



**CITY OF STAMFORD**  
**DEPARTMENT OF HEALTH & SOCIAL SERVICES**  
**ENVIRONMENTAL INSPECTIONS DIVISION**

❖ **Bed bug Description- Recognizing a Bed bug from its appearance**

Bed bugs are small parasites from the insect family Cimicidae. Of the many species of bed bugs, three feed on humans. Adult bed bugs are brown, flat and approximately ¼ inch long. They have rounded bodies about the size of an apple seed and are visible to the human eye. Bed bugs come out at night or in darkened areas. They feed on blood, usually human, but they can also feed on bats, small mammals and birds. After feeding, bed bugs become dark red and grow to ⅜ inch long. They lay small white eggs that hatch into difficult to see transparent nymphs, who start feeding at their first opportunity.

**Adult Male**



**Adult Female**



**Engorged Nymph**



**Eggs and Dropping**



Actual sizes of bed bug life stages:

o	o	o	o	o	o	o
Egg	1st	2nd	3rd	4th	5 <sup>th</sup>	adult

### ❖ **Bed bug Reproduction**

Bed bugs are most active when we sleep. They crawl onto exposed skin, inject a mild anesthetic and suck up a small amount of blood. Most people never feel the actual bite. Bed bugs need a blood meal to grow and lay eggs. A female bed bug lays 5-7 eggs per week and when feeding on a host body, will lay 200-500 eggs in her life time. The eggs take about 10 days to hatch. Bed bugs are fully grown in 2 to 4 months and can live as long as year.

### ❖ **Proper Identification of Bed bugs**

Before you can treat a bed bug infestation, you must verify that the insect is in fact a bed bug. Because different species of insects may have different habits, the methods to control the insects will be determined by the types of insect species found. This is why it is very important to contact a Connecticut licensed exterminator to perform the extermination treatment. The treatment for bed bugs is different from that of ants, roaches and other insects. Bed bugs have built up a natural immunity to many current pesticides and insecticides and while you may eliminate roaches, fleas and ants with a certain insecticide or pesticide it may not affect the bed bug. This is why the need to identify the exact species of insects and other pests is absolutely necessary. The insect suspected of being a bed bug should be collected into small break-resistant container or zip- lock plastic bag and brought to an appropriate authority for identification. The proper identification of a bed bug can be made by an entomologist or trained health department personnel.

### ➤ **Other insects bite too**



**Mosquitoes-** usually bite during the warm months of the year and most often at dawn and evening hours. Mosquitoes enter the home through unscreened openings such as windows and doors.



**Lice-** live on the body and feed by penetrating the skin. Look for lice in the hair or clothing.



**Ticks-** are usually found outdoors in shrubbery/wooded areas or on pets that bring them inside the home. Ticks feed by biting the skin to absorb blood.



**Fleas**- bites are associated with pets or wildlife in or near the home. They often bite at the ankle, wrist or waistline.



**Flies**-several flies bite humans including but not limited to sandflies, black and buffalo. The common house fly does not bite but feeds on the surface of the skin.



**Mites**- some mites live on birds, rats and mice nesting in or on buildings. Most mites do not live long off of the host but will bite people, if they get on the skin. They may be seen on window sills and air conditions units and sleeves. Dust mites are found in every home and live in mattresses, pillows, carpets and fabric covered furniture.



**Spiders**-leave behind one or two puncture wounds when they bite. The bites maybe associated with some localized pain. Some spiders avoid daylight and are not aggressive towards humans. They hide under rocks, boards and in the cracks and crevices of homes.

#### ❖ **Health Effects of Bed bugs**

Bed bugs are not considered to be disease carriers and there are no known cases of infectious diseases transmitted by their bites. Nevertheless, bed bugs do suck blood from and inject saliva into their hosts. Bed bugs bite at night, all over the human body, but especially around the face, neck, upper torso, arms and hands. It is the saliva they inject during feeding that can cause itchy swelling on the skin. That swelling may become irritated and infected when scratched.

#### ❖ **How do Bed bugs Travel**

Bed bugs have wings but can not fly. They travel by crawling to their host from narrow hiding places. Bed bugs are often carried into a home on objects such as clothing, furniture, and luggage. They travel along pipes, electrical wiring and through openings, from room to room or apartment to apartment. Dumping an infested mattress or other furniture on the street is another way of spreading bed bugs. Bringing home discarded items that may be defaced or ripped could lead to a bed bug infestation. You can also pick up bed bugs at the Laundromat.

## ✓ Travel Precaution Tips

- Wash and dry clothes on hot settings
- Use hard smooth luggage, avoid fabric luggage
- Pack plastic bags to seal purchases and/or items that may become infested
- At a destination point, inspect the bed area for bed bug signs on head boards, mattress seams, adjacent furniture and objects near to the bed
- At a destination point, keep luggage off floors and beds, place them on high luggage racks
- Do not unpack clothing
- Always keep luggage closed
- Place hanging items on shower rail
- Keep shoes away from beds
- Before checking out , seal suspicious items in plastic bags
- On arrival home, unpack materials outside residence and take laundry directly to washer and or drier for immediate cleaning

## ❖ **Inspecting for Bed bugs**

When inspecting for bed bugs you will need a flashlight and magnifying glass to assist you in your search. To further assist you, a putty knife or a thin durable card to slide between the cracks and crevices are useful tools to dislodge bed bugs from their hiding spots. Inspect areas of the home that are within 10 to 20 feet of where you sleep, lounge or entertain. Use the flashlight to inspect behind and underneath furniture and woodwork. You will need to check seams, creases and any rips in the covers of mattresses and box springs. **Some other possible hiding places for bed bug are :** cracks in the bed frame and head board, underneath chairs, couches, bed, dustcovers, between the cushions of upholstered furniture, underneath area rugs and edges of carpets, between the creases of drapery or curtains, in drawers of night stands and dressers, behind baseboards, around doors and window casing, behind electrical outlets plates, under loose wallpaper, paintings and posters, cracks in walls, in telephones, radios, clocks, smoke detectors, toys and other electronic devices. It is also important to inspect new and used furniture before bringing it into your home.

- In early infestation bed bugs don't travel far from the host. Inspect for bed bugs in the tufts, seams and folds of mattresses.
- In moderate infestation bed bugs will spread to box springs and cracks and crevices of bed frames.
- In severe infestation bed bugs will spread to cracks in floor boards, behind wallpaper, window and door casing, molding, picture frames, couches, electronic devices and wherever there is a dark crack or crevice.

### ❖ **What to do if you have Bed bugs**

- Bring a bed bug to the Health Department for identification
- An inspection of your unit will be conducted upon bed bug confirmation
- An order to exterminate will be sent to your Landlord after identification is confirmed
  1. For Buildings with less than 4 units the whole building must be exterminated
  2. For Buildings with more than 4 units the units surrounding the complaint must be exterminated
- Landlord must provide the Health Department with a copy of the Connecticut Licensed Exterminator's Report indicating the bed bug infestation has been eliminated

### ❖ **Eliminating Bed bug in the Home**

- Establish a team approach made up of: landlord, tenant and exterminator
- Actual identification of the insect must be obtained
- Locate the source of problem
- Inspect to locate all hiding spots
- Clean the entire apartment
- Remove all clutter from the living unit
- Encase and bag all bedding and clothing in the affected areas
- Wash all sheets, blankets and other clothes and then dry washed items on the hottest setting
- Wash and treat all headboards and bed frames
- Clean and remove bed bugs from other items
- Isolate the clean bed bug free items until all bed bugs have been eliminated
- Inspect and treat all surrounding rooms and adjacent living units
- Conduct follow-up inspections and treatments until the bed bugs have been eliminated
- Vacuum and discard vacuum waste in sealed plastic trash bags
- Seal all cracks and crevices with caulk

### **Recommendations for Transient Residential Living or Group Homes**

- Inquire if client has been exposed to bed bugs
- Items found or discarded on the street can not be brought in the home
- All belongings must be free of bed bugs
- If bed bugs are suspected implement entry guidelines for room occupancy
- Inspect all luggage, back pack and plastic bags outside of the facility
- Provide clean plastic containers or bags for personal clothing
- Wash clothes immediately upon entry and dry on hot temperature
- Provide educational material on bed bugs

## Recommended Treatment for School/Childcare when Bed bugs are found on Student/Child in a Classroom

- The student should be discreetly removed from the classroom so that a school administrator can examine clothing and other personal belongings.
- Any insects found should be removed and collected for identification by Health Department lab personnel.
- The school nurse can assist by identifying any suspicious bite marks on exposed body parts.
- The transportation of any insect to the Health Department Lab should be done by school administration personnel. If a confirmed bed bug was found on a student, then a school administrator should contact the student's parents or guardian to inform them of the bed bug presence on their child.
- Health Department personnel will visit the home of the student confirmed with bed bug(s) to inspect for bed bugs and provide bed bug information to the parent(s).
- The classroom where the bed bug was found must be sealed and not reoccupied until a Connecticut licensed exterminator has inspected the room to determine the extent of the problem and/or an extermination method has been approved by the Health Department to be conducted by Board of Education Facilities Personnel.
- Extermination should be conducted by using an integrated pest management approach.
- Once a bed bug has been properly identified and confirmed in a location, all adjacent rooms must be exterminated and cleaned.
- The extermination and cleaning will include all surfaces that contain cracks and crevices.
- All cracks and crevices must be sealed in confirmed rooms with bed bugs to prevent any future harborages and pathways to other rooms.
- Do not remove any items including furniture from the class room until it has been exterminated and cleaned.
- A school preventive maintenance plan must be implemented for the daily, weekly and monthly cleaning and routine maintenance of the school.
- Once the extermination and cleaning process has been completed, the Health Department will inspect and review the methods of eliminating the bed bugs from the classroom(s) before it can be re-occupied.
- When there is bus transportation involved with a student identified with bed bugs, the bus must be taken out of service until it has been exterminated and cleaned.
- Parents should inspect backpacks, coats, jackets and other personal items that travel from the home environment to school daily until the bed bugs have been eliminated.
- The student should be provided with plastic bags or plastic containers to store personal items to prevent bed bugs from spreading to other areas of the school. School administration personnel should follow-up to ensure this procedure is in place until bed bugs have been eliminated from the home environment.

**Please note that there is no disease transmission from bed bugs and there is no reason to exclude a child from school or childcare.**

## ❖ **Bed bug Extermination Preparation**

### ➤ **Tenant**

All clothes and linens should be bagged during the extermination and washed in hot water or dry cleaned afterward and then placed in sealed plastic bags. Everything must be removed from in and under all furniture and bagged. Those items may be separately treated. Mattresses and box springs may be sprayed only if bagged after extermination and not used by children or persons sensitive to pesticides. Fabric furnishings and mattresses should be sprayed using a light mist, penetrating seams, tufts and folds. The treated surface should dry for at least 4 hours before use. All items must be removed from the walls and stacked in the middle of the room so they can be inspected for bed bugs. All bookshelves must be cleared off and the items placed in plastic bags. **Follow all guidelines provided by the exterminator or landlord for reporting signs of bed bugs, cleaning and room preparation for extermination.**

### ✓ **Bed bug Preparation Checklist**

- Strip the beds and launder all sheets, pillowcases, mattress pads and blankets prior to the extermination. Do not replace these bed linen items until after the extermination process has been completed. If you have a waterbed it should be emptied before the extermination process and can be refilled after the extermination has been completed.
- Remove everything from bedroom closets and place items in plastic bags prior to extermination. Do not replace any items until after the extermination has been completed.
- Have all clothing and fabrics washed or dry cleaned prior to extermination and placed in plastic bags. Do not replace any clothing or fabrics until after the extermination has been completed.
- Remove all items from dresser drawers, nightstand, desks and tables and place them in plastic bags prior to extermination. Do not replace any items until the extermination has been completed.
- Food must be protected by storing it in the refrigerator or in containers or seal in plastic bags and remove from the area being exterminated. Small refrigerators in bedrooms should be emptied and food items placed in the kitchen refrigerator, containers or plastic bags and then removed from area being exterminated. All food preparation and non contact food surfaces must be washed after the extermination process has been completed.
- Discard all cardboard boxes, shoe boxes, paper and plastic bags, old newspaper magazines and any other items that could be hiding places in rooms identified with infestation.
- Vacuum all areas of infested rooms and discard vacuum waste in sealed plastic trash bags prior to extermination.

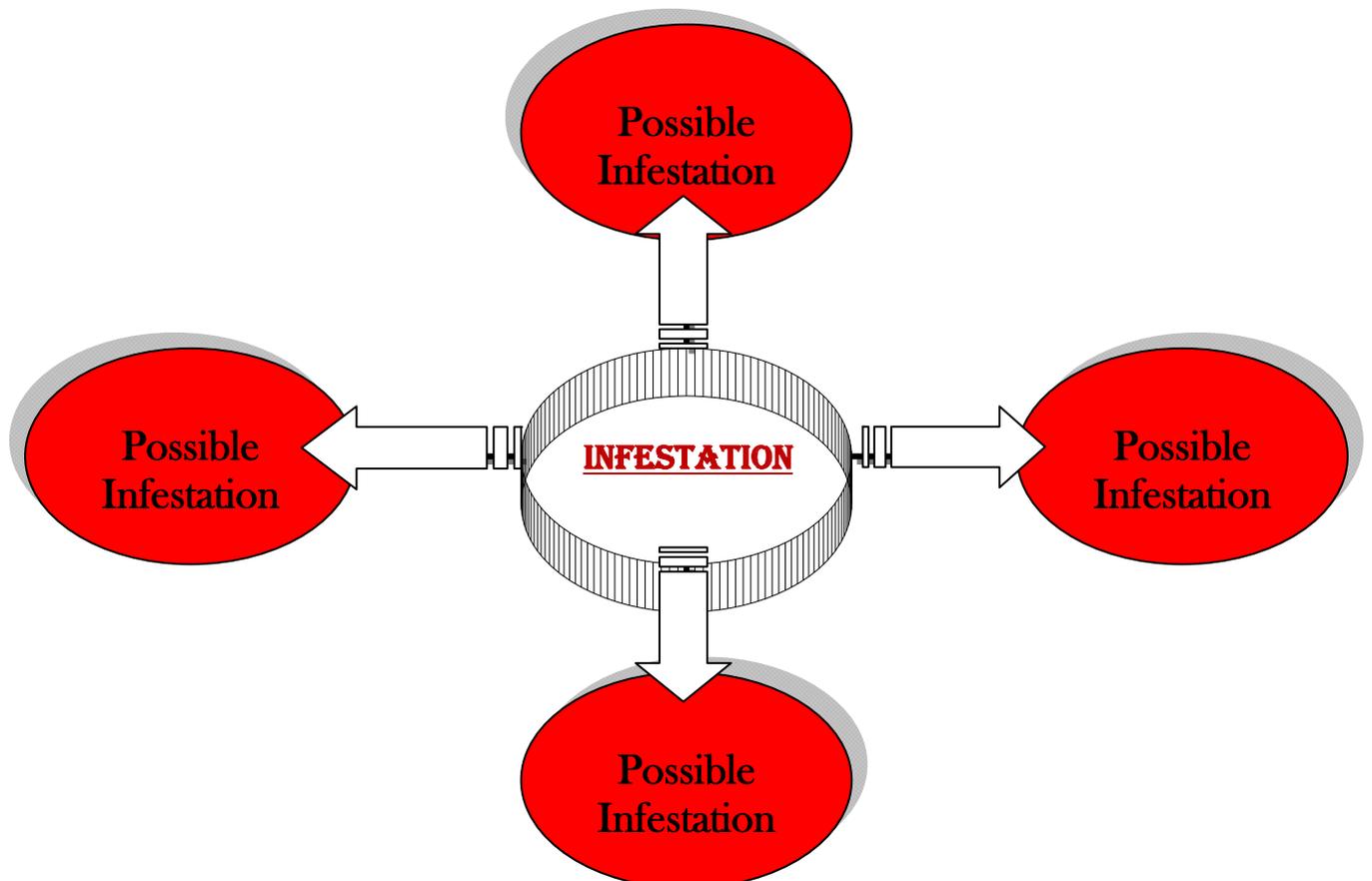
➤ **Landlord**

A Connecticut licensed exterminator with experience in bed bug extermination is needed to eliminate the problem. The professional must be informed that this is a bed bug infestation, since standard roach treatments are ineffective and the professional treatment should be done a minimum of twice with in a 2 week period and continued until an inspection has revealed that all bed bugs have been eliminated. All cracks and crevices within apartments must be cleaned and sealed after extermination has been completed.

**Discourage tenants from trash picking. The items that are found in the trash may be infested with bed bugs or other pests.**

➤ **Exterminator**

- Should assess/inspect the property to determine the extent of the infestation before giving you a written price quote
- Should provide you with a written inspection report with a scheduled plan on how to prepare for treatment and prevent further infestation
- Should inform you when it is safe to return after extermination
- Should continue extermination process with inspections until infestation has been eliminated
- Should provide education awareness to you on how to prevent bed bugs
- Should provide extermination preparation sheet to occupants
- **Should exterminate all units around the unit identified with the infestation: as shown here**



### ❖ **Why have Bed bugs Returned**

- There is a greater human mobility across the world via train, plane, boat and car
- There is a lack of awareness from homeowners, landlords and tenants
- Often harborages are missed on initial assessment
- There are inaccurate identifications of bed bugs which leads to improper treatment

## **THINGS TO REMEMBER**

### ➤ **Landlords and Tenants**

- Bed Bugs are not here because of Filth
- Learn how to prevent bed bug infestation
- Both parties have responsibilities to get rid of the problem
- Hire a Connecticut licensed exterminator to eliminate infestation
- Adjacent units must be treated

### ➤ **Exterminator**

- Once is not Enough!
- Bed bugs are not Roaches
- Adjacent units must be treated

**If you have a complaint or questions contact the City of Stamford Health Department Environmental Inspections Division at (203) 977-2748 or stop by the office at 888 Washington Boulevard 8<sup>th</sup> floor, Stamford, CT. Monday-Friday 8:30am to 4:30pm.**

## ***Bed bug References and Resources***

**Connecticut Agricultural experiment center:**

<http://www.ct.gov/caes/site/default.asp>

**Pictures by Alliance Commercial Pest Control:**

[http://www.pestworldforkids.org/bed\\_bugs.html](http://www.pestworldforkids.org/bed_bugs.html)

**New York Integrated Pest Management Control:**

<http://www.nysipm.cornell.edu/>

**New York City Department of Health and Mental Hygiene:**

<http://www.nyc.gov/html/doh/downloads/pdf/vector/bed-bug-guide.pdf>