

## PURPOSE

This fact sheet, provides guidance on the subject of bed bug infestations within multi-unit properties. Bed Bugs are rapidly resurging within multi-unit properties throughout our nation. It is essential that accurate knowledge of bed bugs, biology, reproduction, their habits, effective treatments and prevention strategies are known to assist in reducing the incidence of bed bug infestations nationwide. This program provides information and references to the IBBRA's best practices regarding the prevention and control of infestations.

## CONTRIBUTING RESURGENCE FACTS

- International travel
- Developing resistance to some commonly used pesticides
- People not recognizing signs of bed bug infestations or bites - [bed bugs are so great at hiding that people tend not to look for them and a percentage of people are not affected by the bite of a bed bug]
- A previous generation of professionals, that had never encountered or seen a bed bug.

## BED BUG IDENTIFICATION AND NATURE

Bed bugs are believed to have evolved as "nest" parasites from inhabiting the roosts of bats and nests of bird's centuries ago. Since bed bugs feed upon warm blood, we as humans are perfect hosts.

It is very important to know what a bed bug looks like compared to similar insects as the treatment options and costs are very different.



Bed bugs, scientifically known as *Cimex lectularius* (Hemiptera: Cimicidae) are small insects that are flattened dorsally.

Adult bed bugs are reddish brown in color, have six legs, and are approximately ¼ inch in length and are easily seen with the naked eye.

## EGGS



A female bed bug may lay a few hundred eggs in her lifetime. Regular feeding and mating (s) are required.

Eggs are fastened to surfaces by a sticky substance are difficult to see. Temperature and condition dependent, eggs can hatch anywhere from 3 to 10 days or longer.

## DEVELOPMENT/LIFECYCLE



The bed bug develops through five immature stages called nymphs or instars, before reaching the adult reproduction stage. During this developmental growth period, they shed their skin (or molt) as they grow to the next stage.



When first hatched, the immature bed bug (nymph) is translucent, pearl whitish in color and become slightly darker as they reach maturity.



Although the young nymph is not always easy to see, after a nymph feeds it will become plump and red because the blood inside shows through their pale skin.



Each stage, from nymph to adult, has to take at least one blood meal in order to continue through the next successive stage to adult bed bug.

## SLEEPING AND HIDING HABITS

Nymphs take blood meal (s), digestion occurs, time passes and the bed bug grows and must molt or shed its skin. This cycle continues through all five immature nymph stages.

Because bed bugs, like all insects, have their skeleton on the outside of their body (exoskeleton), they have to shed this skin in order to grow larger.

After molting, its translucent, soft-body, is exposed and within a couple of hours, the cuticle hardens and gradually darkens.

The fifth instar nymph matures into either an adult female or male. The adult female requires a blood meal to maintain live sperm and for egg production; the male needs blood meals for sperm production.

Mating occurs through a process called Traumatic Insemination; eggs are laid, and glued in place.

Large populations of bed bugs take time to develop, but if a few adults go unnoticed, you could well have thousands after 3 or 4 months!

Bed bugs have the ability to persist and survive for months depending on regular access to blood meals and favorable temperatures.

As their name implies, bed bugs are commonly associated with areas where we sleep but may easily spread to adjacent rooms. Bed bugs find us through our warm environments and the CO<sub>2</sub> expelled from our breath. Like vampires in the night, these insects normally lay dormant during daylight hours in small cracks and crevices and come out at night to feed on blood; but will change their habit according to their hosts work hours and lifestyle. Peak activity usually occurs from midnight to 7:00 A.M. Bed bugs only stay long enough to feed before moving away to hide.

- Bed bugs cannot jump or fly
- Bed bugs move via hitchhiking in clothing, backpacks, suitcases, mattresses, or other furniture and items.
- They are normally found in the seams of mattresses, bed frames, headboards, and box springs but as infestations grow, can disperse outside of bedding areas in chair cushions, sofas, behind electrical outlets, cracks and crevices around baseboards, behind wallpaper or picture frames and in or under any clutter or objects near a bed or lounging area.
- Bed bugs will move great distances to obtain a blood meal.
- During moderate and high infestations, you will find all telltale signs including a sweet musty smell.
- Being unique in their hiding ability and that some people sustain no adverse reaction to the bites, they can go unnoticed for a long time or until a serious infestation occurs. Once settled in, bed bugs do not like to be disturbed, so low to moderate infestations will be found in areas less likely to be disturbed.
- Instinctively, they will seek shelter in dark cracks and crevices when disturbed.
- They love rough materials, unfinished wood, paper, cloth and dark areas hidden away in cracks and crevices.
- Sanitation has nothing to do with whether you get them or not. Bed bugs do not care if it is clean or dirty. They prefer constant temperatures (i.e. paper, cloth) and do not like drafty areas where there is air movement and will move from those areas.

## BLOODMEALS

Depending on their feeding status, bed bugs look very different.



An unfed bed bug looks more like a flat disk but when after taking a blood meal, they increase in size to approximately 3 to 4 times that of their original size.



Fully fed, the bed bug takes on the shape of a torpedo with an elongated trunk bright in color. As digestion progresses the bed bug flattens out until the next blood meal.

## EVALUATE WHAT YOU ARE UP AGAINST

Multi-family home control is much more difficult than in single-family homes because bed bugs frequently travel between units, either by direct human transport or through voids in the walls. There are additional costs and complexities associated with coordinating and encouraging participation from multiple residents. This means battling bed bugs is remarkably different from other bugs in cost and treatment.

Bed bugs are easier to eliminate when found from the "introduction to discovery" of them. A regular assessment and inspection routine will help you to find signs of bed bugs in the earliest of stages. It is important that you develop a regular inspection where each time you clean your home and change your sheets, you search for signs.

## PHYSICAL SIGNS OF BED BUGS

### BITES

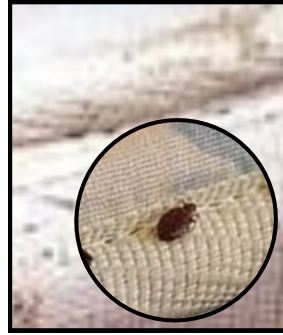


For most people, the first sign of a bed bug problem may be waking up with "unidentified bites". They will bite any exposed area of the body, such as the face, neck, arms, and hands. The victim does not normally feel the act of a bed bug bite. When bed bugs feed, they inject an anti-coagulant and anesthetic from their saliva.

The skin lesion produced by the bite of a bed bug can resemble those caused by many other kinds of blood feeding insects, such as mosquitoes and fleas. Therefore bed bug bites, are rarely identified by the appearance of the bites alone and the culprit must be found for positive identification.

Some people do not react to bed bug bites and others can develop an allergic reaction. This reaction usually results in small, flat or raised bumps, red swollen and itchy skin. If scratched, the bite areas may become infected. In rare cases, some may retain serious rashes or even blisters. Two people sharing the same bed can be affected differently. They can cause sleeplessness, stress and mental anguish. They are not known to cause or spread disease.

## LIVE BED BUGS



Look for live bed bugs in any stage of development. Because of the bed bugs amazing ability to hide, you may not always find a live bed bug. As you do your inspection routine, you will want to be looking for these other signs as well.

## FECAL STAINS [POOP]



Dark dropping or stains. The larger the infestation, the greater amount of these is found. These appear to be minute "ink dots", (like from a black marker pen), can be found just about anywhere and are often mistaken for

## MOLTED BED BUG SKINS [CASTINGS]



These are when the bed bug grows out of its skin and leaves the old one behind. They are normally a paper-thin opaque duplication of the bed bug. These can be mistaken for "crumbs" of food if you eat in bed. Depending on how long

you have had an infestation, you may find different "sizes" as each stage of growth to maturity is a little larger than the last.

## BLOOD SPOTS

Outside of bite marks, people may find blood spots. These spots appear as rusty spots on bedclothes, sheets, furniture and surrounding walls



## PECULIAR ODOR

These odors are usually associated with higher numbers of bed bugs and longer infestations; if you reside in the room on a regular basis you may be "nose blind" to the smell.

## BED BUG PREVENTION

- Carefully inspect all clothing and baggage when you have returned from outings or traveling. Keep all clothing and belongings in sealed plastic bags until they are treated in a hot dryer. Place items in the dryer [loosely packed] on the hottest setting for at least 35-45 minutes. [It is not always necessary to wash clean items but a long tumble in the dryer is mandatory]
- Do not acquire used furniture and mattresses from secondhand stores or streets - these may be infested.
- Change sheets weekly and check for signs
- Vacuum often and check for signs
- Maintain a clutter free environment , especially the bedrooms where bed bugs can find added places to hide.
- Keep beds clear above and below. Do not store items under beds and do not pile coats or clothing on beds.
- Use solid, light-colored sheets - these make early detection of bed bugs easier.
- Check for signs of bed bugs regularly and report immediately to management if you find any.
- Optional, but protects your mattresses – mattress encasements

## WHAT TO DO IF YOU HAVE BED BUGS

In the event that you experience bites, find a live bed bug, or see possible signs of bed bugs, fill out your **BED BUG NOTIFICATION NOTICE** and return it to management as soon as possible.

Even if you are “unsure” it is bed bugs or a sign of them, it is better to be safe than sorry. The sooner you do this the faster the issue can be resolved.

If you find live bed bug (s), (place bug in a sealed bag or container)

Management will then send a bed bug professional to do an inspection of your unit and surrounding units.

- Make your unit available for inspection
- Do not move items from one room to another
- Do not sleep in another room – this will cause bed bugs to move right along with you and possibly spread them to other rooms.

## IMPORTANT!

**ANY ATTEMPT TO DO YOUR OWN BED BUG CONTROL IS IN DIRECT VIOLATION OF OUR POLICIES AND PROCEDURES AND YOU WILL BE HELD RESPONSIBLE FOR NON-COMPLIANCE, AND CAN BE EVICTED.**

### WHY YOU NEED TO CONTACT MANAGEMENT FOR HELP

- Common household products generally will not kill bed bugs in their hiding places and can cause them to spread and infest other parts of the complex. They may cause bed bugs to go deeper into walls and structures of the building.
- “Bug bombs” fill only unobstructed open air spaces and do not reach into the tiny cracks and crevices or into clutter where bed bugs can hide and can also cause the spread of bed bugs and cause fires.
- Insect repellents sprayed on people or mattresses will not kill the bed bugs or stop them from biting. Repeated use of these products in this way can pose health threats to you and your family.
- Any insecticides that are most effective are those used by trained and licensed professionals and may require specialized equipment to apply. These are not readily available as household products and require state certification to purchase and use safely.

**Thank you for taking the time to read this important information regarding our policy and procedures on bed bugs if found in your unit.**

**DO NOT THROW INFESTED MATTRESSES, FURNITURE OR OTHER ITEMS INTO THE DUMPSTER WITHOUT FIRST WRAPPING AND SEALING AND IDENTIFYING IT “BED BUGS”**



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