

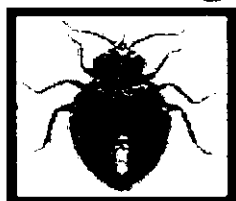
Integrated Bed Bug Management

Bed bugs can be a challenging pest to eradicate. An integrated pest management (IPM) approach is a comprehensive and effective strategy that takes advantage of all appropriate pest management options.

Bed Bug Identification

It is vital that you correctly identify bed bugs before moving forward with bed bug treatment.

Bed Bug Biology



Bed bugs are small, flat insects that are reddish brown in color. They are wingless and are about the size of an apple seed. They have 5 stages of development before reaching maturity, all which feed on the blood of their human and animal hosts. They also shed and their exoskeletons left behind can be easily identified.

TIP
Consider reaching out to your local county extension agent. They will be able to identify the pest at no cost to you.

Common Hiding Places



Bedrooms

Seams of mattresses, box springs, bed frames, headboards, dresser tables, clothing and clutter in closets



Living Rooms

Cracks and crevices of couches, under loose wall paper and picture frames



Travel Luggage

On and in recently used luggage, backpacks, and bags

Other Ways to Identify Bed Bugs

Bed Bug Eggs

Bed bug eggs can be seen with a magnifying glass. They are generally about the size of a pinhead, pear-white in color, and marked by an eye spot if more than five days old.

Bites

Most people have a mild allergic reaction to the bites of bed bugs. They typically form in a trail or grouping that resembles a rash. However, some people have no reaction to a bite, while others have a severe reaction that it can lead to anaphylaxis. (severe, whole-body reaction).

Blood Stains

Blood stains can be found around where the bed bug had its blood meal, typically on a mattress, sheets, upholstered furniture, or walls. They are dark red spots and may bleed on the fabric like a marker would.

Monitoring Equipment

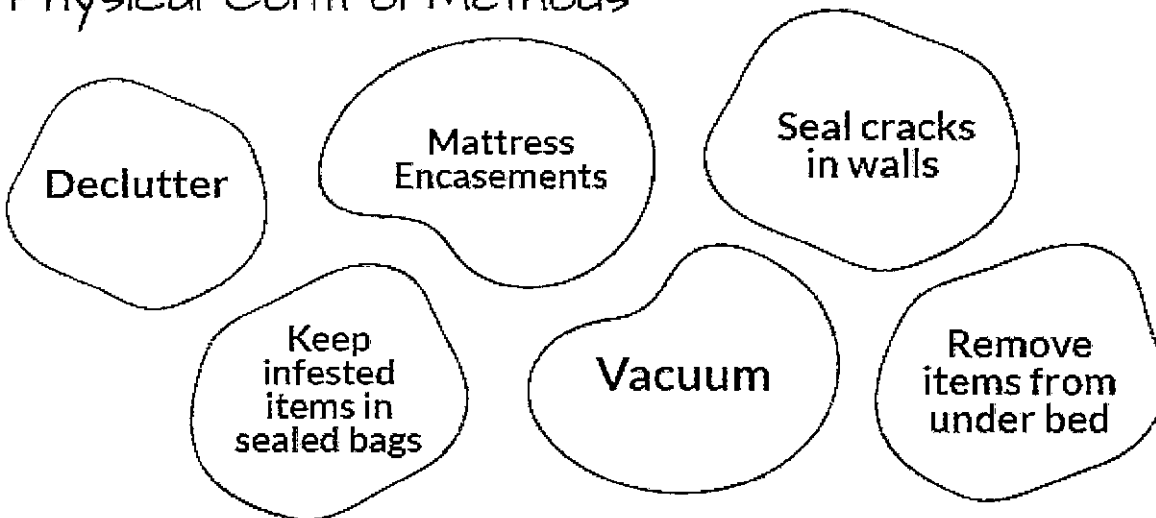
Monitoring equipment such as bed bug interceptors under bed and furniture legs are helpful to detect a bed bug infestation.

Bed Bug Control and Treatment

After confirming you have an infestation, an IPM approach that combines physical, non-chemical, and chemical methods is recommended.



Physical Control Methods



TIP
Be sure that the mattress encasement has a zipper that closes completely and the zipper teeth are tight so no bugs can get out or in.

Non-Chemical Treatment Methods

Heat treatment

Bed bugs are killed at temperatures of at least 120°F for 90 minutes. Consider putting your bedding and clothing in the dryer and using a heat-generating device for items unable to fit in the dryer.

Cold treatment

This method can be successful in the home environment if the freezer is set to 0°F. You must leave the items in a sealed bag in the freezer at that temperature for four days. Be sure to use a thermometer to check the temperature, since home freezers are not always set to 0°F.

TIP
Some non-chemical methods will be more effective than others and should be used with other types of treatment methods.

Chemical Treatment Methods

Hiring a Trained Bed Bug Control Professional

- Call several licensed and insured companies, compare services, get written estimates, and check references
- Look for companies that:
 - Offer an IPM solution
 - Offer both chemical and nonchemical treatment options
 - Give a pre-treatment check-list
 - Perform pre-treatment inspection
 - Recommend both interceptors and encasements
 - Offer two or more service visits and follow-up

Do-it-Yourself

If using pesticides to treat bed bugs yourself, it is important to remain patient and not do something out of desperation that may expose you and your family to an unsafe pesticide. Be sure the pesticides are EPA-registered pesticides labeled for bed bug control. EPA has a product search tool that can help the user choose a pesticide. Be sure to read the label and follow the directions carefully and completely.

[Find a Bed Bug Pesticide Product!](#)
US EPA



Bed Bugs in Schools

Guidance for Parents



Bed bugs can hitchhike from different locations into homes and schools. Education and preparation are the formula for success in dealing with bed bugs. Here are things you can do as a parent to keep bed bugs out of your child's school and your home.

Prevent Bed Bugs from Coming Home

- Limit the items your child brings home from school.
- Inspect items as they arrive from school.
- Keep school items like backpacks, books, and jackets in a single area of the home that is separate from the sleeping areas. If the school has reported problems with bed bugs, isolate them in a sealed plastic container.

A school is not an ideal place for bed bugs, but it can serve as a hub for their travel to other locations, including homes.

Keep Them Out of School

- Limit the items your child takes to school.
- Because backpacks and coats are the most common way for a bed bug to get a ride to school, put them in a dryer on high heat for 30 minutes weekly.
- Store freshly laundered clothing in sealed plastic bags or boxes until they are put on if you have problems with bed bugs in your home.

If You Spot a Bed Bug

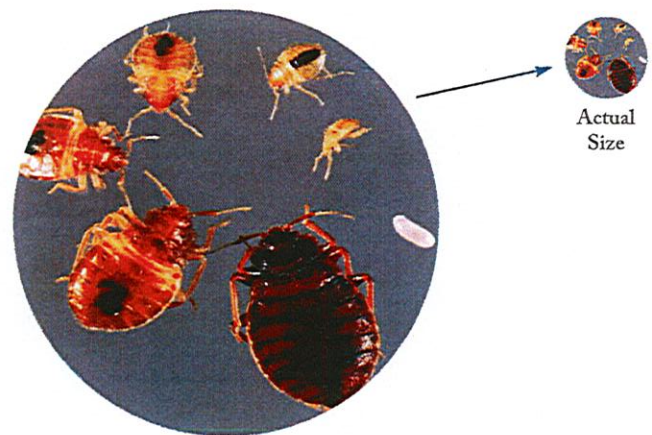
- Catch the suspected bed bug in a zip top bag or contain it under clear tape for identification.
- Many [universities](#) and pest management firms offer identification services.
- Arrange for an inspection by a pest management professional.
- Contact your school nurse so they can investigate within the school.

Bed bugs are not a sign of unhealthy living conditions. We can unknowingly bring them home from infested areas in clothes, shoes, backpacks and other items.

If You Have Bed Bugs at Home

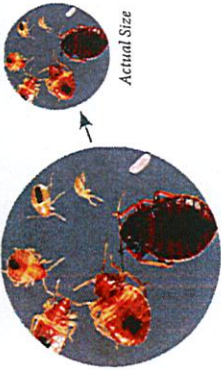
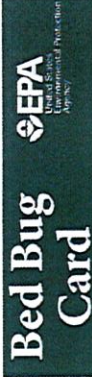
- Put clothing, backpacks, shoes, bedding, and similar objects in a dryer at high temperature for 30 minutes.
- Vacuum bed bugs from cracks and crevices in furniture, equipment, walls, and floors.
- Eliminate clutter to reduce hiding places.
- Use a protective cover that encases mattresses and box springs and eliminates bed bug hiding spots.
- Install [bed bug interceptors](#) (devices placed under the legs of furniture to catch bed bugs and keep them from climbing the legs).
- Talk with a professional pest control company about non-chemical methods like heat treatment of rooms, furniture and other large items.
- If needed, use pesticides made specifically for bed bugs carefully according the label directions or hire a pest management professional.

Identification is Key!



Learn more at epa.gov/bedbugs

Bed Bug Card

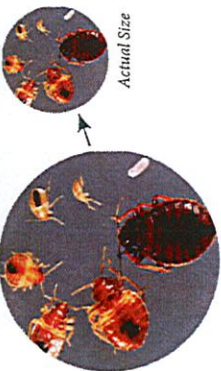
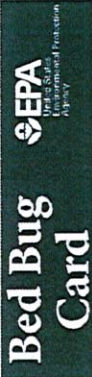


Identification

- Oval bodied, flattened, wingless, six legs
 - Color: adults - brown to red
nymphs - nearly colorless
 - Eggs: white, glued to rough surfaces
- ### Signs
- Small black droppings, blood stains or shed skins on bottom bed sheet.
 - Red, itchy rashes from bites.

epa.gov/bedbugs

Bed Bug Card

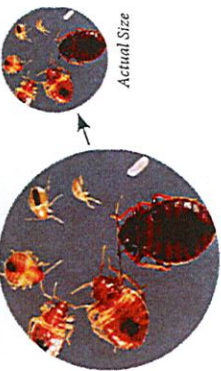


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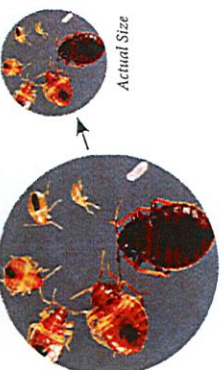


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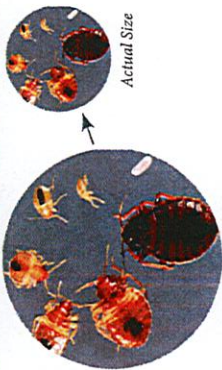


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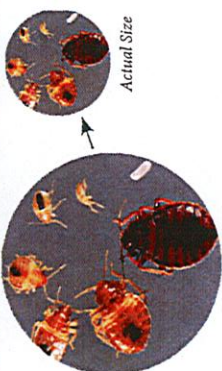


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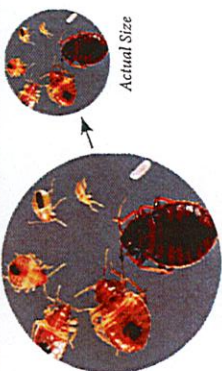


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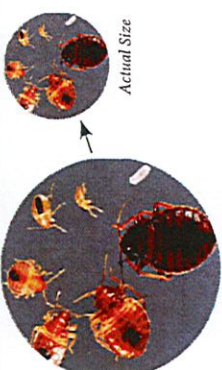


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