptacle.

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- 6) Take the guest room out of service so that it can be treated correctly by your pest management vendor. If the infested guest room is in service at the time the infestation was identified. The guests should be notified of the situation and the following steps should be considered.
 - a. Consider offering a refund for the length of the guests hotel stay.
 - b. All of the guests belongings should be sealed tightly in plastic bags and left in the room until decisions have been made as to how to handle the items.
 - i. Offer to have the guest's clothing hot laundered and/or dry cleaned as necessary (follow same guidelines as stated above for in step #5).
 - ii. Offer to replace clothing if the guest is not accepting of the laundering suggestion.
 - iii. Offer to have the guests luggage professionally inspected or replaced.
 - c. Offer to move the guest to a different room.
 - i. Have the new room inspected for bed bugs before moving the guest. Ideally the inspection should be conducted by the hotel's pest management vendor. If time does not permit, hotel staff can conduct the inspection so the guest can be moved and then follow up with a professional inspection.
 - d. If the guest no longer wishes to remain in the hotel, offer to help them find new lodging accommodations and consider picking up the bill for the duration of the length of their reservation at your hotel.
 - e. We believe, being empathetic to your guest and spending money to demonstrate that you take the situation seriously may prove to be extremely important should the incident develop into a legal claim.

Finding an Effective Encasement

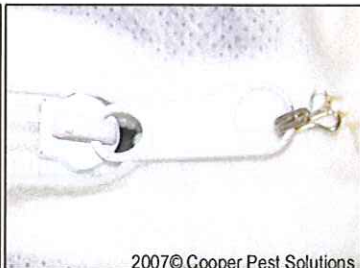
In order for an encasement to be effective it must be both **bite proof**, meaning that the bugs cannot feed through the material, and **escape proof**, meaning that the bugs cannot get in or out of the encasement after it has been installed. Unless the encasements have been specifically designed for bed bugs it is very unlikely that they will work effectively.

There are many encasements available in the marketplace, but most will simply not work effectively against bed bugs. The first truly effective bed bug encasement on the marketplace was manufactured by Protect-A-Bed of Chicago. This has been shown, through rigorous scientific tests, to be completely escape proof and bite proof. It is strongly suggested that only encasements that have strong scientific data backing the claims for use with bed bugs be used in a bed bug management effort.

Studies have shown that Protect-a-Bed Bug Lock™ Bed Encasements do not allow immature or adult bed bugs to escape completely closed Bug-Lock encasements or provide them with the ability to bite through the fabric that composes the mattress encasement. When fully zipped closed, an encasement can successfully prevent bed bugs from gaining access into the encased bed or escaping from an already encased bed. Also, if bed bugs are closed in the encasement, they cannot feed through the fabric that composes the mattress encasement.

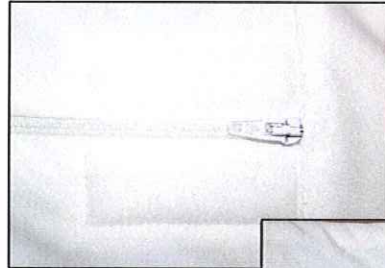


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(Encasements without proper zipper closures)



The Protect-A-Bed line of mattress and box spring encasements are equipped with a patented "Bug Lock" zipper that prevents bed bugs from escaping at the zipper pull end stop.



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(Protect-a-Bed's encasement with Bug Lock™)

It is important to investigate whether or not the encasements have been scientifically tested to be effective against bed bugs as well as to ensure the quality of the research upon which bed bug proof claims are being made.

For further information on choosing a proper bed bug proof encasement we recommend the article "Just Encase" written by Rick Cooper in the PCT magazine of April 2007.

Additional Information on Use of Encasements

Scenario 1: “Mattress and box spring were not encased prior to bed bug infestation”.

Elimination of 100% of a bed bug infestation often takes several visits. During this time you must decide how you are going to deal with infested beds. You can discard them, but new beds that are introduced are likely to quickly become infested by bugs that survived the initial treatments. Encasements can be a very effective solution for this difficult problem. They can be used either to salvage existing bedding and/or protect replacement bedding.

1) Salvage Existing Beds

Many pest control companies and entomologists suggest vacuuming the bed bugs and bed bug eggs off of the mattress and box spring and then encasing them both. By encapsulating the mattress and the box spring, the bed bugs trapped within the encasement are unable to re-infest the room or bite the hotel guest. In addition this approach will also save the mattress and box spring from having to be discarded

2) Protect Replacement Beds

If, due to hotel policies and health department requirements, the mattress and box spring must be discarded, it is essential to encase the new mattresses and box springs. Encasements can be used to protect replacement bedding from becoming infested. Initial treatments for bed bugs are very effective at reducing the number of bugs to very low levels, but typically some bed bug eggs and/or bed bugs survive the initial treatment effort. Often it takes several treatments before 100% of the population is eliminated. As a result, replacement mattresses and box springs quickly become re-infested with bed bugs. This can be prevented by encasing the new bedding. In addition to preventing the reinfestation of the new beds, the encasements will help enable trained housekeeping staff to detect the re-appearance of bed bug activity more readily. Since the bed bugs can not hide in the encapsulated mattress or box spring, your staff would start seeing dark brown stains on the fabric quickly before having a full blown bed bug population in the room again. Once this slight bed bug activity has been detected, and the pest control company is notified, the room can be properly re-treated.

Ideal scenario: “Mattress and box spring were encased prior to a bed bug infestation”.

If the mattress and box springs are properly encased, they might not get infested by bed bugs. The encasements will also help in early detection, as the bed bugs can not hide in the box spring or mattress. Signs of even a slight bed bug problem should be detectable on the surface of the encasement. In addition, encapsulation of mattress and box spring makes the pest control company’s job of removing bed bugs and eggs easier. The pest control company can concentrate on the other parts of the room. The chances of getting rid of the bed bug problem in a shorter period of time should be higher. If the encasements got soiled by the bed bugs, the pest control company has finished their work and no bed bug activity can be detected anymore in the room, then new encasements can be placed on the mattress and the box springs. The soiled encasements should be sealed in a plastic bag and washed properly to remove the stains.

Get more information on Protect-A-Bed’s bed bug proof mattress and box spring encasements by contacting:

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