

# Guide to Successful Bed bug Treatment

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# Where do I start?

- Determine the presents of bed bugs.
- Nothing leaves room without treatment or inspection.
- Begin at the bed and work outwards.
- Dismantle the bed and headboard
- Targeted vacuuming to remove accessible bed bugs.
- Remove switch/outlet covers.
- Remove cove/baseboards if needed.
- Bag items and treat with heat if possible.
- Wrap items in plastic for disposal
- Insure disposal items are not recycled



# Treatment Methods

- Traditional – insecticides
- Thermal – Dry Heat
- Steam Treatment
- Vacuuming
- Discarding infested items
- Box Spring & Mattresses Remediation
- Containerized Heat
- Freezing – Frozen Carbon Dioxide (Dry Ice)
- Containerized Fumigation



# Traditional - Insecticides

- Liquid sprays – Best for application on flat surfaces such as carpet edges, baseboards, beds, couches and other upholstered furniture.
- Pressurized aerosols – Best applied through extension nozzles into cracks & crevices and other openings.
- Dust – Long lasting and safe around electrical outlets, dusts are best used against bed bug inside wall voids, furniture legs, and under bed platforms, behind receptacles and switch plates.



# Thermal-Heat Treatment Methods

Heat kills bed bugs at a core temperature of 113° for 15 minutes!

- Structure Heat Treatment
- Localized Heat Treatment
- Steam Treatment
- Containerized or Truck Heat Treatment



# Thermal – Structure Heat

## Why use Structure Heat?

- Elevating the air temperature of a structure or area of a structure to a level which is lethal to bedbugs.
- It is the only process which kills all stages of a bed bug in one day.
- Non-chemical, non-toxic approach.





# Thermal – Localized (Styrofoam heat box)

## Heat Box?

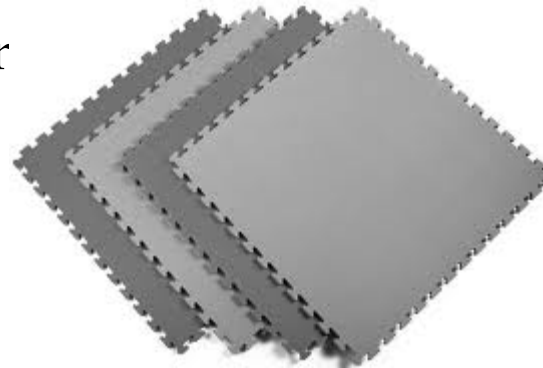
- Space heaters can heat up to  $140^{\circ}$ - $150^{\circ}$   
(Oil-filled eliminates chance of fire)
- Styrofoam heat box contains heat better than plastic or blankets  
(2 inch thick Styrofoam)
- Tile/Concrete floors need to be insulated  
(Carpet padding or foam play pads)
- Circulation of heat is important  
(Fan & heater placement at opposite corners)



# Thermal – Localized (Styrofoam heat box)

## Equipment for a Heat Box?

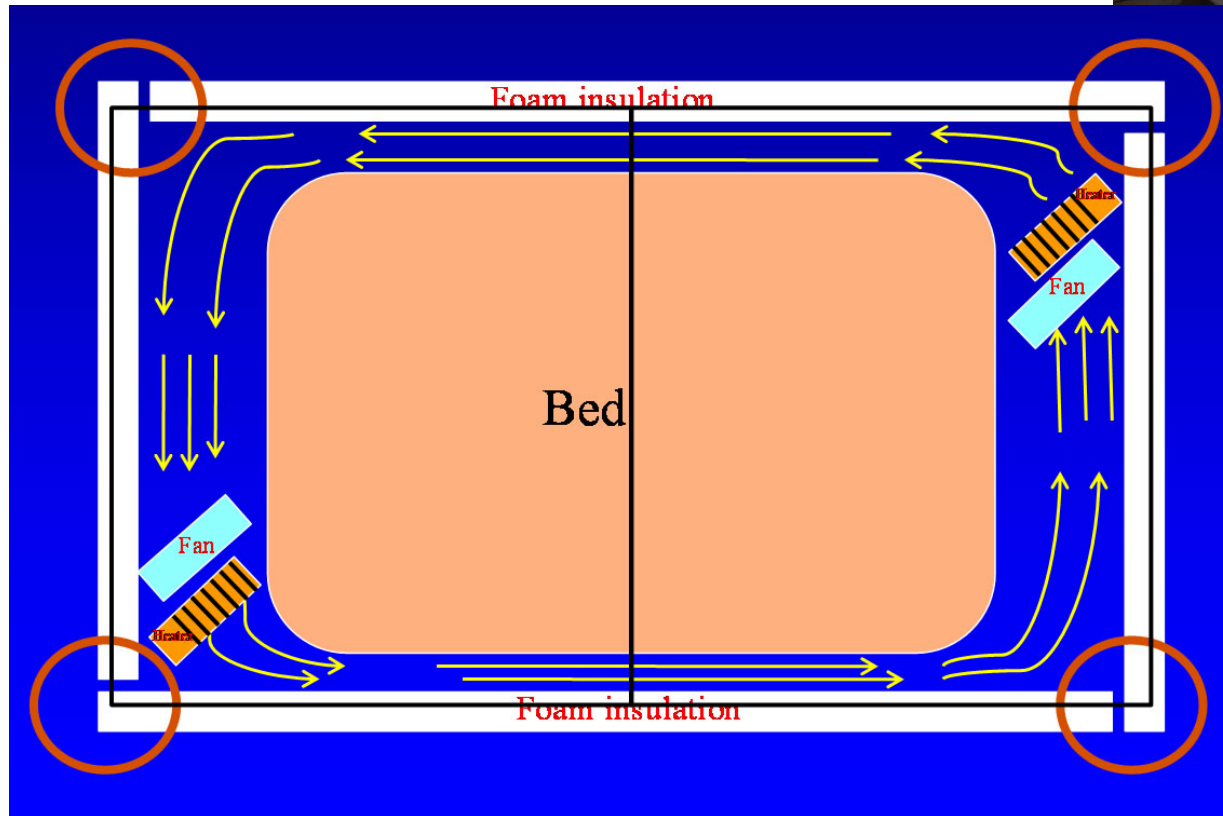
- Space heaters
- Styrofoam Sheets
- Foam Pads
- Box Fans
- Extension cords
- Digital Thermometer
- Cinderblock / 2X6 lumber





# Thermal – Localized (Styrofoam heat box)

How Does it work?



# Thermal – Steam Treatment

## How Does it work?

- Steam kills bed bugs and eggs with a short period of exposure and leaves no chemical residue. The user moves the nozzle over the bed bugs, steam wand must be moved at a rate that heats the area to a lethal temperature.
- Steam can be used to treat almost any area where bed bugs are found or suspected. Avoid treating finished wood surfaces or delicate items that might be damaged by high heat.



# Vacuuming



- Vacuuming is an effective way to remove bed bugs and the dirt that provides them with shelter.
- Vacuum the furniture, the bed frame, the floor, and baseboards - wherever your inspection revealed the presence of bed bugs.



# Discarding Infested Items



Infested furniture and other items that are discarded should be marked or destroyed to avoid being used by others.





# Box Spring & Mattresses Remediation



# Containerized/Truck Heat Treatment

## How Does it work?

- The primary advantage to using a truck is that it can be driven to the infested building, loaded with the commodities, and then heated treated.





# Containerized/Truck Heat Treatment

How Does it work?



# Containerized/Truck Heat Treatment

**How Does it work?**





# Containerized/Truck Heat Treatment

## How Does it work?



# Containerized/Truck Heat Treatment

**How Does it work?**



# Containerized/Truck Heat Treatment

**How Does it work?**





# Freezing – Spot Cold Treatment

## How Does it work?

- Pressurized CO<sub>2</sub> from a cylinder is released and deposited as snow. The snow comes out of the tip at a temperature of  $-108^{\circ}$  and kills bed bugs by rapidly freezing them to temperatures ranging from  $-4^{\circ}$  to  $-22^{\circ}$ .



**Cryonite System**





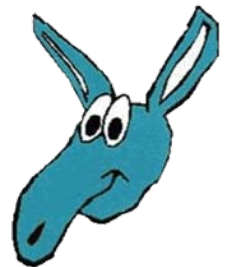
# Fumigation

- Fumigation of furniture, clothing, or other personal items can kill all bed bug stages present. However, such treatments will not prevent re-infestation immediately after the fumigant dissipates.
- Fumigation of an entire building would be equally effective but, again, would not prevent re-infestation, and will pose logistical nightmare.



How many follow-up services should be done?

*As many as it takes!*



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