

Water Quality and Health

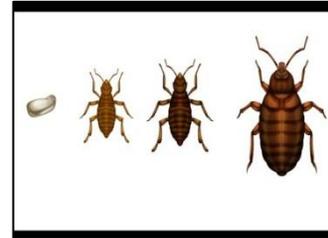
Disinfesting Bed Bugs

By Linda Golodner

A resurgence in bed bug infestations since around 2000 is making travelers wary of hotel beds, and not just lumpy mattresses in budget hotels. Bed bugs travel the world secreted in luggage and clothing; they respect no boundaries, infesting everything from low-cost housing to five-star hotels.

In contrast to surfaces harboring disease-causing microorganisms, such as *E. coli*, and norovirus, which should be disinfected with EPA-registered disinfectants like chlorine bleach, items harboring bed bugs should be disinfested with an appropriate EPA-registered insecticide.

Because bed bugs are very difficult to eliminate, a licensed professional exterminator is your best bet.



Bed Bug Life Stages

Bed Bug Bites

Bed Bugs are flat parasitic insects ranging in size from one to seven millimeters (about the size of Abe Lincoln's head on the face of a penny). They are visible to the human eye and are usually active at night. When the lights are out they feed on human and animal blood, which causes their bodies to change in color from light brown to reddish-brown.

According to the [US Centers for Disease Control and Prevention](#) (CDC), when bed bugs bite, they inject an anesthetic and an anticoagulant that prevents a person from realizing he or she is being bitten. Bed bug bites can take as long as 14 days to develop in some people. Bite marks—slightly swollen, red areas that may itch and be irritating—look similar to those of a mosquito or flea. CDC reports bite marks may be random or appear in a straight line on the skin.

Scratching skin bites can lead to infection, but generally speaking, bed bugs are a nuisance that causes people to lose sleep.¹ Whereas bed bugs generally do not spread disease, most of us prefer not to serve as a nocturnal meal for an army of insects.

Unwanted Travel Companions

People who travel frequently and share living and sleeping quarters where others have previously slept have a higher risk of being bitten or spreading a bed bug infestation, according to CDC. The flat bodies of bed bugs help them hide in very small spaces for long periods of time. Bed bugs are often transported by travelers as stowaways in the seams and folds of luggage, overnight bags and folded clothes.

¹ One exception is an allergic reaction to the bites that could require medical attention.

Waking up to Bed Bug Infestations

One clear sign of a bed bug infestation is multiple skin bites, but there are environmental signs too. Clusters of dark brown or black spots of dried excrement in bedding, for example, indicate bed bug infestation, as does a subtle, sweet, musty odor, according to the [Orkin website](#). Virginia Tech entomologist Dini M. Miller, PhD, reports molted bed bug “skin” is another common indicator of infestation. Each bed bug molts five times in its life, leaving plenty of evidence of its presence.

Miller recommends inspecting for evidence of bed bugs in mattress seams and tufts and under mattress tags, behind headboards, inside the holes for set-in screws, along wood creases in box springs or in bed frames, and where box spring fabric is stapled to a wood frame. When checking into a hotel room, pull back the sheets and mattress cover in one or two corners of the bed to inspect the mattress. Use luggage racks provided by the hotel and avoid placing your suitcase on the bed, lowering your risk of picking up unwanted passengers.

Orkin notes bed bugs may be present in objects within five to eight feet of a bed. They may also inhabit cracks and gaps behind wall outlets, floor molding, window and door molding and where carpet edges meet the wall.

Be Proactive

Left untreated, bed bugs will spread into adjoining rooms and apartments, so treatment should be prompt. In addition to consulting a reputable pest control company, websites like the Texas A&M AgriLife Extension site [lists several helpful steps](#) individuals can take. These include isolating beds to make them bed bug-free and treating affected materials with heat, cold or sunlight.

When it comes to bed bugs, forewarned is forearmed. Taking steps to avoid bed bugs can be less trouble than getting rid of them, but if you do get them, by all means, be proactive.

Linda Golodner is President Emeritus of the National Consumers League and Vice Chair of the Water Quality & Health Council.

A Common-sense Approach to Controlling Bed Bugs

At a 2013 meeting of the American Chemical Society, researchers from Washington State University and the University of Kentucky presented their findings that the genes bed bugs use to develop resistance to pesticides are active in the bug’s hard outer surface, or cuticle, where they can impede insecticides from reaching the insect’s nervous system (see [press release](#)). The researchers suggest that new pesticides should focus on ways to subdue those genes, but emphasize that insecticide use must be paired with common-sense measures such as “removing bedroom clutter where bed bugs can hide, frequent vacuuming of dust and other debris, washing bed linens in hot water and heat-drying in a dryer, and sealing cracks and crevices to eliminate hiding places.”