



Photo by Gary Alpert, PhD, Harvard University

**Introduction:** Human bed bugs are found all over the world in all kinds of neighborhoods and settings. During the last decade there has been a significant increase in the reported number of infestations. The good news is that this insect is not known to transmit any type of human disease. However, some individuals experience intense itching from the bites that can lead to nervous and digestive disorders. The challenge is to prevent the spread of this pest by correctly identifying it and eliminating it.

**Infestation Origins:** Bed bugs may hitch a ride on luggage, furniture, clothing, shoes, backpacks, pillows, boxes, and other objects when these are moved between apartments, homes and hotels where there is an infestation. Used furniture, especially bed frames and mattresses, are of greatest risk in harboring bed bugs and their eggs. Because they readily survive for many months without feeding, bed bugs may already be present in apparently "vacant" and "clean" apartments. Bed bugs can wander between adjoining apartments

through voids in walls and holes through which wires and pipes pass. They have also been seen crawling across hallways in hotels from one unit to another.

**Biology:** Bed bugs are active at night when they leave their daytime resting place deep inside cracks and crevices to seek out a blood meal. Adult male and female bed bugs, as well as nymphs (young), feed on blood and then retreat to daytime hiding places where they lay their eggs. A person doesn't feel the bite taking place. It is the saliva that causes the intense itching and welts the next day. People often think the bites are caused by mosquitoes or spiders. Some people don't have a bite reaction for 4-5 days. Others may show no reaction to the bites at all.

**Identification:** Other insects such as spiders can cause bites on humans, so it's important to correctly identify bed bugs if they are present. Checking the bed linen in the middle of the night offers a good opportunity to find bed bugs on the move. Look for bed bugs under folds in mattresses, along seams, and behind headboards. A sweet, pungent odor and fecal (black) or bloody spots left on bedding are indications of a bed bug infestation.



**Fecal stains on sheets, and eggs and cast skins in the cracks of bed frames are signs of bed bugs.**

Live or dead bed bugs, cast skins, and eggs from an infested room or residence can be submitted to the Health Department for identification. Other insects may be confused with the bed bugs so proper identification is important.

**Treatment and Control:** A licensed pest control professional (PCP) should be hired to effectively eradicate bed bugs. Once a careful inspection has been conducted within infested and adjoining rooms, an approved insecticide that has some long-lasting activity should be applied. A follow-up pest control evaluation is advised as a second insecticide application is usually necessary.

Mattresses and box springs can be vacuumed, steam cleaned and treated by a PCP. They should then be encased in a zippered cover that is bed bug proof. If the PCP requests disposal of the mattress and box spring, it should first be treated, then wrapped in plastic before removal and placement in a locked dumpster or transport to landfill.

A strong vacuum with a disposable bag can be used to remove bugs and eggs from cracks and crevices. A stream cleaner is useful for killing nymphs and eggs. Clothes can be washed in hot water and dried on the hot cycle. Putting non-washable items such as tennis shoes in a dryer for 5 minutes at moderate heat will kill bugs and eggs.



**Adult bed bug, life size**

Particular attention should be given to beds with head boards fastened to the wall or boxed-in mattress frames as these offer excellent hiding places. Bed bug

infestations in these areas can evade detection and insecticide treatment.

**Prevention:** Good house-keeping practices including regular vacuuming and washing of bedding are helpful to discourage bed bugs. Eliminating hiding places by caulking cracks and crevices is also a good idea. Do not buy used mattresses or stuffed furniture because of the potential of introducing a bed bug infestation.

Since bat and bird bugs can also take a blood meal from humans, eliminate them and their nests from chimneys, attics, and eaves. Nest removal should include insecticide treatment to control any bat or bird bugs that are left behind.

#### References and Resources:

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**For more information call:**

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# Bed Bug Control

