

UNDERSTANDING AND PREVENTING BED BUGS

THANKS TO

The Family Housing Fund (Visible Child)

Blue Cross & Blue Shield

Growing Up Healthy: Kids in Community Initiative

Hart-Shegos And Associates, Inc.

Hart-Shegos Inspection Services, LLC

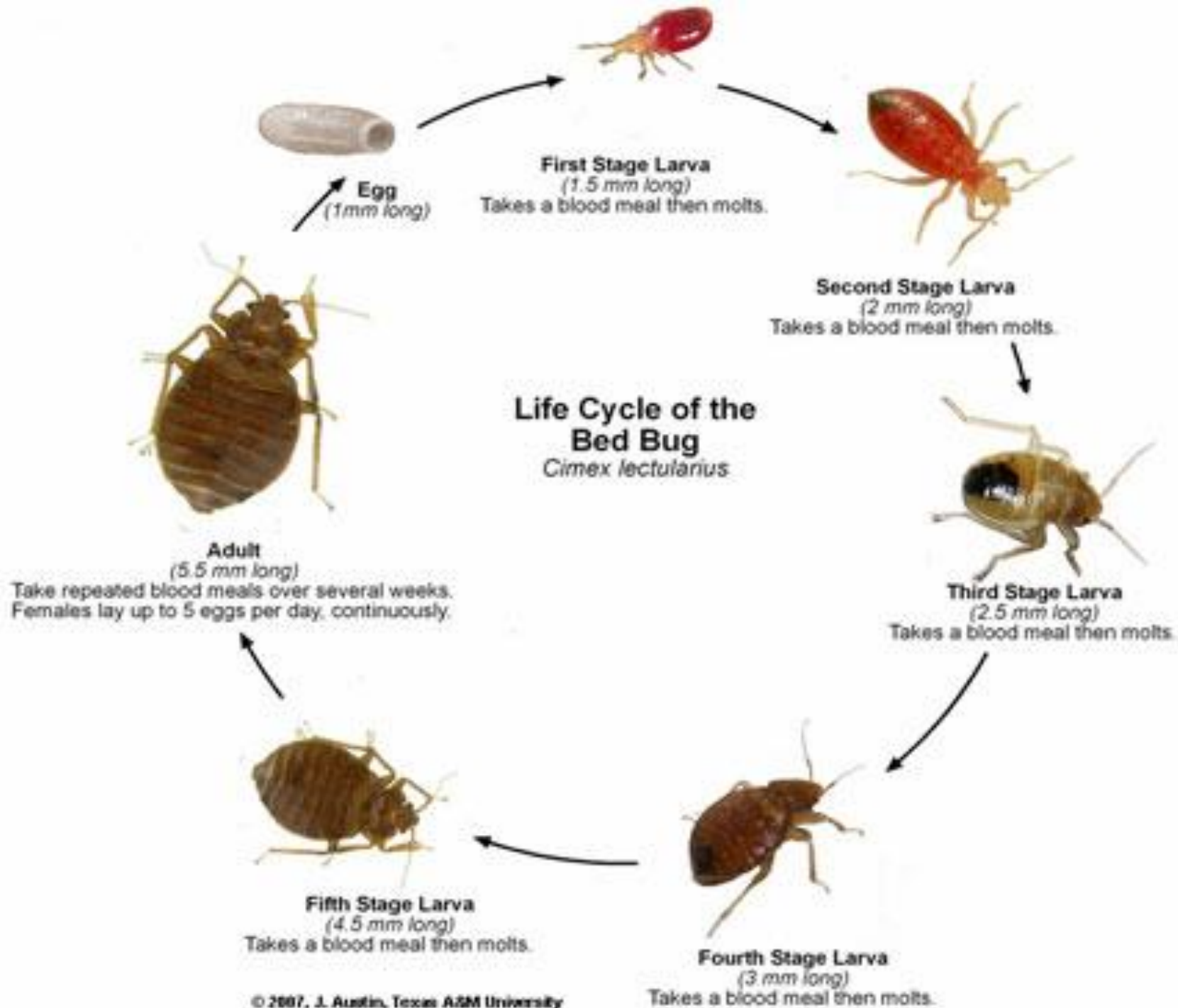
Why do we have bed bug problems- I thought they were a thing of the past?

- Evidence dates back thousands of years
- Plagued both rich and poor
- Disappearance with DDT
- Bedbugs are making a comeback!



What are bed bugs?





Bed Bug Eggs



A Bed Bug After Eating



Bed Bug Activity

- Bed bugs like the dark.
- They will come out in the light if they are hungry enough.



Bed Bug Feeding

- Bed bugs feed primarily on human blood.
- Feeding is short.
- Bites don't usually hurt.
- Bed bugs leave rows of bite marks.



After they feed, they like to crawl away to safety:

- Around beds
- In electrical outlets
- In bed mattresses and box springs
- In crevices





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- Hide in clusters, but some are loners
- Like to be close to the host, but can travel up to 60 feet for a meal
- Are very fast
- Can leave dark stains and shed skin

Bed bugs have an amazing ability to hitchhike.



Discarded, infested belongings often end up in donation centers.



Human Reaction to Bed Bugs

Simple reaction to bed bug bites



Severe reaction to bed bug bites



Bed Bug Bites:

- Secondary infections due to scratching
- No red spot
- Anywhere on the body, but usually arms and legs
- A pattern of bites in a row or clustered in a triangle
- Itching



Reactions to repeated bites can progress more severely.



Other Bug Bites

Ticks - Lyme's disease



Chiggers



Flea bites



Lice





Chronicle / Paul Chinn

Scientific study has shown no evidence that bed bugs transmit diseases.

- Bed bugs can cause more than itching
- Some people have significant emotional distress
- Some people develop delusory parasitosis, or Ekbom's Syndrome: a recognized psychological condition



Residents who have experienced homelessness may be especially vulnerable to the psychological distress of bed bugs.



Some illnesses mimic the symptoms of parasitosis:

- ✓ Hypothyroidism
- ✓ Cancer
- ✓ Cerebrovascular disease
- ✓ Neurological disorders
- ✓ Vitamin B 12 Deficiency
- ✓ Diabetes Mellitus
- ✓ Menopause
- ✓ Allergies
- ✓ Drug Abuse
- ✓ Stress

STRATEGIES FOR RESPONDING TO SUSPECTED DELUSARY PARASITOSIS:

- Encourage a medical screening to rule out an underlining health issue
- Work directly with the resident in conducting a unit inspection – preferably conducted by a trained bed bug detection team
- Recommend mattress covers and laundering bedding and clothes
- Provide resident education materials on bed bugs, their behaviors and how to prevent them
- Never dismiss their complaints as irrational, rather help them to understand how to prove the presence of bed bugs
- If housekeeping is an issue, seek third-party assistance in housekeeping support services
- Refer the resident to mental health clinical resources if complaints persist and no cause is verified.

We need to approach this problem armed first with a response using practical knowledge.



Bed Bug Treatments: Integrated Pest Management

- ✓ An effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices.
- ✓ Uses current, comprehensive information on the life cycles of pests and their interaction with the environment.
- ✓ This information together with available pest control methods is used to manage pest damage by the most economical means, with the least possible hazard to people, property and the environment.

Bed Bug Treatments: Three Non Toxic Protocols

✓ Steam

✓ Heat

✓ Freeze

Bed Bug Treatment Protocols: Steam

Pros

Non Toxic

Cons

- ❑ Limited application areas
- ❑ Leaves behind moisture – mold potential
- ❑ Can damage property

Bed Bug Treatment Protocols: Heat

Pros

- ❑ Can be very effective at high enough temperatures
- ❑ Non Toxic

Cons

- ❑ Can damage property
- ❑ Bed Bugs can flee into areas that heat can't penetrate
- ❑ Can be expensive
- ❑ Difficult to administer in large spaces
(commercial/residential)

Bed Bug Treatment Protocols: Freeze

Pros

- ❑ Can kills each phase of the life cycle
- ❑ Stops them “cold”
Non toxic

Cons

- ❑ Hard to reach bugs in hiding places
- ❑ Can damage property

Bed Bug Treatment Protocols: Fire and Ice Methods

Pros

- Classic IPM approach
- Effective

Cons

- Can be expensive
- Few companies offer it because of lack of experience

Bed Bug Treatment Protocols: EPA Web Site



Pesticides: Controlling Pests



Recent Additions | Contact Us Search: All EPA This Area

You are here: [EPA Home](#) » [Pesticides](#) » [Controlling Pest](#) » [Bed Bugs](#) » EPA Registered Bed Bug Products

Pesticides Home

Controlling Pests Home

Around the Home

Lawn & Garden

At School

In Agriculture

Questions about Chemicals?

Related Information

EPA-Registered Bed Bug Products

EPA has developed a search tool that can help you choose an EPA-registered bed bug product that meets your needs. You can search for a product by its:

- Name
- Company
- EPA-registration number
- Where you can use the pesticide
- Pesticide type

Resources

- [Bed Bug Main Page](#)
- [Top Ten Bed Bugs Tips](#)
- [Joint Statement on Bed Bug Control](#)



Bed Bug Search Tool

Enter the information as described in each section. The results will depend on how broadly or narrowly you define your categories.

As with all pest control situations, be sure to use a product that fits your needs, never use products indoors that are not approved for indoor use, and ensure that label directions are followed. For example, be sure to consider where you want to treat your bed bug infestation.

Where do you want to use this product?

(Check one or more, if applicable. If you don't check a box, your search will return all types of bed bug products.)

- Mattress
- Whole Home
- Whole Room
- Crack/Surface/Void (e.g. open spaces inside structures such as walls or floors)

You can refine your search by specifying one or more of the following options:

Which product are you interested in?

You can leave blank to get a list of all products which fall under your criteria

Are you interested in a particular active ingredient?

All Ingredients

Bed Bug Pesticide Alert

- ✓ Never use a pesticide indoors that is intended for outdoor use. It is very dangerous and won't solve your bed bug problem.
- ✓ Using the wrong pesticide or using it incorrectly to treat for bed bugs can make you sick, may not solve the problem, and could even make it worse by causing bed bugs to hide where the pesticide won't reach them.
- ✓ Check if the product is effective against bed bugs...if a pest isn't listed on the product label, the pesticide has not been tested on that pest and it may not be effective. Don't use a product or allow a pest control operator to treat your home unless bed bugs are named on the product label.
- ✓ Before using any pesticide product, **READ THE LABEL FIRST**, then follow the directions for use.
- ✓ Keep in mind that any pesticide product without an EPA registration number has not been reviewed by EPA, so it hasn't been determined if or how well it works.

7 Components to a bed bug control plan

- 1. Operational policies
- 2. Tenant Education
- 3. Staff Education
- 4. Inspections
- 5. Complaint Reporting System
- 6. Infestation Response
- 7. Evaluation/Inspections

- Roles and Responsibilities of staff and residents
- Donation Policies
- Move- in Procedures
- Storage Policies
- Maintenance Policies and Procedures
- Response Strategy Policies
- Budget Priority Policies
- Housekeeping Training and Inspections

Tenant Education

- Bed Bug biology and habits
- Bed Bug facts
- Current status of Bed Bugs in the US and local community
- Signs of Bed Bug infestations
- What steps should be taken when Bed Bugs are identified
- Role of housekeeping and clutter management and the spread of Bed Bugs
- How to cooperate with staff and pest control professionals
- What the consequences are for non-cooperation
- Policies regarding donations

Staff Education

- Understanding can reduce fear
- Staff should have the same type of training as residents
- Staff should know how to implement policies and practices
- Staff are essential to creating a cooperative community approach to problem solving
- Staff can be an effective bridge between tenants and extermination professionals

Inspections

- Tenant conducted inspection
- Staff conducted during home visits
- Scheduled pest inspections
- Professional contract inspections
- Complaint triggered inspections

Infestation Response

The Bed Bug Handbook recommends:

- Use only a licensed and insured pest control firm
- Choose a company with substantial experience controlling bed bugs in sites like yours
- Ask for references
- Do not hire a company until they describe their plan of action in detail
- Choose a company affiliated with at least one professional association, such as the state or national pest management association.

Evaluation/Inspections

- Policies and procedures
- Tenant and staff training
- Inspections and complaint reporting
- Extermination methods