



Bed Bugs: Information and Treatment

Bed bugs are found all over the world. These reddish-brown insects are oval, flat, and don't have wings. They prefer to feed off human blood. They hide during the day, coming out mainly at night. They like to hide near a food source so that they can eat in the early morning hours.

When unfed, the adult bed bug is about 5 mm by 3 mm. Once fed, the bed bug gets longer, wider, and its colour changes to a dull red. The change is so great that you may think that you're looking at two different insects.

Each female bed bug can lay about 200 eggs at one time. The eggs take 10 days to hatch. In ideal conditions (23 °C and regular feeding) the female bed bug can lay eggs up to 3 times a year (that's up to 600 eggs a year!). The eggs are sticky, making it easier for them to develop without being disturbed. It takes 2 months for the bed bug to become an adult. They're very hardy insects—they can live more than a year without food! Bed bugs don't spread any infectious human diseases.

Why are we hearing more about them?

Bed bug infestations have increased worldwide over the last few years. Some reasons for the increase in bed bug infestations may be:

- increased world travel
- not knowing how to prevent and control infestations
- changes in pesticide use
- more resistant to chemical control measures
- not knowing what they look like

Where are bed bugs found?

Bed bugs are found wherever there are people. They like dark, cool hiding places that are close to a food source (e.g., where people sleep). Their favourite places are covers and mattresses (especially along the seams). Later, they spread to crevices (gaps) in the bed frame and box spring. When the infestation is really bad, bed bugs will spread to gaps in places like:

- baseboards
- window and door casings
- picture frames
- carpet
- loose wallpaper
- cracked plaster
- the surfaces of stippled ceilings



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Bed bugs spread when infested clothing, mattresses, or furniture is moved. They can crawl from one room to another—even from one apartment to another! They can be brought in to your home by infested luggage and clothing. If you've been travelling, check your luggage and clothing carefully before you bring them into your home.

How do I know if there's an infestation?

You'll know if you have an infestation because you'll see bloodstains and dark spots on sheets and mattresses, bed clothes, walls, etc. Sometimes you may even notice a sweet, musty, raspberry-like smell.

How do I control an infestation?

You need to find all the places bed bugs hide. Because they usually come out only at night, they can be hard to find.

A. Non-Chemical Control

Sticky tape or glue paper

You can buy sticky glue paper at most hardware or garden stores. Place the paper around walls, the legs of the bed, or wherever you think they are. You can also use carpet tape, which is sticky on both sides.

Use Heat

It takes a temperature of about 45 °C to kill a bed bug. This means that you can use a steam cleaner in cracks and gaps.

Vacuum

Use a nozzle attachment to vacuum all corners, mattress seams, and gaps in upholstered furniture. Vacuuming will remove both the bed bugs and the eggs. Put any waste and the vacuum cleaner bag in a plastic bag and put it outside.

Stop Them from Climbing

Prevent bed bugs from moving onto furniture by coating the legs of furniture with petroleum jelly (e.g., Vaseline®), or by wrapping the legs with double-sided tape.

General Cleaning

Regularly clean your home, wash all bedding and clothing, and vacuum often. Clothing that has been cleaned can be stored in plastic bags that are tied tightly

B. Chemical Control Sprays and Aerosols

Before using a pyrethrin spray or aerosol, make sure you vacuum the area well. Remove dust and lint from covers, mattresses, floor corners, and furniture. Put any waste and the vacuum cleaner bag in a plastic bag and put it outside.



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You can use the pyrethrin aerosols on cracks and crevices, including mattress seams, bed frames, furniture, electrical boxes, baseboards, carpet edges, and loose wallpaper.

Don't use pyrethrin spray on mattresses or upholstered furniture unless the product label says you can. Sprays are usually used on crevices and cracks in the floor.

How to Prevent Bed Bug Infestations

How do bed bugs move around?

Bed bugs can only crawl. They will crawl from room to room or from suite to suite in multi-family buildings, by travelling along pipes, or crawling into and out of spaces in walls. To go long distances (like from building to building) bed bugs need help from people.

New infestations start when a person moves items such as furniture, clothing, backpacks, handbags, linens, decorative items, books, cardboard boxes, and any other item where a bed bug could be hiding to a new place. The person usually doesn't know that there are bed bugs in the item or items.

How do I prevent bed bugs from infesting my home?

Taking precautions to prevent bed bugs entering your home and becoming established is your best defense. See the topics at the end of this page for more information.

- Don't pick up discarded items from the street or back lane. It may have been left there because it was infested with bed bugs.
- If you spend any time in a place that might be infested with bed bugs, take precautions when you come home.
- Inspect your home regularly for bed bugs. This can be as simple as inspecting your bed every time you change your sheets.
- In multi-family buildings, talk to your landlord or property manager about what they do to prevent bed bug infestations (their protocol). They should know about bed bugs and be willing to talk to you about them. It is possible to do things during a renovation to slow down or stop bed bugs from spreading suite to suite.
- Encase your mattresses and box springs. This will remove many of the hiding places on your bed and make sure that your mattress doesn't become infested and have to be thrown away. Having encasement on your mattress makes it much easier to inspect regularly.

Encasement is the term used to describe enclosing your mattress in a bed bug proof cover.



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It's usually a 6-sided cover with a zip. You can buy them at department stores, mattress stores and from some Pest Control Operators. The package should say "bed bug proof". You can wrap a mattress in heavy plastic and seal all the seams with something like duct tape; however, the plastic could get a hole in it.

- Inspect your room when travelling, and take precautions when you get home just in case.

Shopping for Second-Hand Goods

What to Look for When Shopping

- Bed bug droppings are reddish-black to black. They look like small dots or large smears. It can look like a dot from a felt pen that has run a little around the edges.
- The skin they shed is a light tan—it looks like a dead bed bug.
- Use a flashlight, as bed bugs move quickly to get away from the light.
- Carefully look at all the surfaces of furniture including the inside and outside surfaces, the sides of drawers, joints, screw holes, backs of bookcases and any other place that could hide a bed bug. If a credit card can fit into the space, a bed bug can hide in it.
- Upholstered furniture that is in good condition (no tears or holes) will have fewer places for bed bugs to hide.
- Look at all household goods including items like stuffed animals, books, or DVDs.
- When buying clothing, carefully inspect the seams and hems.

Bringing Your Items Home

- Bring plastic bags that you can seal the item in before you take it home.
- When you get home, put any items that can withstand heat in the dryer for 30 minutes on high heat (it is okay to wash it first), or keep the item in the sealed bag until you do your laundry. The heat of the dryer will kill the bed bugs and their eggs.
- If bringing home a larger item that can't be laundered (like furniture), keep it isolated, preferably outside your home until it can be cleaned thoroughly. A detached garage or shed is a good place for larger items. If possible, leave the furniture outside until it can be cleaned and inspected a second time.

Cleaning Your Items to Remove or Kill Bed Bugs

- For soft furniture including mattresses, couches, chairs etc., vacuum all cushions/pillows, the top and bottom surfaces, and all crevices using a vacuum cleaner crevice tool.
- For hard furniture like dressers, TV stands, bookshelves etc., wipe the inside, outside, top, and bottom with soap and water. Pay extra attention to all cracks and crevices. Seal all the joints with silicone or other sealant.



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- Throw away the contents of your vacuum cleaner outside of your home.
- If you think you have or may have a bed bug infestation, don't give away or donate any items. Throw the item in the garbage. If possible, destroy it so it is not likely to be taken away by someone going through your garbage.

How Do I Inspect for Bed Bugs?

If you think you have bed bugs you need to do a thorough inspection to see if you have them and how far they've spread. Start close to where you sleep. Keep moving out until there are no more signs of bed bugs.

Collect the tools below so you can find and clean the bed bugs up as you go:

- **Flashlight** to look in dark nooks and crannies and on dark surfaces. Sometimes the light startles bed bugs. They'll stop moving for a few minutes and then move quickly to get away from the light.
- **Magnifying glass** to make it easier to see and confirm that they are a bed bug.
- **Narrow tool** such as an old credit card or thin putty knife to force bed bugs out of cracks and crevices.
- **Plastic bags** to capture and discard any bed bugs you find.
- **Paper towel** to clean and to squish the bed bugs
- **Vacuum cleaner that has a crevice tool** to vacuum the bed bugs as you find them.
- **Bucket of soapy water and sponge** to clean up signs of the bed bugs (like the brown or red spots on a mattress). This makes it easier to watch for new signs of bed bugs.

Start close to where you sleep. Keep moving out until there are no more signs of bed bugs.

Look in the places below and any other places that a bed bug might hide in:

- **Beds:** Look along seams of mattresses, between the mattress and box spring, and on all sides of the bed frame, including the underside and behind the headboard.
- **Other furniture in the bedroom:** Along drawer runners, undersides of drawers, and any hidden cracks and crevices and joins between parts of furniture.



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- Room: Look along baseboards and along other trim such as around walls and doors. Look behind pictures or anything else hanging on the wall, including in cracks in drywall and under torn wallpaper.
- Look in and under smaller items such as books, clocks, toys and anything else in the room that is small.

Move to the next room and repeat the inspection.

Once you've finished the inspection and cleaning you'll have a good idea of how far the bed bugs have spread.

How Do I Prevent Spreading Bed Bugs to Others?

Wear clothes that aren't infested with bed bugs.

- Put the clothes you plan to wear in the dryer on the hottest setting for 30 minutes. Don't forget your socks, your coat, toque, scarf, and mittens.
- When you take them out the dryer, give your clothes a shake to loosen any dead bed bugs that may be stuck on them. Put the clothes in a plastic bag right away and make sure the bag is tightly sealed.
- The last thing you will do before you leave your home is get dressed, so make sure you remember to do everything else beforehand.
- Put on the clothes that you heat treated and put into a plastic bag. A good place to put on your clothes is in the bathroom or even in the bathtub. Bed bugs are easier to see on light surfaces, like a white bathtub. Dress in a place that you know doesn't have bed bugs.
- Leave as soon as you are dressed. Don't sit down. Be careful not to brush against anything where a bed bug could be hiding.

Check your bags, purse, backpack, or briefcase.

- Take everything out of your bags, purse, backpack, or briefcase. Check everything for signs of bed bugs. Throw out anything that can't be cleaned that a bed bug could hide in (like day timers or notebooks).
- Vacuum or brush the bag well and/or put it in the dryer on the hottest setting for 30



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minutes.

- Store your bag wherever the bed bugs aren't likely to be. Your bag should not touch anything that a bed bug could hide in or that could let it get into your bag.
- A good idea is to store your bag in a sealed plastic bag. White plastic is best because bed bugs are easier to see against a white background. Don't store it on a chair or on your bed, or you will have to vacuum or brush it every night.
- You can also hang your bag in the closet, as long as the closet has enough room. Make sure the bag doesn't touch anything except the closet rod.

Make sure the clothes for the next day are free of bed bugs.

- Take the clothes straight from the dryer and seal them in a plastic bag.
- When you come home, put your coat and other outerwear (like a hat and mittens) into a plastic bag right away, and seal it tightly. This way you won't have to put them in the dryer again.

To learn more, call your nearest Environmental Health office:

- Calgary: (403) 943-2295
- Edmonton: (780) 735-1800
- Grande Prairie: (780) 513-7517
- Lethbridge: (403) 388-6689
- Red Deer: (403) 356-6366