

Everything you wanted to know about Bed Bugs But were afraid to ask



Bed Bug
Size: 1/4" to 3/8"

Bed bugs are a worldwide pest. However, since 2002 bedbugs have significantly increased in U.S. cities from New York to Honolulu. According to Dr. Michael Potter, an urban entomologist at the University of Kentucky and one of the leading authorities on bed bugs, "Bed bugs will be the pest of the 21st century, no question about it." They are being found in hotels, apartments, dormitories, homes, offices, schools, hospitals, cruise ships, movie theaters, and in cabs and buses. Their small size and their ability to hide anywhere allow them to move around virtually undetected. Once they are inside a room where someone sleeps, they crawl out at night in search of a blood meal. "This is one serious issue" Potter observed.

Why are they pests? Do they spread disease?

Bed bugs feed only on the blood of humans and other warm blooded animals. These insects feed mostly at night when you are asleep. They cause small, hard, swollen welts on the skin. Some people do not even know they have been bitten, but others suffer a reaction (itching and inflammation) to the saliva injected while the insect feeds. Bed bugs are not currently known to transmit human disease.

How big are bed bugs?

Adult bedbugs are reddish-brown in color, oval shaped, and flattened. The adults are about 1/4" long (about the size of an apple seed). The immature stages called nymphs are as small as 1/32" and appear as tiny specs. After a blood meal their body becomes swollen and is more of a dull red color. They cannot fly or jump but they do crawl around quickly.



Adult Bed Bug
(Actual Size)

What is their growth and development?

With temperatures between 70° to 85° F and with regular feeding on blood each female bed bug can lay three to five eggs per day. This can add up to be 200 to 400 eggs in her lifetime. Depending upon conditions, eggs may hatch in as few as 6 days or as long as 28 days. When bed bugs bite it takes about three to five minutes for the bed bug to become engorged. It then crawls away to a hiding place such as a crack or crevice to digest the meal. Bed bugs will seek more blood when they are hungry but they are capable of going two weeks to two months and in extreme cases up to a year without a blood meal.

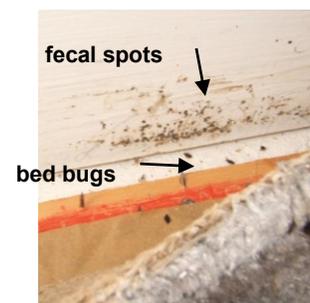
Where do they hide during the day?

Bed bugs prefer to hide close to the host in the seams of bedding and in the cracks and crevices of bed frames and headboards. They will, also hide in cracks, crevices, and clutter within ten to twelve feet away from the bed or other areas where people sleep. Some common hiding spots away from the bed include:

- in the creases of upholstered furniture
- in dresser drawers and frames
- under carpets and in cracks along and behind baseboards
- in and behind picture frames and anything attached to the wall
- under loose wallpaper
- in pleats of drapes and curtains
- behind electrical outlet cover plates
- around window and door frames
- in clothes and other items piled on the floor
- on wheel chairs or walkers
- in piles of papers and stacks of books
- in radios, televisions, computers, or lamps
- in and on luggage, backpacks, gym bags, and computer carrying cases
- **and in just about any other narrow crack or crevice you can find in a room.**



Bed bug
on mattress seam.



Bed bugs under carpet
along tack strip

How do you prepare for a treatment?

Your cooperation is essential for a successful treatment. Read and follow the directions that are provided. The specific directions will vary depending upon the severity of infestation and the amount of clutter. In general you will need to pick up and remove items and clutter from the floor. Reducing the amount of clutter in your home or apartment is critical to a successful treatment. Plan to wash your sheets and blankets and other infested fabric items in hot water and dry them in a hot dryer for at least 30 minutes before making up your bed after the treatment.



Wash sheets and blankets in hot water and dry them for 30 minutes in a hot dryer before making up your bed.

How is the treatment done?

The most common treatment method combines both chemical and non-chemical methods. Encasements are used to cover the mattress and box spring. The bed frame and headboard are inspected and treated. The perimeter of the room and the accessible hiding places need to be located and treated with a properly labeled pesticide. All rooms where people sleep, rest, or sit for an extended period of time need to be treated. The treatment may be extensive and time consuming. A vacuum may be used to remove live bed bugs and steam may be used to treat upholstered furniture. Interceptor traps may be placed under or near beds and furniture where people sleep or rest. There are often two or three and sometimes more follow up visits before bed bugs are eliminated. Other control methods include whole apartment heat treatment, small area heat treatment, and containerized treatment with chemically impregnated strips.



Inspecting bed frame

Why are zippered mattress covers needed?

There are three main reasons for encasing your mattress and box spring in bed bug proof covers.



1. The encasements prevent bed bugs from finding hiding places in the seams, beading, handles, and edges of the mattress and box spring.

2. The white color of the encasement makes it easier to detect bed bug activity.

3. Any bed bugs that are trapped under the encasement will die. The encasements need to be installed after the treatment is completed and before you make up and use the bed. Encasements need to be left on the bed for at least one year. They may be removed for cleaning but must be replaced immediately.



Encasements Installed

Will one treatment be enough?

It is likely to take several treatments at two week intervals to get results. The need for additional treatment(s) is determined by the severity of the initial infestation, the amount of clutter, the number of hiding places, reports of new bites and sightings, and your cooperation in preparing as instructed.

Why are they so difficult to control?

The difficulty in control has to do with finding all the hiding places. The more clutter in a room, the more furniture, and the more "stuff" are factors that increase the number of places that need to be treated. Bed bugs hide in cracks and crevices and have the ability to go unnoticed for several weeks. Also, university research has shown that bed bugs are resistant to the residual effects of many commonly used pesticides.

How do you know when they are gone?

If you do not have new sightings or bites for eight weeks it is likely that the bed bug infestation is eliminated. To be sure, place bed bug traps such as the ClimbUp™ Interceptor or Volcano with SenSci Activ® Lure under or near the legs of your bed or other furniture. Inspect the traps weekly.



ClimbUp™ Interceptor Trap

What if I plan to discard a mattress or box spring?

Wrap the mattress and box spring in plastic or place it in a zippered mattress bag (you can get one at U-Haul) before removing it. Discourage others from taking the mattress by spray painting a big "X" on both sides or cut the fabric so that it looks ruined. If you live in an apartment notify building management when you plan to discard infested furniture or bedding so the appropriate steps can be taken to minimize the chance of spreading bed bugs.

How are they spread?



Bed bugs hide in the seams and hitch hike on luggage.

Bed bugs are excellent hitchhikers and are easily carried from place to place. They hide in the seams and crevices of furniture, luggage, bedding, backpacks, boxes, and even clothing worn by people coming from infested sites. They may also be found on wheel chairs and walkers. Bed bugs are capable of following utility, plumbing and cable lines in buildings. More commonly, bed bugs are spread between rooms by people visiting and sharing bedding, furniture, and other personal possessions. Bed bugs may be spread by carelessly moving infested furniture through hallways in a building.

What Can I Do to Reduce the Risks of Bed Bug Infestation?

- Inspect the seams and edges of your mattress, box spring, and bed frame every time you change the sheets and make up your bed. Notify your building maintenance office if you find a bed bug on the bed or anywhere in your apartment.
- Reduce clutter. Do not keep piles of clothes, toys, shoes, papers, or books on the floor, under the bed, stuffed in closets, or anywhere in your apartment. These are prime hiding places for bed bugs.
- Purchase and install certified bed bug proof encasements for your mattress and box spring. The covers trap bed bugs hidden inside the mattress and box spring so that they cannot come out and bite.
- Pull your bed six to twelve inches away from the wall so that it is not touching the wall. Do not place or store anything under your bed.
- Carefully inspect your luggage and backpacks whenever you return home from a vacation or overnight trip. Store your luggage in large plastic bags. Use twist ties to seal the bags.
- Do not scavenge mattresses, beds, or other furniture that others have thrown away. Carefully inspect any second hand or rental furniture and other used items before bringing them into your home.
- Be careful who you let stay overnight or sleep on your couch. Likewise, be mindful on whose couch or bed you sleep. Inspect your child's backpack, stuffed animals, and other personal belongings if they have slept or stayed overnight at another's home or apartment.
- Do not try to treat the infestation yourself with aerosol "bombs". The mist will not penetrate the places where bed bugs hide.

Here are some Do's and Don'ts for you to consider

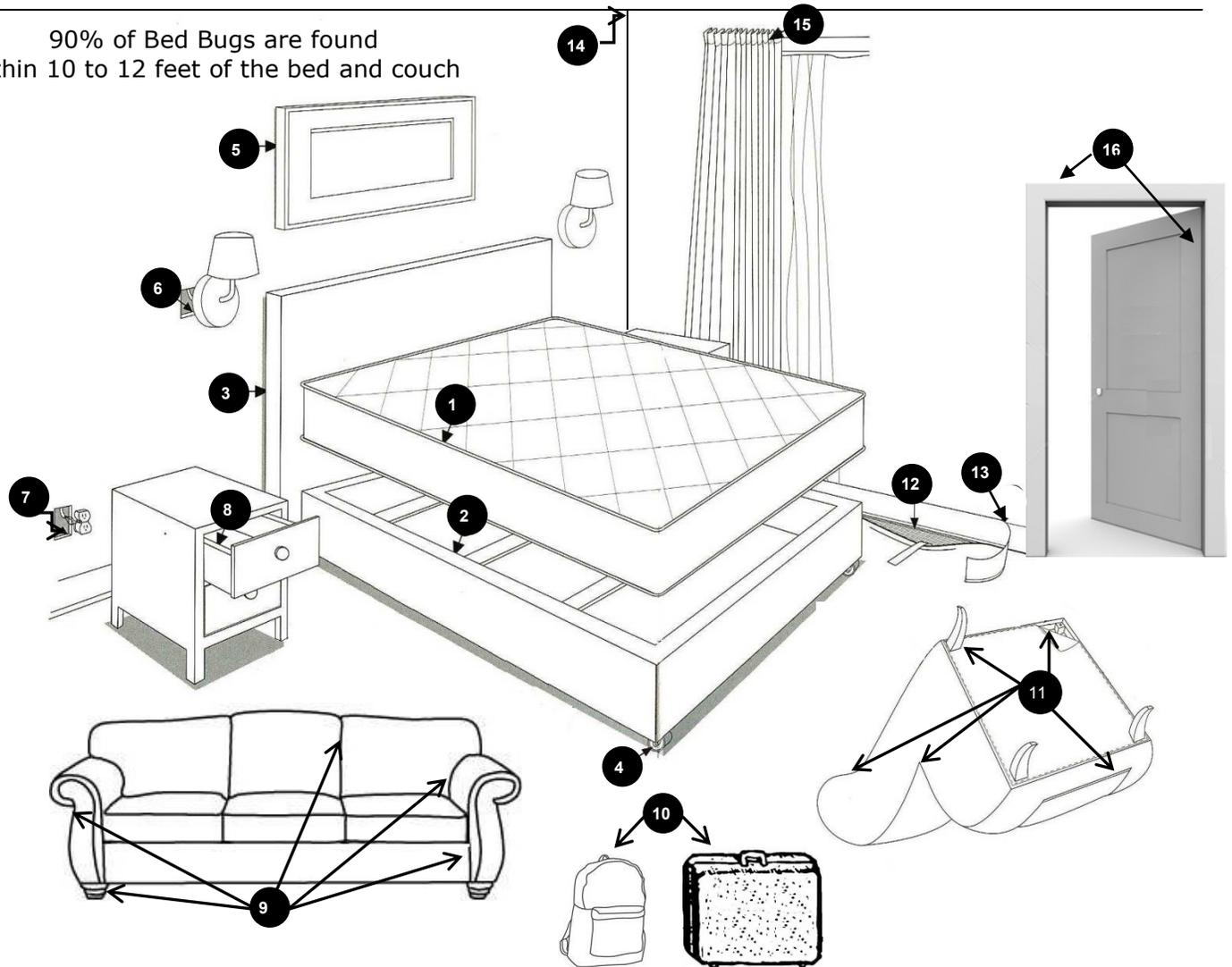
- Don't Panic! You can control bed bugs with careful inspection and by using proper control methods.
- Don't ignore the bed bugs. Acting right away will increase success in eliminating bed bugs.
- Don't sleep on another bed or the sofa. Bed bugs may follow you and it will become much more difficult to get rid of them.
- Don't try to kill bed bugs by using garden pesticides or other unregistered products. Using pesticide products to kill bed bugs that are labeled only for outdoor use or not labeled to treat bed bugs can make you or your family very sick.
- Don't use rubbing alcohol, kerosene or gasoline. These chemicals may cause fires and can be hazardous to your health.
- Don't try to kill bed bugs with room foggers or "bug bombs." The mist released by these items just does not reach the places where bed bugs hide and, as such, are generally ineffective against bed bugs.
- Don't place mothballs or boric acid dust between your mattress and box spring or under and around your bed. These products are not labeled or approved for the control of bed bugs and are not effective.
- Don't treat your children or yourself with mosquito repellent in an attempt to keep bed bugs off while you sleep. Conventional insect repellents, like those used to deter ticks and mosquitoes, do not appear to be effective against bed bugs.
- Don't throw away furniture. In most situations beds and other furniture can be treated for bed bugs effectively. Throwing away furniture can spread the bugs to other homes and apartments.
- Don't store things under the bed. Storing stuff under the bed gives bed bugs many new places to hide. This makes it more difficult to get rid of bed bugs.
- Don't move things from room to room. Moving your belongings from the room with bed bugs to another room in your house will likely spread the bed bugs.
- Don't wrap items in black plastic and place in the sun. It will not get hot enough inside the bag to kill all the bugs. Likewise, placing bedding or furniture outside in the winter may immobilize the bugs temporarily, but not kill them. Temperatures outside need to be sustained at 0°F for at least four days.

Things You Can Do If You Suspect You Have Bed Bugs

- Do make sure it is a bedbug. Read "Everything You Always Wanted to Know about Bed Bugs, But Were Afraid to Ask at www.generalpest-ohio.com. Click on the Bed Bug Tab.
- Do carefully read and follow all the label directions and safety precautions for any pesticide product you choose to use.
- Do act promptly. It is much easier to eliminate bed bugs when the infestation is found early and before it has had a chance to spread.
- Do take steps to reduce clutter and organize your personal possessions. Clothes and fabric items that may be infested should be dried in a hot dryer for at least 30 minutes.
- Do wrap or encase an infested mattress, box spring, or furniture in plastic before you remove these items from your home or apartment.
- Do discourage others from taking the discarded items by spray painting a big "x" on both sides, by cutting the fabric so it looks ruined, or by disassembling the item to render it unusable.
- Do limit visitors to your home or apartment until the bed bugs are gone.
- Do pull your bed six to twelve inches away from the wall so that it is not touching the wall.
- Do install bed bug proof encasements on your mattress and box spring. These encasements prevent bed bugs from finding hiding places on your mattress or box spring. The white color makes it easier to detect new bed bug activity. Any bed bugs that are trapped under the encasement will die. You may remove the encasements to launder them but replace the covers before you sleep on the bed.
- Do carefully inspect your luggage and backpacks whenever you return home from a vacation or overnight trip. Store your luggage in large plastic bags. Use twist ties to seal the bags
- Do be mindful who you let stay overnight or sleep on your couch. Likewise, be mindful on whose couch or bed you sleep. Do inspect your child's backpack, stuffed animals, and other personal belongings if they have slept or stayed overnight at another's home or apartment.

Bed Bug Hot Spots*

90% of Bed Bugs are found within 10 to 12 feet of the bed and couch



Bed Bug Hot Spots*

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| 1. Mattress (edges, beading, buttons, handles, labels) | 9. Upholstered Furniture: edges, seams, cushions |
| 2. Box Spring | 10. Backpack, suit case, luggage, computer cases |
| 3. Headboard | 11. Furniture: underside, back, edges, legs, seams |
| 4. Wheels, legs, supports, frame, slats | 12. Under carpeting along tack strip |
| 5. Pictures and other wall mounted decorations | 13. Baseboards, coving |
| 6. Wall mounted lamps | 14. Edge of wall and ceiling, crown molding |
| 7. Electrical outlets | 15. Drapery and curtain pleats |
| 8. Bedroom furniture: night stands, dressers, tables | 16. Door frames and hinges |

*drawings provided by and adapted from [Smart Solutions: Bed Bugs](#), BASF Corporation 2010

For additional information about bed bugs, please contact:

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