

## What are bed bugs?

The common bed bug (*Cimex lectularius*) is a wingless, red-brown, blood-sucking insect that grows up to seven mm. in length and has a lifespan from four months to one year. The common bed bug is found worldwide. Infestations are common in the developing world, occurring in settings of unsanitary living conditions and severe crowding. In North America and Western Europe, bed bug infestations became rare during the second half of the 20th century and have been viewed as a condition that occurs in travelers returning from developing countries. However, bed bugs are becoming increasingly common in the United States, Canada, and the United Kingdom.

## How are bed bugs spread?

It often seems that bed bugs arise from nowhere. The bugs are efficient hitchhikers and are usually transported in or on luggage, clothing, beds, furniture, etc. Outbreaks can often be traced to travel, especially in countries or cities where bed bugs are common. This is a particular problem for hotels, motels and apartments, where turnover of occupants is constant. Bed bugs are small, cryptic and agile, escaping detection after crawling into suitcases, boxes, and belongings. The eggs are almost impossible to see when laid on most surfaces. Use of secondhand beds, couches, and furniture is another way that the bugs are transported into previously non-infested dwellings.

## Where do bed bugs hide?

Bed bugs can live in almost any crevice or protected location. The most common place to find them is the bed. Bed bugs often hide within seams, tufts, and crevices of the mattress, box spring, bed frame and headboard. Many areas besides beds, however, can harbor bed bugs. Upholstered chairs and sofas should be checked carefully, including seams, tufts, skirts, and crevices. Sofas can be major bed bug hotspots, especially when used for sleeping. Nightstands and dressers should be emptied and examined inside and out, then tipped over to inspect the woodwork underneath. Oftentimes, the bugs will be hiding in cracks, corners, and recesses. Other common places to find bed bugs include: beneath and along the edge of wall-to-wall carpeting (especially behind beds and furniture); cracks in wood molding; ceiling-wall junctures; behind wall-mounts, picture frames, switch plates and outlets; under loose wallpaper; amongst clothing stored in closets; and inside clocks, phones, televisions and smoke detectors.

## How do you inspect for bed bugs?

A thorough inspection requires dismantling the bed and standing the components on edge so that upper and lower surfaces can be examined. Things to look for are the bugs themselves, and the light-brown, molted skins of the nymphs. Dark spots of dried bed bug excrement are often present along mattress seams or wherever the bugs have resided. Box springs afford many places for bed bugs to hide, especially underneath where the fabric is stapled to the wooden frame. Oftentimes the underlying dust cover must be removed to gain access for inspection and possible treatment. Cracks and crevices of bed frames should be examined, especially if the frame is wood. (Bed bugs have an attraction for wood and fabric more so than metal or plastic). Headboards secured to walls should also be removed and inspected. In hotels and motels, the area behind the headboard is often the first place that the bugs become established. Bed bugs also hide among items stored under beds.

## What are the symptoms of bed bug bites?

Bed bugs feed by piercing the skin with an elongated beak through which they withdraw blood. Engorgement takes about three to 10 minutes, yet the person seldom knows they are being bitten. Symptoms thereafter vary with the individual. Many people develop an itchy red welt or localized swelling, which sometimes appears a day or so after the bite. Infestations also may cause anxiety, embarrassment, and loss of sleep. Others have little or no reaction. Bed bugs feed on any bare skin exposed while sleeping (face, neck, shoulders, arms, hands, etc.). It is important to recognize that not *all* bites or bite-like reactions are due to bed bugs. Confirmation requires finding and identifying the bugs themselves, which often requires the help of a professional.

## Do bed bugs transmit disease?

Although bed bugs can harbor pathogens in their bodies, transmission to humans is highly unlikely. For this reason, they are not considered a serious disease threat. Their medical significance is mainly limited to the itching and inflammation from their bites.

### **How do you treat bed bug bites?**

Antihistamines and corticosteroids may be prescribed to reduce allergic reactions, and antiseptic or antibiotic ointments to prevent infection.

### **How do you treat bed bug infestations?**

Pre-treatment responsibilities include reducing clutter, bagging and laundering (120°F minimum) or discarding infested bedding. Items that cannot be laundered can sometimes be de-infested by heating for several minutes in a clothes dryer. Other items can be wrapped in plastic and placed in a hot, sunny location for at least a few days (the 120°F minimum target temperature should be monitored in the centermost location with a thermometer). Bed bugs also succumb to cold temperatures below 32° F, but the chilling period must be maintained for at least two weeks. Attempts to rid an entire home or apartment of bed bugs by raising or lowering the thermostat will be entirely unsuccessful. Most housecleaning measures are of little benefit in bed bug management. Site-specific vacuuming, however, can help remove some of the bugs before treatment with insecticides. Bed bugs (especially the eggs) can be difficult to dislodge. Optimum results will be achieved by moving and scraping the end of the vacuum suction wand along infested areas such as seams, tufts and edges of bedding, and the perimeter edge of wall-to-wall carpets. Afterward, dispose of the vacuum contents in a sealed trash bag. Steam cleaning of carpets may be helpful for killing bugs and eggs that vacuuming may have missed.

While the former measures are helpful, insecticides are important for bed bug elimination. Treat bed bugs with an insecticide labeled for this use. Do not apply an insecticide directly to the mattress unless the label specifically gives directions for this use. As it may be impossible to penetrate all hiding places immediately, control may not be immediate and bugs may be seen for several days after treatment. However, if bugs persist for two weeks or more, it is advisable to do a second treatment. For heavily infested homes or apartments, a commercial pest control operator should be consulted to control the infestation.

### **Do I have to throw out the bed?**

Eliminating bed bugs from beds can be a challenge. If there are holes or tears in the fabric, the bugs and eggs may be inside, as well as outside. There also are restrictions on how beds can be treated with insecticides. For these reasons, pest control firms often recommend that beds be discarded, especially when heavily infested or in poor condition. Whether the bed stays or goes, encasing both the mattress and box spring is helpful if bugs are still present. Zippered encasements -- available at bedding and allergy supply stores -- deny bed bugs access to inner, hidden areas and entrap any bugs already inside. Some pest control firms treat seams, tufts, and crevices of bed components, but they will not spray the entire mattress surface, bed sheets, blankets, or clothing. Vacuuming (discussed above) may further help to remove bugs and eggs from mattresses and box springs that cannot be discarded. Some pest control firms also treat beds with portable steam machines. The technique can be useful, but affords no residual protection and does not kill bugs or eggs hidden inside the box spring or mattress. Fumigation is another way to de-infest beds and hard-to-treat items, but the procedure is not always available. In extreme cases, entire buildings have been fumigated for bed bugs. The procedure is costly though, and involves covering the building in a tarp and injecting a lethal gas.

### **How do you prevent bed bug infestations?**

Householders should be wary of acquiring used furnishings, especially beds and couches. Curbside items should definitely be avoided, and secondhand items should be examined closely before being brought into the home. Concerned travelers may want to check their beds for telltale signs of the bugs. This would entail examining the bed sheets and upper and lower seams of the mattress. Some professionals also suggest removal and examination behind the headboard, a frequent hiding place for the bugs in hotel rooms. If bed bugs are detected, travelers can request another room. Concerned travelers may also want to elevate suitcases off the floor (e.g. on a luggage stand). Inspecting or vacuuming luggage upon arriving home is less useful since it is hard to detect bed bugs inside a suitcase. Although incidence of bed bugs in the United States is increasing, they remain rare in comparison to most other household pests. Familiarity can help to avoid infestation, or at least prompt earlier intervention by a professional.

OSDH 03/06



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