

bugs themselves and the light-brown, molted skins of the nymphs. Dark spots of dried bedbug excrement are often present along mattress seams or wherever the bugs have resided. The gauze fabric underlying the box spring must be removed to gain access for inspection and possible treatment. Successful treatment of mattresses and box springs is difficult, however and infested components may need to be discarded. Cracks and crevices of bed frames should be examined. Headboards secured to walls should also be removed and inspected. Bedbugs also hide among items stored under beds. Many areas besides beds, however, can harbor bedbugs. Nightstands and dressers should be emptied and examined inside and out, then tipped over and inspected beneath. Oftentimes the bugs will be hiding in cracks, corners and recesses. Upholstered chairs and sofas should be checked, especially seams, tufts, skirts and crevices beneath cushions. Sofas can be a major bedbug hotspot when used for sleeping. Other common places to find bedbugs include: along and under the edge of wall-to-wall carpeting (especially behind beds and furniture); cracks in wood molding; picture frames, switch plates and outlets' under loose wallpaper; in clothing stored in closets; and inside clocks, phones, televisions and smoke detectors. The challenge is to find and treat all places where

bugs and eggs may be present. Bedbugs tend to congregate in certain areas, but it is common to find an individual or some eggs scattered here and there. California American Exterminator sometimes also inject a pyrethrum-base, "flushing agent" into crevices to help reveal where bugs may be hiding.

Treatment Procedures

It often takes hours to properly inspect and treat a bedbug infestation and follow-up visits are usually required. As mentioned earlier, owners and occupants have important pretreatment responsibilities. Reducing clutter is a necessity. Belongings strewn about rooms give the insects many places for bedbugs to hide and hinder inspection and treatment. Infested bedding and garments will need to be bagged and laundered (120° F) or discarded since these items cannot be treated with insecticides. Vacuuming can be very useful for removing bugs and eggs from mattresses, carpet, walls and other surfaces. Pay particular attention to seams, tufts and edges of mattresses and box springs and the perimeter edge of wall-to-wall carpets. Afterward, dispose of the vacuum contents in a sealed trash bag. Steam cleaning of carpets is also helpful for killing bugs that vacuuming may have missed. While vacuuming and

carpet cleaning can be helpful, insecticides are important for bedbug elimination.

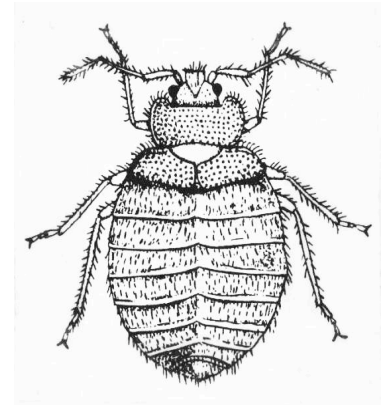
Do I Have to Throw Out the Bed?

Eliminating bedbugs from mattresses and box springs is challenging. 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 pesticides. For these reasons, it is often recommended that infested beds be discarded. California American Exterminator has developed a control program specifically for the control of bedbugs. Our program includes an initial inspection of the unit, special 'bedbug preparation instructions' for the resident, and an initial treatment. We also have mattress and box spring encasements that are available to protect your mattresses. Bedbugs are proving to be a difficult pest to control and unfortunately it seems, they are here to stay. However, with the cooperation between California American's trained Route Managers, on site property managers and staff and the residents, control of bedbugs is possible

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BEDBUG INFORMATION PACKET



BEDBUGS

Most of us have heard the nursery rhyme 'don't let the bedbugs bite' but never knew they were real until now. Many households of this generation have never seen a bedbug. Until recently, they also were a rarity among pest control professionals. They are increasingly being encountered in homes, apartments, hotels, motels, dormitories, shelters and modes of transportation. International travel has undoubtedly contributed to the resurgence of bedbugs in this country.

Description and Habits

Bedbugs are small, brownish, flattened insects that feed solely on blood. Adult bedbugs are about ¼ inch long and reddish brown, with oval, flattened bodies. The immature nymphs resemble the adults, but are smaller. Bedbugs do not fly, but can move quickly over floors, walls, ceilings and other surfaces. Female bedbugs lay their eggs in secluded areas, depositing up to 5 a day and 500 during a lifetime. The eggs are tiny, whitish, (individual eggs are about the size of a dust spec). Newly hatched nymphs are no bigger than a pinhead. As they grow, they molt (shed their skin) 5 times before reaching maturity. A blood meal is needed between each successive molt. Under favorable conditions (70-90° F), the bugs can complete development in as little as a month, producing 3 or more generations

per year. Bedbugs are very resilient. Nymphs can survive months without feeding and the adults for more than a year. Infestations are unlikely to lessen by leaving the premises unoccupied. Bedbugs are active mainly at night. During the daytime, they prefer to hide close to where people sleep. Their flattened bodies enable them to fit into tiny crevices. Bedbugs do not have nests like ants or bees, but do tend to congregate in habitual hiding places. These areas are marked by dark spotting and staining, which is the dried excrement of the bugs. Also present will be eggs and eggshells, molted skins of maturing nymphs and the bugs themselves. Another likely sign of bedbugs is rusty or reddish spots of blood on bed sheets or mattresses. Heavy infestations are sometimes accompanied by a "buggy" or sweetish odor. Initial infestations tend to be around beds, but the bugs eventually may become scattered throughout a room, occupying any crevice of protected location. They also can spread to adjacent rooms or apartments.

Bites and Concerns

Bedbugs usually bite people at night while they are sleeping. They feed by piercing the skin with an elongated beak through which they withdraw blood, yet the person seldom knows they are being bitten. Symptoms thereafter vary with the individual. Some people develop and itchy welt or localized

swelling, while others have little or no reaction. Unlike fleabites that occur mainly around the ankles, bedbugs feed on any bare skin exposed while sleeping (face, neck, body, shoulders, arms, hands, etc.). The welts and itching are often attributed to other causes such as a mosquito. For these reasons, infestations may go a long time unnoticed and can become quite large before being detected. It is important to recognize that not all bits or bite-like reactions are due to bedbugs. Confirmation requires finding and identifying the bugs, themselves. A common concern with bedbugs is whether they transmit disease. Their medical significance is mainly limited to the itching and inflammation from their bites.

How Infestations Originate

It often seems that bedbugs arise from nowhere. The bugs are efficient hitchhikers and are usually transported in on luggage, clothing, beds, furniture, etc. Outbreaks can often be traced to international travel from countries where the bugs are common, such as Asia, Africa, Europe, the Caribbean, or Central/South America. Bedbugs 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. Purchase or rental of secondhand mattresses, box springs and furniture is another way that the bugs are transported

into previously non-infested dwellings. Once bedbugs are introduced, they often spread room to room throughout a unit. Unlike cockroaches that feed on filth, the level of cleanliness has little to do with bedbug infestations. Pristine homes, hotels and apartment have plenty of hiding places and an abundance of warm-blooded hosts.

Controlling Infestations

Bedbugs are challenging pests to control. In the past they were treated with products that are now banned such as DDT. They hide in many tiny places, so inspections and treatments must be thorough. California American Exterminator Company's Route Managers know where to look for bedbugs and have an assortment of management tools at our disposal. Owners and occupants will need to assist your Route Manager in important ways. Affording access for inspection and treatment is essential, and excess clutter should be removed. In some cases, infested mattresses and box springs will need to be discarded.

Where They Hide

Bedbugs can live in almost any crevice or protected location. The most common place to find them is the bed. Bedbugs often hide within seams, tufts, and crevices of the mattress, box spring, bed frame and headboard. A thorough inspection requires dismantling the bed and standing the components on edge. Things to look for are the