



BED BUG PROTOCOL

EDUCATION



PREVENTION



CONTROL

Introduction

Bed bug infestations have become an epidemic in North America. It has been identified by the Toronto Public Health as a large and growing problem in Toronto's urban areas. The problem has been particularly prevalent in residential sites, community housing units, apartments, and shelters across the city, with several Cota sites being no exception. Reoccurring bed bug infestations experienced by staff and clients have highlighted the need for concrete and consistent guidelines for treating and preventing bed bugs across all Cota locations.

As an innovative community organization, Cota is committed to promoting and maintaining the health and safety of its clients and staff. As part of this ongoing commitment, the organization has developed setting-specific protocol guidelines and procedures to help staff respond to the problem in a timely and efficient manner, while also providing assistance and support to clients who are dealing with bed bug infestations in their homes. Protocols were developed for three specific settings: residential Cota sites, private apartments and homes which case managers and staff visit (i.e. home visiting by case managers and staff) and residential sites owned and managed by an external Landlord. The guidelines are based on the Integrated Pest Management (IPM) approach that combines a variety of techniques and products that pose the least risk to human health and the environment.

The protocols are reviewed by the Facilities Coordinator at least annually during the 1st quarter and do their best to encapsulate the most relevant and up-to-date information from such sources as Toronto Public Health and Toronto Community Housing who are actively dealing with bed bug infestations in their respective jurisdictions. However, it is inevitable that new information about the effectiveness of existing treatments and suggestions for new ones will continue to come into our knowledge. Regardless of the type of treatment used, eliminating the ideal conditions for bed bug to thrive is the focus at Cota.

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1. How to Identify Bed Bugs

1.1. What Are Bed Bugs?

Bed bugs are small insects that feed on human and animal blood and can be found in homes, most commonly in, or very close to beds including the frame and box spring, headboard, fabric furniture. Bed bugs hide during the day and venture out at night to look for a blood meal.

1.2. How Do They Get In?

- Bed bugs can be brought in on used furniture, mattresses and clothing. Bed bugs have been known to travel into dwellings from discarded furnishings left as trash.
- When people travel, they can bring back bed bugs in luggage from hotels and hostels.
- Bed bugs can also spread from unit to unit from above, below and side to side.

1.3. Identifying Features

Description

- Adult bed bugs are oval, wingless, *reddish-brown*, and about quarter of an inch (4-7 millimeters) long, which is about the size of an apple seed. Males have pointed abdomens, while the females have rounded abdomens.
- Before feeding they are flat, after the feeding they turn *dark red* and become swollen.
- Eggs are *white*, 1mm long, laid in batches of 10-50 on rough surfaces such as wood or paper, and are covered with a glue-like substance. The egg shells often remain on the surface after the hatching.



Habitat

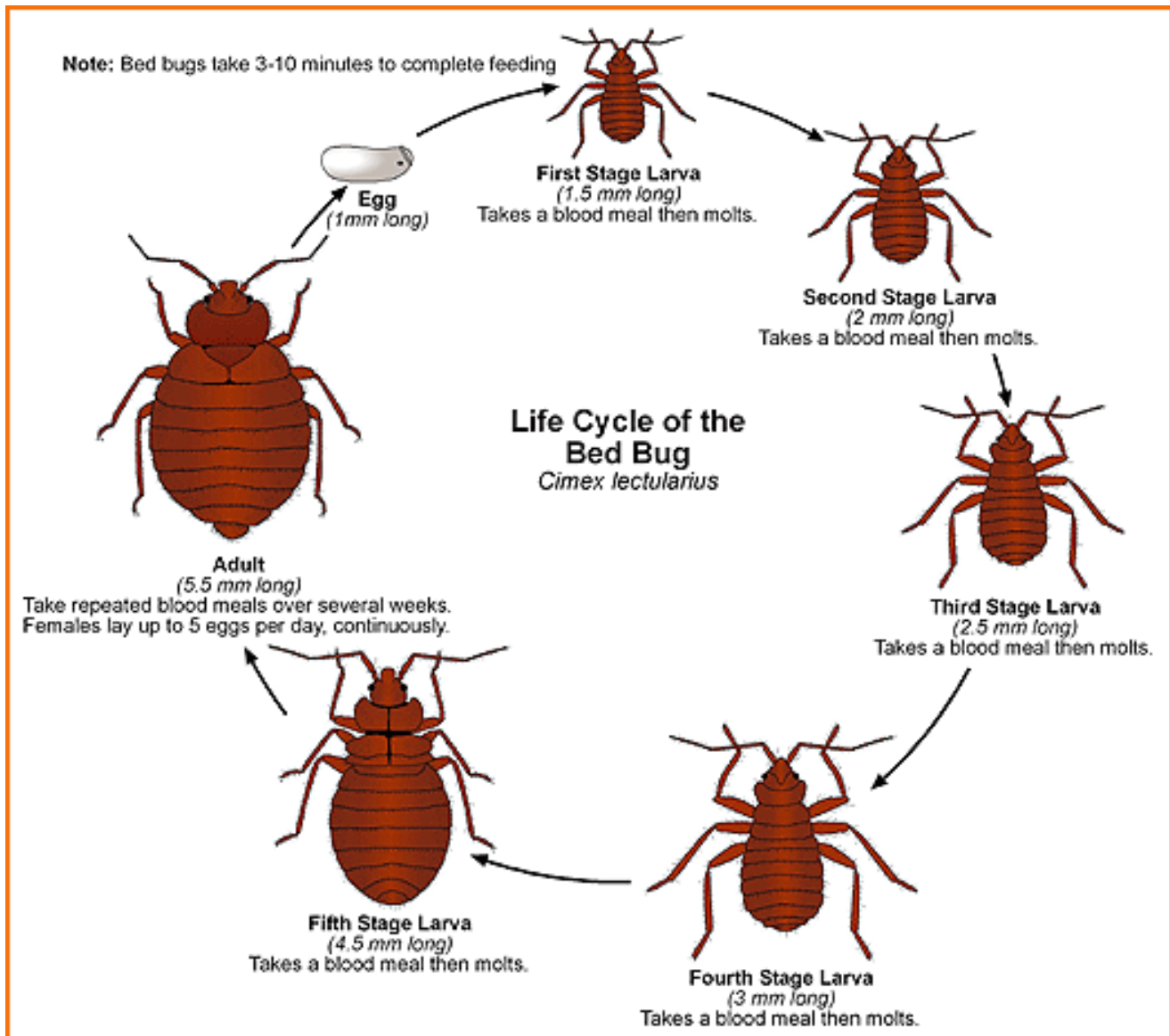
- They generally feed at night and hide in crevices during the day. Dark and warm places are an ideal environment for bed bugs.
- Bed bugs prefer to hide within 5 to 10 feet of their food source.

Food Source

- Bed bugs feed on the blood of mammals and birds. Although they prefer humans, they will feed on other hosts such as pets and rodents.
- They are attracted by body heat and exhaled carbon dioxide
- Bed bugs typically bite at night, all over the human body, especially around the face, neck, upper torso, arms and hands.

Life Cycle

- Bed bugs who feed regularly have a lifespan of approx 10-12 months, while those without adequate feeding can live dormant for a little more than a year.
- Female bed bugs deposit from 3 to 8 eggs at a time. A total of 300-500 eggs can be produced by a single female bed bug.
- Their eggs are 1/25" long and curved. They are often deposited in clusters and attached to cracks, crevices or rough surfaces near adult harborages with a sticky epoxy-like substance.
- Eggs typically hatch in a week to 12 days and the nymph must feed within 2-3 days or they will die. The freshly hatched nymph is beige-colored turning a reddish color after getting a blood meal. There are 5 nymphal stages for bed bugs to reach maturity, a blood meal is required to advance through each stage and the entire progression usually takes about 32-48 days.



1.4. Signs Of Infestation

- Live bed bugs within mattress seams, on bed frame joints, on the back of headboards.
- Blood spots on sheets and bedding (appears like rust).
- Bed bug eggs, egg shells, and cast of skin on beds, bedding and mattress.
- Clusters of small but very itchy red bumps on human skin.
- Possibly sweet, musty odour present in the room.

1.5. Common Hiding Places

- Seams, creases and folds of mattress and box spring.
- Cracks in bed frame and head board.
- Between cushions of couches and chairs.
- Under area rugs and the edges of carpets.
- In drawers and closets.
- Behind electrical plates and under loose wallpaper, paintings and posters.
- In cracks in walls, floors and plaster.



Image: www.arrowexterminating.com

1.6. Health Risks

- Bed bugs are **not known** to carry or transmit infectious diseases as they lack the necessary protein to do so.
- Some people may have an allergic reaction to the bite, ranging from minor to moderate and serious skin irritation and inflammation of the bitten area. Others do not exhibit any sign of being bitten.
- Although not deemed a 'health risk' the psychological aspects of dealing with bed bugs can take its toll on a person battling an infestation through anxiety, perceived social stigma, feeling isolated and possible loss of sleep.

2. Standard Guidelines for Bed Bug Treatment

2.1. Integrated Pest Management (IPM) Approach To Bed Bugs

Cota uses an Integrated Pest Management (IPM) approach to treating and preventing bed bug infestations at its sites. It is an approach to planning and managing that includes a variety of methods for reducing pest populations to acceptable levels. Based on this model, the most effective treatment and prevention of bed bugs infestation can be achieved through integration of multiple tactics, ongoing evaluation and management of new information, and ability to make adjustments when the desired results are not achieved.

The principles of Integrated Pest Management approach to treating bed bug infestations:

- a) Educating for staff and residents.
- b) Prevention strategies such as early detection monitoring devices (glue traps, bed bug moats).
- c) Using pesticides only on confirmed bed bug activity.
- d) Ongoing vigilance and cooperation of staff and residents.

2.2. Common Bed Bug Treatments

- a) Thorough cleaning: de-cluttering, vacuuming, properly applied steam-cleaning, and washing and drying of bedding and clothes in hot water and a hot dryer.
- b) Fumigation performed by a licensed Pest Management Professional (**PMP**).
 - I. Residual insecticide spray (**Pyrethrin**)
 - II. Dusting with food-grade Diatomaceous Earth or Drione.
 - III. Thermal Heat - targeted steam, large scale or portable heat chamber (ZAPBUG Oven)
- c) A combination of the above treatments is usually recommended for optimal results.

2.3. General Guidelines For Pre-Treating Infested Environments

1. Every site should have the following items ready for immediate use:
 - a) Bed bug response toolkit containing: Kleen-Green, (pre-mixed & concentrate glue traps, flashlight, magnifying glass, PPE, black garbage bags & clear garbage bags, grey duck-tape for sealing and black makers for labeling bags.
 - b) Clean clothes and slippers in variety of sizes for residents while their clothes are being treated.
2. It is highly recommended to use garbage bags in two different colours. For example, clear bags for storing clean items, and black bags for infected or at-risk items in need of treatment. The bags should be labeled appropriately.
3. **Infested items** that are being discarded should be double-bagged in BLACK garbage bags, sealed tightly and labeled "BED BUGS", then immediately taken into the garbage bin outside. Infested furniture should be broken down and /or spray painted "BED BUGS", so that it is re-introduced to the site or picked up and used by anyone else.
4. **Washable items** (bedding, blankets, clothes, towels, some curtains) must be machine-washed in HOT water and dried in a HOT dryer for a minimum of 20 minutes.
5. It is highly recommended that each facility designates a clean and secure area for storing cleaned items, and another area for storing bagged items that are being treated.

2.4 Thermal Heat Treatment (Extreme Infestations/Un-washables)

1. In extreme infestations, thermal heating is an option but is very expensive.
2. If heating only a unit or room, the site is sealed off and ideally caulked before treatment commences to reduce the chance of migration of bed bugs to adjacent units. The risk of migration is minimal during thermal heat treatments as bed bugs are initially drawn towards the rapidly rising heat source then become disoriented and lethargic before succumbing to the lethal heat.
3. Thermal heating equipment is strategically set up in locations where the heat will be most effectively delivered to the site.
4. PMP techs are very active during the thermal heat treatment. Think of the room or site as being in a giant hot tumble dryer. The techs are constantly entering the treated site and moving items around to ensure the lethal heat is passing through and penetrating all areas of the site.
5. As the temperature reaches 60°C (125°F) fans are activated in order to deliver lethal heat to bed bug harborage areas.
6. Once temp reaches 58°C (135°F) it is maintained for at least 4 hours which in turn kills any live bed bugs including eggs.
7. After the treatment, dusting with food grade diatomaceous earth (DE) or a permethrin based dust (Drione) in and behind outlet and switch plate covers is applied. A small amount of residual spray may be applied in certain circumstances to cracks and crevices for long term protection.
8. The PMP will provide a detailed report of the bed bug thermal heat treatment.
9. Approximately 14 to 21 days following the thermal treatment, a canine inspection team should tour the site to ensure the infestation has been knocked down and the cycle has been broken.

2.4.1. Thermal Heat Treatment – Pros & Cons

Pros:

- Cota has several portable heat chambers for un-washables as large as a 50' TV
- Thermal Heat, properly prepared for (*see page 21-22 for detailed prep*) and applied is a **sure kill of all cycles of bed bug life, including eggs.**
- Thermal Heat Treatments are completely non-toxic.
- Large scale Thermal Heat applied by PMP's have equipment that is powered by their own generators, saving the cost of electricity
- Non-washables can be easily treated without having to resort to using naphthalene (moth balls/flakes) which is toxic.

Cons:

- Thermal Heat Treatments of entire units are very expensive.
- A lot of planning and prep work goes into a thermal heat treatment – see the prep sheet on page 21/22.
- Units or sites with extreme clutter pose a challenge and place the successful outcome of thermal treatment in jeopardy as there is NO GUARANTEE lethal heat will penetrate the harborages of bed bugs seeking refuge in excessive clutter.



2.5. Safety

2.5.1. How to Protect Yourself in Infested Environments

- When entering bed bug infested environments, DO NOT sit on any furnishings or brush up against chairs, beds, drapes or excessive clutter and objects
- Spray your shoes with Kleen-Green solution when exiting infected and at-risk premises.
- Be vigilant and check units and your surroundings daily.
- Prevent clean items from coming in contact with infestation by storing them in CLEAR garbage bags, double-bagged, sealed and labeled.
- Upon returning home – wash clothes worn at the time of contact with infestation in HOT water and dry in a HOT dryer for a minimum of 20 minutes.

2.5.2. Safe Use of Insecticides

- Always follow the instructions from the Pest Management Professional (PMP).
- Consult the PMP over the proper application of food grade diatomaceous earth or Drione, as these residual pesticides, when inhaled, can irritate mucus membranes if inhaled.
- Consult SDS sheets and WHMIS (Workplace Hazardous Materials Information System) guidelines when dealing with any materials deemed hazardous in the workplace.
- DO NOT enter a chemically treated unit within 4 hours of the application.

3. Procedures

3.1. Intake: For Move-Ins from Potentially Infested Environment

1. Determine if the client is coming from a bed bug infested environment:

- Inform client that he/she is required to undergo a standard bed bug prevention treatment, as part of the service agreement.
- Inform client that his/her clothes and all washable items will be washed and dried, and non-washable items will be treated for bed bugs and stored for 3-5 days.
- Arrange for a change of clothes and shoes.
- Thermally treat or spray client's shoes, air for 15-30 minutes, and then they can be used again. Other shoes brought with client in a bag should be treated as all non-washable items (see below).
- Wash clothes in HOT water and dry on HOT cycle for a minimum of 20 minutes.

2. Treat client's washable & non-washable items:

Washable

- Double-bag in BLACK bags
- Seal and label
- Take to be washed in HOT water and dry in HOT cycle for minimum 20 minutes
- If cannot wash immediately, seal, label & store in designated area until able to wash and dry

Non-washable

- Use a portable heat chamber to kill bugs and suspected eggs in electronics, books, cd's

3. After washing & drying:

- Double-bag clean items in CLEAR bags, seal, and label accordingly.
- Transport into a clean and secure storage area.
- Discard used bags immediately

4. Other items from infested environment:

- DO NOT accept any furniture, items recovered from curbsides or dumpsters.
- Establish with client what old or unused items can be discarded.
- All discarded items are to be double-bagged in BLACK garbage bags, sealed and **immediately removed** from the building into the garbage outside. Bags with bed bug infested items should be labeled "**BED BUGS**" to prevent others from taking them.

5. Inspect the new room before move-in:

- Mattress and box spring (ensure fitted encasements cover both)
- Bed sheets
- Cracks in the bed frame
- Underneath chairs, rugs and carpet edges
- Behind peeling wallpaper, pictures, posters, etc.
- Ensure caulking has been done to limit harborages and migration between units

6. Inform client of his/her responsibilities:

- Explain procedures for treating bed bugs at your facility to client and clarify any confusion.
- Reassure client that you will be assisting and supporting throughout.
- Provide list of residents' responsibilities. (Page 18).

3.2. Preparation for Treatment - Residents and Staff

- Contact the Facilities Coordinator and/or inform the landlord **AS SOON AS POSSIBLE!**

You Will Need:

- Cota approved non-toxic insecticide (Kleen-Green)
- Heavy duty garbage bags in BLACK, & CLEAR
- Personal Protective Equipment (PPE)
- Duck Tape and markers for sealing and labeling bags
- Access to washers and dryers in the building or sufficient funds for public Laundromat and dry cleaning (for non-washable items)
- Laundry detergent
- Designated areas for storing items to be treated and for clean items.

Treat And Clean Washable & Non-Washable Items:

- Separate washable items (bed sheets, clothes, towels, some curtains) from non-washable items.
- Washable items:** double-bag in BLACK bags, seal, label, and take to be machine-washed.
- Machine-wash all washable items and dry them on HOT cycle for at least 20 minutes.
- Non-washable items:** Heat in one of Cota's portable heat chambers ZAPBUG Oven.

Vacuum:

- Prepare unit for vacuuming – take all small items out, and clear all drawers and closets.
- Vacuum thoroughly with crevice tool (narrow nozzle):
 - Mattress: seams, folds, buttons, sides.
 - Box spring
 - Bed frame
 - Area around the bed
 - Baseboards
 - Cracks in floor and walls
 - Areas where carpet touches wall
 - Inside drawers and closets
 - Around electrical outlets
 - Radiators, heaters
 - Curtains + curtain rods
 - Door frames
 - Television set + remote
 - Radio
 - Computer
 - Clocks
 - Lamps and light fixtures


- When finished vacuuming, remove dirty bag immediately, double-bag, seal, and discard in garbage outside. Label bag as “**BED BUGS**”.

Prepare Unit For Pest Control Treatment (Fumigation):

- Remove ALL items from walls, dressers and tables.
- Remove all garbage and clutter. Items that did not come in contact with infestation (e.g. kitchen and bathroom items) can be stored in garbage bags during the treatment.
- Dispose of mattresses and box springs that are in poor condition.
- If mattress and box spring are being kept, after vacuuming remove them from the bed frame and place them **upright against the wall**.
- Set furniture 1 **foot** from the wall and vacuum behind. Leave like this for fumigation.
- Unplug all electrical appliances: television, radio, lamps, music systems, etc.
- Any pets to be **off premises**, fish to be removed from the treated unit. If cannot remove fish tank, turn filter off and cover tank with moist cloth.
- Staff or landlord** to open smoke and CO alarms and remove batteries for the fumigation.
 - o **NOTE** a Fire Watch will be in effect during the time the smoke alarms are out of service
- Staff** to advise residents to stay out of unit for **4-6 hours** after the fumigation. Exact waiting time to be confirmed by the pest control technician.

During Pest Control Treatment (Fumigation):

- Space will be locked and out-of-use for a period specified by the pest control technician.
- Post notice on door(s) notifying about closure for bed bug treatment and re-opening time.
 - o Sign should also indicate the date and time of treatment and note the chemical used.

<p style="text-align: center;">DO NOT ENTER</p> <p style="text-align: center;"></p> <p>THIS UNIT IS UNDER FUMIGATION WITH _____</p> <p>APPLIED ON: _____</p> <p>RE-OPENING: _____</p>

Residents and staff must stay out of the area while it is being treated by pest control for 4-6 hours, or as instructed by the technician. Anyone pregnant, with respiratory problems, or under the age of 1 must stay out of the area for at least 24 hours. You must follow any specific instructions provided by the pest control technician who is treating your home.

3.3. After Pest Control Treatment – Residents and Staff

Your pest control professional should provide you with instructions specific to your situation and unit. The procedures below are offered in the absence of other instructions, or to complement them for more effective results. In the event of any conflict or discrepancy, instructions provided by your pest control technician will supersede the instructions offered in this document.

Immediately After Fumigation

- Open all doors and windows for 15-30 minutes to air out.
- Do not use harsh chemicals on treated areas for at least **2 weeks**.
- Vacuum daily for **2 weeks**, and regularly thereafter (check with technician if ok to vacuum treated areas)
- Steam-clean (recommended):
 - o mattress seams and sides
 - o bed frame and spring box
 - o Areas around infected bed: floor, wall, bed side tables, door frames, radiators, curtains, curtain rods, etc.

** Place the steam nozzle directly onto the surface and is move along at a rate of 30 cm per every 10-15 seconds.*
- Create protective barrier to prevent re-infestation:
 - o **Bed bugs cannot crawl up smooth surfaces!** Place legs of bed in glass or plastic containers (Bed Bug Moat).
 - o DO NOT use bed skirts.
 - o It is recommended to seal/encase the mattress and box spring. **Encasements MUST BE SNUG FITTING!!**
- Apply food grade diatomaceous earth to crevices, corners, baseboards, under radiators, etc., in accordance with the product label and technician's instructions.
- Keep residents out of unit during treatment as needed.

Long-Term Prevention

- DE-CLUTTER TO REDUCE BED BUG HARBORAGES.**
- Encase mattresses and box springs with fitted bed bug proof encasements.
- Keep bed at least 2' from walls and drapes, never use a bed skirt
- Prevent bed bugs from crawling between units by using double sided tape around the door frame with the sticky side up (this will assist in catching any bed bugs trying to get into the unit).
- Place bed legs inside Bed Bug Moats – moats **MUST BE KEPT CLEAN** or they serve no purpose.
- Seal any cracks and crevices in walls, floors and bed frames.
- Eradicate potential hosts such as birds' nests and pigeons, and treat areas with insecticide.
- DO NOT introduce any items from the garbage into the dwelling such as old clothes, newspaper and old furniture. ALL used clothes and washable items MUST BE washed and dried by protocol standards before they are brought into the unit.
- Monitor unit **daily**, especially the mattress, bed frame, headboard and bedding.
- Wash and dry bedding **weekly** by protocol standards.
- Inform and remind residents of their responsibilities. (Page 18).

3.4. Suggested Response and Treatment Timeline

This is a suggested timeline for a site with 10 infected units. Please expect treatment timelines and schedules to vary depending on the extent of the infestation, number of staff available to help, and residents' capacity to perform preparation procedures independently. Ideally, pest control treatment should take place within 48 hours of detection. For detailed explanation of the procedure included in this timeline, refer to pages 9-10.

Day 1-2

- Inform all applicable authorities (staff, managers, landlords, etc).
- Order pest control services.
- De-Clutter. IT IS VIRTUALLY IMPOSSIBLE TO ERADICATE BED BUGS WHEN CLUTTER IS PRESENT.**
- Begin removing infected items from units and separating washable items from non-washable.
- Thermally treat non-washable items in one of Cota's portable heat chambers.
- Begin washing and drying washable items (this may take a few days, depending on the volume). **Start with infected items or items most at risk.** Washable items that are waiting to be washed should be stored in BLACK garbage bags, double-bagged and air tight sealed. Indicate on the label that these are washable items waiting to be washed and dried.
- Arrange for alternative clothes and shoes for residents, as needed.
- Arrange for alternative place to stay until fumigation and post-treatment complete. If not possible – coat infected mattresses with clear plastic cover (or cut-open heavy duty garbage bags), and place bed legs in empty cans or glass containers.

Day 3-4

- Pest control treatment begins (**ideally within 48 hours from the time bed bugs detected!**).
- Begin thorough vacuuming with a bed bug Vacuum (sealed canister).
- Continue to wash and dry bed sheets, clothes and other washable items.
- Continue to heat non-washable items, as needed.
- When waiting period completed, begin follow-up and post-treatment procedures.

Day 5-6

- Continue to wash and dry washable items, and treat non-washable items.

Day 7

- Inspect units treated. (See inspection checklist on page 16-17)
- Follow-up treatment by pest control technician (follow-up timeline and procedures depend on the situation and service agreement).

WEEK 2

- Inspect units daily and vacuum.
- Wash bedding and clothes at least once a week.

WEEK 3

- Inspect units daily and vacuum.

4. Checklists

4.1. Client Intake

- Client informed on bed bug control and prevention procedures in place, as part of client's service agreement.
- Client informed that washable items will be washed and dried, and non-washable items will be treated and stored for 3-5 days.
- Alternative clothes and shoes provided, as needed.
- Shoes client is wearing sprayed, aired for 15-30 minutes, and returned to client.
- Clothes and washable items washed, or on the way to being washed.
- Shoes and non-washable items to be thermally treated.

When Intake Complete:

- Inspect unit before client moves in.
- Brief client on his/her responsibilities and provide copy of responsibilities sheet.

4.2. Unit Ready for Pest Control Treatment Checklist

Site / Building: _____

Unit #: _____

- Mattress, box spring and bed frame vacuumed.
- Entire unit vacuumed (floor, walls, carpet, and furniture).
- Floors, walls and furniture surface are clear.
- Mattress and box spring placed upright against the wall.
- Furniture set 2 feet from the wall.
- Bedding, sheets and clothes washed and dried on hot cycle for 20 minutes.
- Non-washable items thermally treated/labelled.
- Residents advised to stay out of unit for 4-6 hours

Approved by Staff: _____

Date: _____

***GOOD PREPARATION AND THOROUGH FOLLOW-UP IS CRITICAL
AND REDUCES THE NEED FOR ADDITIONAL TREATMENT.***

4.3. Complete Treatment Checklist

What Staff Should Look For Before, During, And After Pest-Control Treatment

Preparation for Pest Control Treatment

1. General clean-up

- Remove all bedding.
- Wash and dry bed sheets and clothes, double bag, seal and label when clean.
- Treat non-washable items with spray and moth balls/flakes, double-bag, tightly seal and label.
- Remove all garbage and clutter from unit.
- Empty all drawers and closets.

2. Vacuuming

- Mattress (especially seams)
- Spring box
- Bed frame
- Behind baseboards
- Dressers, tables and chairs
- Inside drawers and closets
- Seams of sofa beds and couches
- Cracks and crevices in walls and floors
- Carpet and carpet edges
- Pictures and mirrors
- Curtains and curtain rods
- Radiators
- Television set and remote
- Radio

3. Steam treatment (recommended)

- Mattress (seams, buttons, sides)
- Box spring: remove and steam corner padding
- Bed frame
- Baseboard and carpet edges
- Dresser
- Chairs, sofas, tables
- Underside of all furniture
- Curtains (vertical seams and folds) and curtain rods

Pest Control Treatment

4. Dusting with insecticide (Drione)

- Behind baseboards
- Underside of box spring
- Plumbing access hatch
- Electrical boxes, light switches and phone jacks

5. Residual insecticide treatment

- Bed frame (especially in cracks)
- Baseboards and carpet edges
- Underside of box spring
- Furniture (chairs, sofas, tables)
- Curtain track
- Plumbing hatch

6. Follow-up treatments (approx. 2 weeks)

- Prep as before.

C) Follow-Up Inspection After Pest Control Treatment

- Return next working day to inspect rooms and glue boards.
 - No bedbugs found – room is clear.
 - Live bed bugs on glue boards found – retreat room and consult pest control.
 - Return 2 weeks after treatment to re-inspect for nymphs and adult bed bugs.

Please note each unit is unique and may be subject to preparation NOT included in this checklist. It is the responsibility of each resident of each unit to follow any further directions provided by the pest control technician, Cota staff, and the landlord. Residents' units and belongings may be subject to more than one treatment or treatments not included in this document.

(Adapted from: Abell Pest Control and St. Jude 's Community Homes)

4.4 Client Visits – Out in the Community - Checklist

- Bed bug 'booties' (protective shoe covers) OR wear separate shoes for home/shelter visits OR spray your shoes with Kleen Green pre-mix solution before entering the car/office.
- 2 large ZIP-Lock plastic bags
- Bring the bare minimum in with you (coat, agenda, brochures/forms).
- Avoid sitting on or brushing up against fabric or wood based furnishings curtains/drapes.
- No pants with cuffs.
- Extra set of clothes.
- Anything bagged should be put in dryer on HIGH HEAT for at least 20 minutes.

4.5 Client Visits – In the Office - Checklist

- Ask client if he or she has had any known infestations or treatments for any pests including bed bugs.
- If you suspect the client may have bed bugs on their person, call your manager and/or the Facilities Coordinator immediately to arrange an inspection/treatment.

IMPORTANT!

- Quick response is key to stopping bed bugs from becoming a problem at the office.
- Where possible, it is strongly recommended that clients be met in public areas away from the office.
- If you see or suspect a client may have brought bed bugs into the office either on their clothing or inside belongings, ask questions, take note of all areas the client has visited while at the office.
- Use Pre-Mixed Kleen Green and thoroughly mist areas client visited.
- Call the Facilities Coordinator and report



Note: Clients should not be denied admission to a shelter on the basis of suspected or confirmed bed bugs.



Note: Any facility that provides shelter or short term accommodation should have a contract in place with a licensed pest-control professional.

(Adapted from: Keys to Recovery ACT Team, At Home/Chez Soi Bed Bug Protocols)

5. Instructions for Residents

IF PREPARATION IS NOT COMPLETE, A REPUTABLE PEST MANAGEMENT PROFESSIONAL WILL CANCEL THE TREATMENT AS IT WILL BE INEFFECTIVE!

5.1. How to Prepare Your Unit for Pest Control Treatment

You will need

- Vacuum cleaner (recommend a canister vacuum with bags for isolation & quick disposal)
- Heavy duty garbage bags
- Duck Tape - for sealing bags and labeling them
- Latex or PVC gloves - for touching infested things
- Laundry detergent
- Access to laundry, and enough money for several loads.
- Steam cleaning device (not a must, but recommended)

Bedroom

- Wash ALL your bedding and clothes in HOT WATER and put them in a HOT DRYER for at least **20 minutes**.
- Empty all shelves, dressers, drawers and closets. Machine-wash and dry what you can.
- Things that did not touch bed bugs can be kept in double garbage bags, sealed tightly and labeled according to what's inside.
- Remove garbage and de-clutter.
- Vacuum well with narrow nozzle:**
 - Mattress - especially seams, folds, buttons and sides
 - Box spring
 - Bed frame
 - Area around the bed
 - Areas where carpet touches wall
 - Around electrical outlets
 - Baseboards
 - Cracks in floor and walls
 - Curtains and curtain rods
 - Inside drawers and closets
 - Radiators, heaters
 - Door frames
 - Lamps and light fixtures
 - Television set and remote
 - Radio
 - Computer
 - Clocks
 - Around electrical outlets
- When vacuuming has been completed, remove the dirty vacuum bag **immediately**, place it in a double bag, seal tightly and place it into the garbage bin **outside**.
- Lean mattress and box spring **upright against the wall** for pest control treatment.
- Move furniture approximately 18 inches from the wall.
- Make sure the floor and furniture surfaces are clear.

Kitchen and Bathroom

- Empty cupboards, shelves and drawers into double garbage bags and seal bags tightly.
- You can leave bathroom items in the bathtub, covered with a clear plastic garbage bag.
- Keep the counter surface in the kitchen and bathroom clear.

Pets

- Dogs, cats, birds and other animals must be out of your home during the treatment.
- Fish should be removed if possible, if not feasible, turn off the fish tank and cover it with a moist cloth.

After The Pest Control Treatment

- You may return to the treated areas after **4-6 hours** – consult the pest control technician for exact time.
- There may be some odd scent in the air. Open all doors and windows for 15-30 minutes to air out.
- Do not use any harsh chemicals or cleaning products on treated areas for **2 weeks**.
- Vacuum every day for at least **2 weeks**, and after that – **at least once a week**.

Prevent Bed Bugs In The Future

- Check your home on a regular basis, especially these places:
 - Mattress folds, sides and corners
 - Spring box
 - Bed frame
 - The areas where the carpet touches the wall
 - Under couch cushions and fabric furniture
 - Cracks in walls and floor
- Tips for preventing bed bugs on your bed:
 - DO NOT use bed skirts
 - Keep bedding, blankets and clothes OFF the floor
 - Place the legs of the bed in bed bug moats and **keep the moats clean!**
 - It is advisable to encase your mattress and box spring with a bed bug proof encasement. The encasements MUST BE FITTED as bed bugs and their eggs can hide in excessive layers or folds.

IMPORTANT!

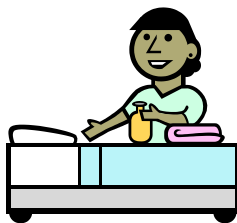
You must stay out of the area that is being treated with chemicals for 4 to 6 hours after the PMP departs. Ask your PMP for the exact time. Anyone pregnant, with lung or breathing problems, or under the age of 1 MUST stay out of the area for at least 24 hours.

Residents' Responsibilities



Image: www.licessquad.com

- ☑ If you notice any bed bugs – tell the staff immediately!
- ☑ Check your unit daily – pay special attention to your mattress, bed frame, and bed sheets. Check your skin for itchy red bite marks.
- ☑ Wash your bed sheets every week in HOT water and dry them in HOT cycle for at least 20 minutes.
- ☑ Promptly remove garbage and de-clutter. Keep your unit clean.
- ☑ **DO NOT** bring in any used furniture or retrieve discarded items from the street.



It is everyone's responsibility to keep our space safe, clean, and free of bed bugs!

6. Bed Bug Response Toolkit

Item	Use
<input type="checkbox"/> Kleen-Green (Pre-mixed - non-toxic enzyme cleaner & pesticide-free insect terminator)	Spraying clothing, shoes at intake Treating non-washable items Topical treatment in units and rooms
<input type="checkbox"/> Glue Trap Chemical Free	Helps monitor/detect and catch live bed bugs
<input type="checkbox"/> Caulking material (Mono Sealant Acrylic)	Sealing cracks and crevices, helps stop migration of bugs
<input type="checkbox"/> Heavy duty garbage bags <ul style="list-style-type: none"> ○ Black ○ Clear 	<ul style="list-style-type: none"> • Black bags – for garbage and infected items being treated • Clear bags - for cleaned and uninfected items
<input type="checkbox"/> Flashlight & Magnifying glass	Assist in search/verification of bed bugs, skins & eggs
<input type="checkbox"/> Duct Tape (grey)	Sealing bags, for extra secured tying Can also be used for labeling bags
<input type="checkbox"/> Flexible Scraper Tool	Assist in bed bug detection (crevices, crack, between fabric folds, seams, etc.)
<input type="checkbox"/> Black Marker	For labelling items
<input type="checkbox"/> Protective Gear: <ol style="list-style-type: none"> 1. body coveralls 2. shoe covers 3. gloves (non latex) 4. respirator N95 5. hair bonnet 	For protection when entering infested environments and handling insecticides PLEASE NOTE: Full body protective clothing need only be <u>considered</u> in only the most extreme cases of infestation.
<input type="checkbox"/> Bed Bug Vacuum <input type="checkbox"/> Portable and/or Industrial Steamer	Cota provides bed bug specific vacuums that seal everything sucked into the HEPA canister. Cota provides P-Touch portable steamers and also industrial grade steamers for bed bug management.

NOTE: Kits are assembled according to site application. Not every kit will include each item listed above.

Personal kits are also available for staff working in the community.

These contain pocket size Kleen Green, Shoe/boot coverings, hair bonnets and gloves

To obtain or replenish your bed bug kit, contact the Facilities Coordinator: gibson_d@cotainspires.ca 416-789-6535

Information on toxicity and regulations for pesticides:
 Pesticide Action Network North America www.pesticideinfo.org

CAUTION!

All pest control products and other chemicals listed in this document are to be used in accordance with the DIRECTIONS SPECIFIED ON THE LABEL, and in accordance with the Workplace Hazardous Materials Information System (WHMIS) and the Safety Data Sheet (SDS) when applicable. Please read and follow ALL labels and directions carefully. This document does not replace labels.

7. Resources

Insecticide Products

1. Natural and non-toxic alternatives

- Cleaning/Industrial Vinegar (10% acetic acid).
- Kleen-Green, can be ordered at 416-859-LICE(5423) or www.licesquad.com

2. Insecticides

- Insectigone All Purpose Insect Killer, available at Canadian Tire.
- Raid Max Crawling Insect Bug Killer, available at major home hardware stores (Canadian Tire, Home Depot).

3. Information on toxicity and regulations of pesticides

- Pesticide Action Network North America: www.pesticideinfo.org
- JHS Bulletin Board **SDS**

Protective Gear

- Tyvek® protective clothing. Available from:
 - www.ULINE.ca:1-800-958-5463-624-5476.

NOTE: Protective clothing, even in extreme cases of infestation, need not be worn provided simple rules are followed.

- Do not brush up against bed, bed skirts, drapes or curtains
- Do not sit in chairs suspected of harboring bed bugs
- Bag your clothing and was/or dry in high temperature for at least 20 minutes

Pest Control Companies

- Power Pest Control
- Purity Pest Control (Canine)

Bed Bug Sleep Protection – Mattress/Box Spring & Pillow Encasements

Am/Can Bed Bug Supply

15 Ingram Drive, Unit 17, Toronto 1-877-411-0053

NOTE: Encasements must be properly fitted to you mattress and box spring. Excessive folds in material will provide a harborage to bed bugs and their eggs.

8. THERMAL PREP SHEET For ENTIRE ROOMS/UNITS

PREPARING FOR HEAT TREATMENT – WHAT YOU SHOULD KNOW

As with any pest control treatment, there are things you need to do in order to prepare. These instructions will help you to protect your belongings and also help your pest control technician to better and more efficiently treat your residence/building. Please read the following carefully to receive the best treatment experience possible.

Items that must be removed or protected

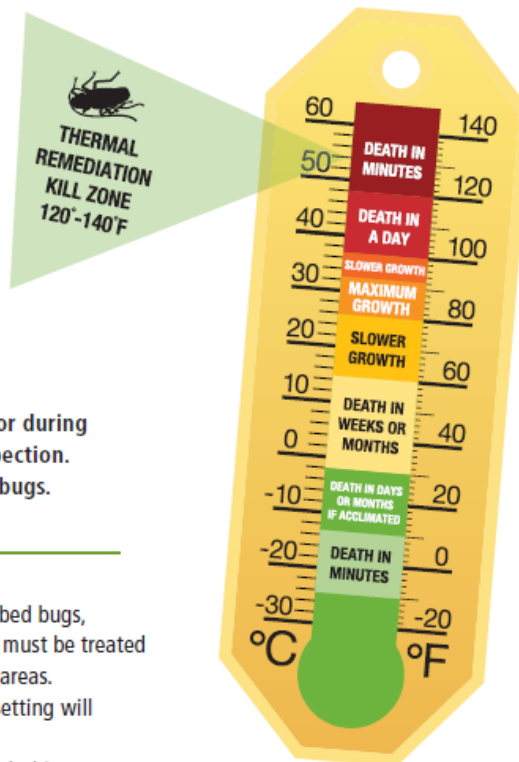
- Pets – including fish in aquariums.
- House plants.
- Fresh food, fruits, vegetables, etc.
- Food that melts – chocolate, candy, etc.
- Prescription and over the counter medications.
- Make-up – especially lipstick (wax based).
- Wax based items – Candles, wax figurines, wax fruit.
- Anything pressurized – spray cans, fire extinguishers, oxygen bottles, etc.
- Flammables lighters, lamp fuel, alcohol, solvents, etc.
- Wooden and stringed musical instruments – leave the cases.
- Family heirlooms and irreplaceable items should be inspected and a determination made as to whether they should be treated.

Please note: Some of the smaller items can be stored in the refrigerator during the treatment. Larger items can be boxed and left by the door for inspection. It will be determined if any of these items need to be treated for bed bugs.

Clothing

The bed bug will seek shelter on and within clothing. To avoid re-introducing bed bugs, any clothing removed from the space before a thermal remediation treatment must be treated (washed and dried at high temperatures) before being returned to the treated areas.

- Washing using the hottest water cycle and drying using the hottest dryer setting will treat most clothing.
- Avoid contaminating the freshly washed clothing. Do not return the clean clothing to the container (bag, basket, etc.) it was transported in unless that container was also treated.
- Clothing left in the heated space must be placed in open weave laundry baskets. Clothing must be packed loosely! Tightly packed baskets will prevent lethal temperatures from reaching all items. Do not place clothing in plastic bags.



- Clothing in drawers can be left in place. Except if clothing is tightly packed, then some items must be removed. Also, it may become necessary to remove the drawers from dressers to help with the air movement.
- Clothing on hangers may be left in closets if the space between the items is large enough to allow the heated air to circulate. Arrange hanging items to open up air space between them.



Larger fabric items – linens, towels, blankets, etc.

These items should be left in the area being heated, as they are likely to shelter insects.

- Place these items in open weave laundry baskets. Pack the items very loosely to allow for air circulation. Do not pack into plastic bags.

Papers, smaller items, knick-knacks and collectibles

A thermal remediation treatment requires moving large amounts of air to be successful. All items that can be blown around and possibly damaged need to be protected.

- Loose papers need to be gathered and boxed.
- Glass items, knick-knacks and other collectibles will need to be secured. Do not leave breakable items on shelves or other areas where damage could happen.
- Pictures, paintings, and other wall-mounted items will need to be taken down to prevent damage.

Electronics, televisions, computers, video players, stereos, etc.

Electronics are a hiding place for bed bugs; do not remove electronics from areas being heated.

- Switch all electronic appliances to the off position.
- Disconnect all electronic appliances by unplugging from the wall outlet.

Water beds and air beds

- Water beds will need to be drained. If the water bed is not drained, it will prevent the frame from reaching lethal temperatures.
- Air beds will need to be partially deflated to avoid damage.
- Select comfort-style air beds with an electronic pump must be partially deflated and unplugged from the wall outlet.



NOTICE TO ALL TENANTS

Cota is committed to promoting and maintaining a healthy and safe environment for all of the tenants and staff at _____. As part of this ongoing commitment, monthly pest control inspections have confirmed the presence of bed bugs/cockroaches within _____

Pest control professionals will be on site on _____ to treat the site. For your own safety, you will be required to vacate your unit and or the premises for at approximately 4 hours.

PREPARATION FOR TREATMENT

A successful treatment depends upon proper preparation. Staff will assist you in preparing for the treatment and to answer any questions you may have.

Thank you for your cooperation

I understand that by signing this notice, I agree to work with the staff to eradicate the bed bug issue, which may include depending on the type of treatment, but is not limited to – permission to de-clutter my unit, identify and remove all personal items that should be removed from the unit, not to interfere and be off site when the treatment occurs

By signing this, I, _____ declare that I have read the notice, or that it has been read and explained to me and I fully acknowledge and agree to the bed bug eradication treatment plan.

Tenant's signature

Date signed

Tenant has given verbal permission to allow the team to implement the proposed plan to eradicate the bed bug issue.

I confirm that I have explained this notice to the tenant/substitute decision maker/parent/guardian and provided the person who has signed this form an opportunity to ask questions which I answered.

Signature of staff

Date signed

9. Sources

Woodgreen Community Services

Power Pest Control

Purity Pest Control

LEAP Pest Control

Premium Prep

ORKIN Canada

Health Canada, Federal, Provincial, Territorial Committee on Pest Management and Pesticides

The Lice Squad

Province of Ontario (An Integrated Pest Management System)

Yale University

Cornell University

NY State Integrated Pest Management Program

St. Jude Community Homes

St. Michael's Hospital

Toronto Community Housing, Integrated Housing Services

Toronto Public Health

www.bedbugsinfo.ca

www.bedbugger.com