Bed Bug Inspections

California Department of Public Health
Vector-Borne Disease Section
www.cdph.ca.gov search word: bed bugs
Part 1:
Bed Bug Basics
Bed bugs are tiny insets that feed on the blood of warm-blooded animals, including humans.

Bed bugs do not spread diseases to humans.
Adult bed bugs are very small and difficult to see with the naked eye
• Adult bed bugs are about $\frac{1}{2}$ the size of a penny

• Unfed bed bugs are flat with a circle shaped abdomen

• Blood-fed bed bugs are elongated with a long, tapered abdomen
Bed Bugs

- Bed bugs shed their skin to grow
- Egg - nymph (5 molts) - adult
- Duration: 5 weeks to four months
- Can live up to 18 months or longer without a blood meal
- Adults live about 10 months
FACT OR FICTION?

After being bitten by a bed bug, it may take 14 days for a reaction at the bite site to develop?
FACT!

Although most bite reactions occur immediately after feeding, a reaction may take as long as 14 days to develop. *

* Feingold et al. 1968
Part 2:
Bed Bug Inspections
Bed Bug Inspection

• Quick inspection for travelers

• Detailed inspection in:
  – Homes
  – Hotels
  – Transportation
  – “Alternative Lifestyle” bed bugs

• Preventative inspections
Quick Bed Bug Inspection for Travelers

Step 1: Mattress
Pull back sheets and inspect mattress seams and box spring for bed bugs. Look for blood spots and dark pen-like spots.
Quick Bed Bug Inspection for Travelers

Step 2: Headboard and Nightstands
Inspect behind the head board by sliding a card or piece of paper along the edge. Inspect inside the nightstand drawers.

Step 3: Luggage
Place on a luggage stand, a hard surface, or in the bathroom

Step 4: After Your Stay
Wash clothes and dry them on the hottest setting
Detailed Inspections
Pest Control Operators

• When possible, inspect the area with a Pest Control Operator (PCO)

• The pest control company will often charge for the time it takes to inspect the infested room.

• Hotel, building staff, or homeowner should provide assistance.

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Bed Bug Inspection Tools

- Flashlight
- Plastic baggies
- Gloves (optional)

Do not bring extra items into potentially infested rooms!!!
Inspection Tips

- Do not remove anything from the room before inspection or treatment*
- Assume all clutter around bed is infested
- Inspect likely hiding spots first (5 - 10 feet around sleeping area)
  - Mattress
  - Boxsprings
  - Bed Frame/Headboard
  - Dresser Table

*Follow guidelines from PCO (Pest Control Operator)
Where to Look

Likely hiding places may include, but are not limited to:

– Seams in mattresses
– Cracks in bed frames and head boards
– Crevices in box springs
– Behind loose wallpaper
– Any clutter around or under the bed
Where to Look

– Under baseboards and carpet
– Wall/floor or wall/ceiling junctions
– Within clock radios, irons or telephones
– Within desks, bed stands or dressers
– Within curtain rods and folds of drapes
Homes: Other Inspection Sites

- Luggage and luggage storage areas
- Hampers, laundry rooms
- Pet sleeping areas
- “Couch Potato” sites
Suspicious bites around your head?

Reports of bed bugs infesting coat racks!
Bed bugs have also been found on public transportation living underneath cloth seats.
Alternative Lifestyle

Bed bugs can survive in backpacks.
What to Look For

- Bed bugs
- Blood spots, fecal stains
- Shed exoskeletal skins
- A sweet or musty odor
Rusty Blood Spots/Fecal Stains

- Bed bugs try to feed every 3 to 7 days
- Most bed bugs double their weight with every blood meal
- ½ of blood meal is lost by defecation in the first 5 hours after feeding
Bed Bug Odor

Bed bugs emit a unique sweet, musty odor.
Population Density

In 70°F conditions, 40 bed bugs can produce over 5,900 offspring in six months!
Bed Bug “Brood Center”

Fecal matter, egg shells and cast exoskeletons accumulate in brood centers.

If you find one brood center, don’t stop looking as there may be more!
Keep in Mind

• Bed bug inspections are tedious and can take 1-2 hours for a standard size bedroom
• Bed bugs are exceedingly wary…their hiding places tax the patience and ingenuity of all in search of their presence!*

*Mallis, Handbook of Pest Control
Keep in Mind

• Bed bug brood centers are found in a dark, sheltered location
• Bed bugs prefer to feed at night, during the day they are found hiding in cracks and crevices
• Bed bugs do not like drafts
• Bed bugs must walk to get from place to place (or are moved on linens, sheets, furniture)
How Far Do Bedbugs Travel?

• Literature sources report bed bugs traveling from 2-100+ ft
• Think about what this means for a:
  • Hotel
  • University dorm room
  • Prison
  • Hospital
  • Residence
Be ready to tear the room apart!
“Rusty Spots” on Mattress

©2005 Department of Medical Entomology, Westmead Hospital, Westmead.
Mattress (especially seams)
Mattress (especially seams)
Bed Bugs & Rusty Spots on Sheet
Survey Sites: Box Frame
Base of Wall Covering

©2005 Department of Medical Entomology, Westmead Hospital, Westmead.
Bed Bugs Will Stain Walls

© Heinsohn/NPMA
Upholstered Chairs
Window Curtains & Frames
Inspection In Hotels

Inspect rooms adjacent to infestations

- Rooms above and below infestations
Hotels: Storage Areas and Service Carts

- Inspect furniture storage areas where extra items are kept
- Service carts should be inspected and treated as necessary
Hotels and Homes: Throw Out Vacuum Bags

- Vacuum the infested room and throw away bag
- Clean all other vacuum components with hot water and detergent
Part 3:
Bed Bug Prevention
Prevent Reinfestation: Don’t Get Them Again!

- Educate household members or housekeeping staff about the signs of infestation
- Follow-up on all household or customer complaints
- Change bed lines frequently and inspect for rusty spots/insects/cast exoskeletons
- Follow advice of pest management professional, schedule follow-up visit after treatment
- Glue boards or similar devices placed under beds may aid in bed bug collection
Monitoring

- Place glueboards under bed for monitoring purposes
For additional information, please visit:

The California Department of Public Health

The U.S. Centers for Disease Control and Prevention