

# B.I.T.E. Back!

INFORMATION YOU CAN USE TO STOP BED BUGS IN THEIR TRACKS

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## Getting the Inside Scoop: Surveys on Bed Bugs

Earlier this year, MPAC developed and distributed our own online survey to collect data on bed bug infestation and violations. Our results indicate a disconnect between landlord/building managers and tenants when it comes to the perception of compliance with the Chicago bed bug ordinance. Of those surveyed, 88% of tenants believe landlords had not fully complied with the ordinance while 67% of landlords indicated non-compliance by tenants.

At our follow-up round table event, testimonies from building managers revealed that some landlords believe the Department of Buildings does not enforce the ordinance evenly and that tenant violations reported to the city are not followed up with an inspection. These collected efforts at evaluating and tracking the ordinance reveal a mixed public opinion of the ordinance itself, as well as substantial confusion surrounding its rules and applications.

In an effort to further assess the ordinance MPAC has developed [a survey for client service providers](#) - folks that serve the greater Chicago community on housing, medical and many other social service needs. The survey is designed to garner a broader view of bed bug issues in Chicago that goes beyond the individual experience. We hope to report on the results of that survey in our next BITE Back!

Currently, the University of Arizona is conducting their own study on bed bug infestations. Please consider helping to further our knowledge of bed bugs by [taking this 10 minute survey](#).

## The Cutting Edge: New Treatment Methods in Development

Stay up to date on the latest trends in treatment! These new techniques are currently being developed and tested for use on bed bug infestations:

### PHEROMONE-LACED TRAPS

A series of trials at Simon Fraser University have found bed bug traps to be effective at luring and trapping bed bugs. The 2015 study addresses one of the biggest problems in bed bug control—the bugs' ability to hide. New traps, expected to be commercially available later this year, will use pheromones to trap bed bugs in one place. The traps present the additional benefit of helping landlords, tenants, and pest control professionals detect and monitor infestations in their early stages, when they are easiest to treat.

### TREATED MATTRESS LINERS

Researchers at [Ohio State University](#) are studying a treated mattress liner that can stop even the most resistant bed bug populations from biting, feeding, and laying eggs. Researchers want to know if the product lives up to its promise of long-term prevention and control of bed bugs. Impregnated with pyrethrin pesticide, the mattress cover supposedly prevents bed bugs from feeding or laying eggs. The idea behind this product is that while the liner won't kill the bugs outright, a bed bug that can't feed or reproduce is significantly easier to manage. So far the lab results support these claims.



### CRYONITE

Heat has long been the king of bed bug treatment, but cold has recently come into use to freeze bed bugs and other pest insects in all stages of their life cycle. Cryonite systems apply super-cold carbon dioxide "snow" directly to the infested area with an applicator tool to freeze bed bugs on contact with temperatures below negative 100°F. This eliminates all stages of the bed bug life cycle—adults, juveniles, larvae, and eggs. Some advantages of Cryonite systems are that they are non-toxic, dry, can be used in or near electric devices, involve no chemical exposure, and leave little to no environmental footprint.

## Bed Bug Webinars

Our first bed bug webinar series was a great success! Thanks to the over 200 participant, MPAC is looking to remount this series later this year. Like us on Facebook or follow us on Twitter(@MWToxicFree) to get updates and information.

## Hiring A Pest Control Operator: Questions to Ask

### *Do they offer an Integrated Pest Management (IPM) option?*

IPM should include inspection, monitoring, guidance on prevention policies & procedures, and treatment strategies that go beyond pesticides such as monitoring and least toxic treatment methods such as heat, vacuuming, or 25 registered pesticides.

### *Do they offer a building assessment/inspection?*

Assessments are necessary to help determine where and when you got the bed bugs to avoid future infestation.

### *What type of training does their staff receive?*

Pest control technicians are not required to have a pest control license but they must work with someone that does and be trained before working alone. Ask how many hours of training on IPM techniques for bedbugs have been received.

### *Do they perform a pre-treatment inspection?*

To treat for bed bugs, the technician must know where they are located making pre-treatment inspection a must.

### *Do they offer steam cleaning or other types of heat treatments?*

Applying heat is one of the best ways to kill bed bugs. Steam cleaning, for example, is a safe, environmentally friendly way to kill bed bugs and their eggs. Using heat correctly can minimize the need for pesticides.

### *Do they provide service reports of work performed and written recommendations of further actions to take to maintain a bed-bug-free facility?*

Service reports and IPM recommendations will help you prevent bed bug problems in the future. You and your pest control operator must work as a team for effective control.

### *Do they provide references?*

A reputable bed bug treatment company will give you references of previously treated facilities. Get those numbers and make sure to call.

## Research Roundup

MPAC tries to keep track of new changes and developments in bed bug control. This helps us better inform the public using the most up to date information possible. Recently, a number of interesting research results concerning bed bugs have been published. Read on for the latest on diseases, control techniques, and the biology of bed bugs.

### PATHOGEN PATHWAYS

The pathogen that causes trench fever and other human diseases (the bacteria *B. quintana*) has recently been found in bedbugs. Bedbugs have long been suspected to transmit diseases, although the particulars of transmission are still unclear. One study reported that bed bugs that were fed human blood infected with *B. quintana* were carriers for over 2 weeks (Leulmi et al 2015). Infected bed bugs can also pass the pathogen to their offspring. No study has shown that bed bugs have transmitted the bacteria to humans, but the 2015 study highlights the need to continue monitoring bed bugs for the transmission of human pathogens.

### IT WORKS! IPM ON A COMMUNITY LEVEL

Low income apartment communities in the U.S. suffer from disproportionately large bed bug infestations due to lack of effective monitoring and treatment. Several previous studies have tested Integrated Pest Management (IPM) in isolated apartments. However, a [2015 study at Rutgers University](#) is the first to evaluate the effectiveness of IPM on a community-wide scale (Cooper et al 2015). The study found that implementing IPM in an affordable housing complex can successfully reduce infestation rates to very low levels. The program resulted in a 98% reduction in bed bug counts among treated apartments. Reducing pesticide use and exposure are key goals of any IPM program; this study relied on mostly non-chemical measures resulting in very low pesticide usage.

### THE LAWS OF (BED BUG) ATTRACTION

Rutgers University researchers may give insight into developing more effective bedbug trapping devices and designing better treatment strategies ([Singh et al. 2015](#)). The study found that bed bugs show a strong preference for red or black trapping devices or hiding places. Bed bugs are also strongly attracted to vertical objects and prefer coarse surfaces (sensitive to even subtle differences). Color, texture, and the presence of vertical objects are three variables that can be manipulated to design better treatment strategies in the future.

