

## BED BUG FACT SHEET

**Bed Bugs** are rapidly resurging and capturing the attention of many countries throughout the world. It is essential that accurate knowledge of bed bugs, their habits, biology, reproduction, effective treatments and prevention strategies will assist in reducing the incidence of bed bug infestations worldwide.

**There are several factors that accompany the resurgence of bed bugs in our modern day society that have included:**

- 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.
- Lack of society education

**EDUCATE – BED BUG IDENTIFICATION AND NATURE - SINCE PEOPLE TEND TO MISTAKE OTHER BUGS FOR BED BUGS, PROPER IDENTIFICATION IS IMPORTANT.**



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



Adult bed bugs are reddish brown in color, have 6 legs and are approximately ¼ inch in length. The adults can easily be seen with the naked eye.



**EGGS:** A female bed bug can lay a few hundred eggs in her lifetime of many months to around a year, but these are not deposited at one time and regular feeding and mating are required. These eggs are attached to surfaces by a sticky substance and can be difficult to see. Depending on temperature and conditions, these eggs can hatch anywhere from three [3] to ten [10] days or longer. 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 isn’t always easy to see, after a nymph feeds it will become plump and red because the blood inside shows through their

pale skin.



**DEVELOPMENT/LIFECYCLE:** The bed bug develops through five immature stages called nymphs or instars, before reaching the adult reproduction stage. The time for development from first nymph to adult varies according to temperature, blood meals and conditions. During this developmental growth period, they shed their skin (or molt) as they grow to the next stage. This development process from egg to adult can take place in approximately 24 to 36 days (this is temperature dependent, as warmer temperatures speed up the process).



Each stage, from 1st instar nymph to adult, has to take at least one blood meal in order to continue through the next successive stage to the adult bed bug. [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 5 immature nymph stages.

Because bed bugs, like all insects, have their skeleton on the outside of their body (exoskeleton) they have to shed their exoskeleton in order to grow larger. This shedding of the exoskeleton is called *Ecdysis* or molting. After molting its translucent, soft-body is exposed and within a couple of hours, the cuticle hardens and darkens. A bed bug in any stage must take a blood meal to molt into the next stage successfully.

The 5th instar nymph matures and is either an adult female or male. The adult female needs a blood meal for egg production and to keep the sperm alive that it receives from the male; the male needs blood meals for sperm production. Mating occurs and eggs are laid and glued in place by the female bed bug.

Large populations of bed bugs take time to develop, but if a few adults are not detected early, you could well have thousands after 3 or 4 months! In most bed bug literature you will find that adult bed bugs have been reported to have the remarkable ability to persist and survive from 4 months to 2 years depending on regular access to blood meals and favorable temperatures.



**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 approx. 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 darkens in color and flattens out until the next blood meal.

**HEALTH IMPLICATIONS:** 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 act of biting is usually not felt. When bed bugs feed, they inject an anti-coagulant and anesthetic from their saliva. They are not known to cause or spread disease but they can cause

sleeplessness, stress and mental anguish. 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 can become infected. In rare cases some may retain serious rashes or even blisters. Even two people sharing the same bed can be affected differently.

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, can rarely be identified by the appearance of the bites alone and the culprit must be found to be positively bed bugs.

**SLEEPING AND HIDING HABITS:** As their name implies, bed bugs are commonly associated with areas where we sleep but may spread to adjacent rooms. Bed bugs are drawn to humans by the CO<sub>2</sub> we expel while breathing and warmth. 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 usually move via hitchhiking and often hide within 15 feet of bedding areas but can move more than 100 feet to obtain a blood meal.
- Bed bugs cannot jump or fly, so they infest homes by being transported in clothing, backpacks, suitcases, mattresses, or other furniture and items.
- Bed bugs are sloppy housekeepers leaving telltale signs where ever they are present and where ever they go. They sometimes congregate in colonies, excrete liquid fecal matter (old blood meal) and molt where ever they please. During moderate and high infestations you will find all of these telltale signs including a sweet musty smell.
- Bed bugs can live in the seams of mattresses, bed frames, headboards, and box springs, but they are not just in beds. They can be in chair cushions, sofas, behind electrical outlets, cracks and crevices around baseboards, behind wall paper or picture frames and in or under any clutter or objects near a bed or lounging area.
- 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 are found in areas less likely to be disturbed. Instinctively, they will seek shelter in dark cracks and crevices when they are disturbed.
- Sanitation has nothing to do with whether you get them or not. Bed bugs don't care if it's 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. They love rough materials, unfinished wood, paper, cloth and dark areas hidden away in cracks and crevices. It is not uncommon to find a lone isolated bed bug in a certain area.

## **Cluttered areas have significant impact on how efficiently they are eliminated**

### **EVALUATE - SIGNS OF BED BUGS:**

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 than other bugs in cost and treatment.

Bed bugs are easier to eliminate when found from the introduction of them to discovery of them. A regular assessment and inspection routine of your unit will help you to find signs of bed bugs in the earliest of stages. People sometimes go months without realizing they have bed bugs because they don't react to bites. 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 THAT YOU MAY HAVE 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]



This sign of bed bugs is fecal (poop) dropping or stains. The larger the infestation, the greater amount of these will be found. These stains appear to be minute "ink dots", (like from a black marker pen), can be found just about anywhere and are often mistaken for mold. Some materials are "impervious to moisture" and the dropping may "bead up" on the surface.

### 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've 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 may be recognized as rusty spots on bedclothes, sheets, furniture and surrounding walls.

### PECULIAR ODOR

The next sign is a peculiar "odor" that can be from defecated blood and oxidized iron in blood, a sort of rusty smell. There are actually many bed bug infestation odors (and have been said to be like coriander, cilantro, citronella, and/or musty raspberries). Some of the odors are usually associated with higher numbers of bed bugs and longer infestations, and like any of the normal human smells and scents, if you reside in the room on a regular basis you may be "use to" the smell.

If you find ANY of these signs, or suspect bed bugs, call management right away (place bug in a zip lock bag and bring to the front desk).

## **DO NOT ATTEMPT TO TREAT BED BUGS YOURSELF!**

### **BED BUG PREVENTION TIPS**

- Carefully inspect all clothing and baggage when you have returned from traveling. Place clothing and belongings in sealed plastic bags until they can be run 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]
- Avoid acquiring used furniture and mattresses from secondhand stores - these may be infested.
- Remove clutter from the home, 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 helps keep bed bugs from entering your mattresses – mattress encasements

### **INITIATE - CONTROLLING BED BUGS SAFELY – WHAT TO DO IN THE EVENT OF OR SUSPECT OF BEDBUGS**

In the event that you are getting bit, find a bed bug, or see possible signs of bed bug, fill out **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.

Management will then send their 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.

### **FOR SAFE AND EFFECTIVE CONTROL**



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

### **USING PESTICIDES ON BED BUGS**

If bed bugs have been found in your apartment, resist the urge to use household bug sprays or “bombs.” *Bed bugs are resistant to most commonly used pesticides.* Using bug bombs and sprays on mattresses and in bedrooms will only increase your exposure to more toxins, and not control bed bugs. Since pesticides are poisons, they should be used sparingly and carefully by a professional only. Any chemicals used will be applied by a pest management company who is experienced with bed bugs and chemicals.

## **USING PRODUCTS LABELED “NON-TOXIC” FROM LOCAL HARDWARE STORES**

Because of the recent resurgence of bed bugs, many companies are placing “non-toxic”, safe, do-it-yourself type products on the market. These products [may] work as direct contacts kill only. If you can see a bed bug, you can kill a bed bug - the problem with bed bugs is – if you can see a bed bug – you can kill it. It is those that are “hidden away” that are not reachable with direct contact kill products.

The odors from these can cause bed bugs to go deeper into furniture and other hiding places. Use extreme caution when addressing bed bugs so that you don’t drive them deeper into their hiding places.

### **[IMPORTANT] 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 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.
- 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.
- The 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.
- Experienced companies know where to look for bed bugs, are schooled in proper techniques, and have an assortment of management tools at their disposal.

**THANK YOU FOR TAKING THE TIME TO READ THIS IMPORTANT INFORMATION REGARDING OUR POLICY ON BED BUGS IF FOUND IN YOUR UNIT. DO NOT ADDRESS A BED BUG PROBLEM YOURSELF, CALL MANAGEMENT RIGHT AWAY.**

Thank you for choosing us as your bed bug solution professional.