

Bed Bugs

Adult bed bugs are oval, wingless, rusty red colored, have flat bodies, antennae and small eyes. They are visible to the naked eye, but often hide in cracks and crevices. When bed bugs feed, their bodies swell and become a brighter red and may be mistaken for ticks or small cockroaches. In homes, bed bugs are nocturnal and feed primarily on the blood of humans, usually when people are sleeping. The typical life span of a bed bug is about 10 months. Bed bugs can go without feeding for 80 to 140 days. Older stages of nymphs can survive longer without feeding than younger ones, and adults have survived without food for as long as 550 days. A bed bug can take six times its weight in blood, and feeding can take 3 to 10 minutes. Temperatures between 70F-80 F are most favorable, allowing them to develop into adults most rapidly and produce up to three to four generations per year.



Bed bug infestations were once thought to be associated primarily with crowded and dilapidated housing. However, infestations can now be found in the finest hotel and living accommodations. The reasons for the resurgence appear to involve increased human travel, ease of movement of infested luggage and items, and changes in the pesticides available to control this pest. The presence of bed bugs is not determined by the cleanliness of the living conditions where they are found. Bed bugs should not be considered as a medical or public health hazard. Bed bugs are not known to spread disease.

Life Cycle

Female bed bugs lay 200 to 500 tiny, white eggs in batches of 10 to 50 on rough surfaces such as wood or paper. Glue-like material covers the eggs, which hatch in about 10 days. After hatching occurs, the eggshells frequently remain stuck in place. There are five progressive stages, each requiring a single blood meal before molting to the next stage. The entire life cycle from egg to adult requires anywhere from 5 weeks to 4 months, depending on temperature and availability of food (blood). When temperatures are in the range of 70° to 82°F, development occurs most rapidly.

Where are bed bugs found and how are they spread?

Bed bug infestations usually occur around or near the areas where people sleep. These areas include apartments, shelters, rooming houses, hotels, cruise ships, buses, trains, and dorm rooms. They hide during the day in places such as seams of mattresses, box springs, bed frames, headboards, dresser

tables, inside cracks or crevices, behind wallpaper, or any other clutter or objects around a bed. Bed bugs have been shown to be able to travel over 100 feet in a night but tend to live within 8 feet of where people sleep.

Bed bugs spread by crawling and may contaminate multiple rooms in a home or even multiple dwellings in apartment buildings. They may also be present in boxes, suitcases, or other goods that are moved from residence to residence or from a hotel to home. Bed bugs can live on clothing from infested homes and may be spread by a person unknowingly wearing infested clothing.

How do I know if I've been bitten by a bed bug?

The face, neck, hands, and arms are common sites for bed bug bites. When bed bugs bite, they inject an anesthetic and an anticoagulant that prevents a person from realizing they are being bitten. Most people do not realize they have been bitten until bite marks appear anywhere from one to several days after the initial bite. The bite marks are similar to that of a mosquito or a flea -- a slightly swollen and red area that may itch and be irritating. Welts from bed bug bites do not have a red spot in the center -- those welts are more characteristic of flea bites. Sometimes the itching can lead to excessive scratching that can sometimes increase the chance of secondary skin infection. Bite responses can range from an absence of any physical signs of the bite, to a small bite mark, to a serious allergic reaction, including anaphylaxis requiring medical attention. Typically, no treatment is required for bed bug bites. If itching is severe, steroid creams or oral antihistamines may be used for symptom relief. Secondary bacterial infections that develop over heavily scratched areas may require the use of antibiotics.

The bite marks may be random or appear in a straight line. A peculiarity of bed bug bites is the tendency to find several bites lined up in a row. Infectious-disease specialists refer to this as the "breakfast, lunch, and dinner" sign, signifying the sequential feeding that occurs from site to site. Other symptoms of bed bug bites include insomnia, anxiety, and skin problems that arise from profuse scratching of the bites.

How do I detect a bed bug infestation in my home?

Infestations can be found by identifying the fecal stains, egg cases, and shed skins in crevices and cracks on or near beds. Look at other areas such as under wallpaper, behind picture frames, in couches and other furniture, in bedsprings and under mattresses, and even in articles of clothing. While fecal stains and skin casts suggest that bed bugs have been present, these do not confirm that the infestation is still active. Observing the bed bugs themselves is definitive confirmation that an area is infested. A professional pest-control company may help determine whether the home contains bed bugs.

How can I get rid of bed bugs?

If bed bugs are suspected then a licensed pest controller should be consulted. A careful inspection must be undertaken and all possible hiding places within infested and adjoining rooms examined. Once all likely sources have been identified, then an approved insecticide, which has some residual activity, should be applied to all harborages. The carbamates and the organophosphates are far more effective for control, but may not be recommended for use on mattresses (check the label).

This is especially so with heavy infestations and thus a post control treatment evaluation is always advisable. Licensed applicators should always provide proof of licensure upon request.

If I have a bed bug infestation, what can I do myself?

Getting rid of bed bugs is not an easy process, and most cases of bed bug infestation will require treatment by a pest-control expert. Some of the things you can do yourself, include:

- When it is colder than 25 degrees F, place mattresses and furniture outside for several hours to kill bed bugs. Temperatures below 25 degrees F will freeze and kill bed bugs.
- Wash all bedding, draperies and clothing in hot water on a regular basis.
- Vacuum and steam-clean carpets.
- Wrapping up infested materials (small items) in black plastic and placing the articles in the sun, thereby killing the bed bugs with the heat generated.
- Clothes can be washed in hot water and dried on the hot cycle of the clothes dryer.
- Delicate materials can be placed into the freezer.

Bed bugs can be difficult to get rid of because they hide so well. In addition to using a flashlight, carefully aiming a hot hair dryer into these crevices while looking will help force bed bugs out. Clean areas where bed bugs hide:

- Thoroughly clean all bedding, linens, curtains, rugs, carpets, and clothes. Washing items in hot water and drying them on the highest dryer setting will kill bed bugs. For those items that may be harmed by washing and drying at high temperatures, soak in warm water with lots of laundry soap for several hours before rinsing.
- Wipe away or vacuum all dust from the bed frame, nearby furniture, floors and carpets. Vacuum the mattresses carefully. After vacuuming, immediately place the vacuum cleaner bag in a plastic bag, seal it tightly, and throw the bag away in an outdoor container.
- If you find bed bugs on the mattress, buy a waterproof zippered mattress cover. These covers often say "allergen rated," or "for dust mites." Scrub the mattress seams with a stiff brush to dislodge bed bugs and any eggs. Then enclose the mattress in the cover for at least one year. This will trap any remaining bed bugs inside the cover, killing them.
- Throw away and replace an infested box spring if necessary.
- Remove all clutter from bedrooms and any other furniture that people may sleep or nap upon. Place this clutter into a plastic garbage bag, seal it tightly, and throw it away. If you need to save it, make sure it stays sealed up for a year.
- Repair any cracks in plaster and all loosened wallpaper, especially in bedrooms.

Generally, pesticides will need to be applied in conjunction with any nonchemical means of control. Use insecticides to get rid of bed bugs that are hiding in walls and other large objects. (Choose insecticides with "pyrethrins" as an active ingredient on the label. Only use insecticides labeled for household use because some insecticides can damage or stain your furniture, wallpaper, etc. Use care when applying insecticides, especially around children, the elderly, immuno-compromised people, and anyone else who may be sensitive to insecticides. Always follow label directions carefully.) Pesticide products labeled for bed bugs may be available at drug, hardware or home improvement stores that

adults can apply themselves. If you choose to use a pesticide, or if a licensed exterminator suggests you use one, follow these precautions:

- Only use pesticides clearly labeled as intended for bed bug extermination. Never use a cockroach spray, ant spray, or any other pesticide that does not list bed bugs on the label for bed bug extermination.
- Make sure you read, understand and follow the instructions on the pesticide's label.
- Never spray pesticides on mattresses or sofas, or in areas where children are present.
- Never purchase or use a product without a manufacturer's label and never buy pesticides from street vendors.

Prevention

People usually bring bed bugs into their homes, in luggage or on clothes, after visiting an infested dwelling or hotel. If you travel frequently, watch for signs of bed bugs in your hotel room by checking under sheets and inspecting mattresses, especially if you have been bitten. If you suspect bed bugs, check your luggage before leaving and wash all your clothes as soon as you get home.

You also can bring bed bugs into your home on bedding or furniture. If you purchase second-hand furniture, especially beds or mattresses, thoroughly inspect the item before bringing it into your home. If you remove infested mattresses or furniture from your home, do not leave it on the curb or porch. Take it immediately to the dump.

It is much easier to control a population when the infestation is small. Keep clutter down, so it is easier to inspect and bed bugs have fewer hiding places. Also, seal up cracks, crevices, and holes in bedding or furniture and other potential hiding sites.

Sleeping with the lights on has not been shown to be effective in preventing bed bug bites. Conventional insect and tick repellents are also not useful against bed bugs, so one should not try to avoid being bitten by using insect repellent at night.

References

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