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BED BUGS

THOMAS JEFFERSON UNIVERSITY HOSPITAL

How Are Bed Bugs Spread

- Bed bugs live in articles of furniture, clothing or bedding , so they or their eggs may be present in used furniture or clothing
- They spread by crawling and may contaminate multiple rooms in a home
- They may also be present in boxes, suitcases, or other goods that are moved from residence to residence or from hotel to home

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Where are Bed Bugs Found

- Bed Bugs prefer to hide close to where people sleep: Bed Frames, Mattresses, Head Boards, Box Springs
- Cracks in wallpaper
- Curtains
- Upholstered Furniture

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Where are Bed Bugs Found (Cont'd)

- Edges of Carpets
- Corners Inside Dressers and Other Furniture
- Behind Plugs and Switch Plates
- Closets or storage areas where clothing is kept
- Door moldings

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Where are Bed Bugs Found

- Under Telephones, Clock Radios
- Televisions
- Picture Frames
- Wall Mirrors

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Where Are Bed Bugs Found (cont'd)

- **Bed bugs have also been found in:**
  - Movie Theaters
  - Hotels
  - Office buildings
  - Hospitals

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Where are Bed Bugs Found (cont'd)

- Laundries
- Homeless Shelters
- Transportation Vehicles
- And other locations where people congregate

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Eggs, Nymphs, & Adults Beneath Carpet Edge

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Bed Bugs on a Headboard

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Bed Bug Infested Mattresses

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Signs of Bed Bugs in a Bed Frame

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Preventing Bed Bug Infestations

- **Look for Physical Signs of Bed Bugs:**
  - Small dark spots which are bed bug excrement
  - Eggs and eggshells, which are tiny and white (about 1mm)
  - Skins that nymphs shed as they grow larger
  - Rusty or reddish stains on bed sheets or mattresses caused by bed bugs being crushed

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Preventing Bed Bug Infestations (cont'd)

- Check all secondhand furniture, beds, and couches for any physical signs of bed bug infestation
- Use a protective cover that encases mattresses and box springs; be sure to check them regularly for any holes or tears
- When trying on clothes at a store make sure to not place your clothes on the floor or chair that is available; ALWAYS use the hooks provided

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How to Protect Yourself While Traveling

- During Hotel stays, use luggage racks to hold your suitcase instead of placing them on the floor or beds
- Check the mattress and headboard before sleeping
- Keep all luggage zipped

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Treating Bed Bug Infestations

- Combining chemical and non-chemical treatments in a unified approach is the best way to control bed bugs. This approach is called Integrated Pest Management (IPM).
- IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment combined with available pest control methods like pesticides.

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Non-Chemical Treatments

- Should be used as Management tools only!
- Put all bedding and clothing in the dryer at high temperatures to kill bed bugs
- **Heat** infested articles to at least 113 degrees Fahrenheit for 1 hour. The higher the temperature, the shorter the time needed to kill bed bugs at all life stages

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Non-Chemical Treatments (cont'd)

- Use mattress, box spring, and pillow encasements to trap bed bugs and help detect infestations
- It is highly recommended to throw out infested mattresses and box springs
- Vacuuming; make sure to use one with a disposable dust bag – the contents must then be sealed in a plastic bag and disposed of properly

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Non-Chemical Methods (cont'd)

- **Steam:** particularly effective as it kills **ALL** life stages of the bed bug, including the egg. Steam treatments can be very time consuming so they should always be used with insecticides for better long-term control
- **Freezing:** has the advantage that heat sensitive materials will not be damaged. Place the small item loosely into a bag and put into a freezer operating at approximately -20 degrees C for a minimum of 10 hours

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Chemical Treatments

- **Insecticidal Dusts:**
  - Work by wearing away the waxy exterior of a bed bug, which causes it to dry out and die quickly
  - They are placed in crevices or behind such things as walls, light switches and cover plates for electrical outlets
  - Silica Powder is one of the most common used insecticidal dusts

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Chemical Treatments (cont'd)

- **Contact Insecticides:**
  - A neurotoxin that works by exciting and paralyzing an insect's nerves; this happens to the bed bugs after they come in direct contact with the product or residue from the product
  - Fall under the class of insecticides known as pyrethroids
  - **Common pyrethroids:** Deltamethrin, Cyfluthrin, Cypermethrin, Permethrin, and Pyrethrum

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Chemical Treatments (cont'd)

- **Insect Growth Regulators:**
  - Also known as **IGRs**, can work but they don't kill bed bugs quickly.
  - An IGR prevents bed bugs from reaching maturity and reproducing.
  - **Common IGRs:** Hydroprene, Pyriproxifen
  - Exterminators will typically use IGRs in addition to other types of insecticides

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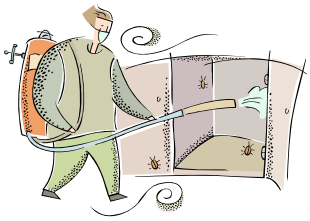
Thomas Jefferson University Hospital Bed Bug Policy



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Spotting the Signs

- Bed Bugs are typically hiding during the day and difficult to spot; look for tiny, rust colored stains on mattress seams, ceilings, under seat cushions and behind headboards
- Keep an eye out for potential hiding places, such as buckling wallpaper or carpet, or conditions that attract bed bugs like heat or moisture
- **Report such issues to Environmental Services Immediately!!!**

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Bed Bugs Found on Patient, Clothing or Personal Items with or Without Bites

- 1.) Enter order for Contact Precautions
- 2.) Charge Nurse to notify Environmental Supervisor and Bed Management. Room is to be blocked for admission by Bed Management until Environmental Supervisor arrives
- 3.) Environmental Supervisor is to contact Exterminator
- 4.) If there is a roommate, examine for any signs of bed bug infestation and if **NO** activity, transfer roommate

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Bed Bugs Found on Patient, Clothing, Personal Items With or Without Bites (cont'd)

- 5.) If possible save bug in a specimen cup for identification by environmental supervisor and/or exterminator
- 6.) Bathe patient immediately with soap and water and place patient in a new gown. If patient is fully ambulatory have them shower. Place patient on new bed surface (ex: bed, stretcher)and transfer them to a new room
- 7.) **Do Not** remove actively infested furniture including bed surface, until Environmental Supervisor and/or Exterminator inspects and decontaminates furnishing and room

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Bed Bugs Found on Patient, Clothing, Personal Items With or Without Bites (cont'd)

- 8.) Patient's belongings (clothes, shoes, bags) are double bagged and tightly sealed with tape labeled "Do Not Open" and if possible, sent home with family/caregiver for home laundering
- 9.) Environmental Services to bag and tightly seal all trash in special durable bag
- 10.) Bedding, linen and curtains should be contained and removed as soon as possible to be laundered

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Bed Bugs Found on Patient, Clothing, Personal Items with or without Bites (cont'd)

- 11.) Environmental Supervisor to notify Bed Management when room has been cleaned and cleared by Exterminator
- 12.) Isolation may be discontinued when the patient has been bathed and no further evidence of infestation is observed for **at least** 24 hours
- 13.) Patient's personal belongings can remain double bagged for remainder of stay

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Treatment of Patient Rooms

- Highly recommended that mattresses be disposed of
- All curtains need to be removed
- TJUH Uses Western Pest Services – Their Toolbox Includes:
  - Sterifab
  - Steam
  - Residual Insecticides
  - Vacuum

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