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POLTI®

POLTI CIMEX ERADICATOR

GOODBYE BEDBUGS!

QUICK GUIDE FOR DISINFESTATION

¡ADIÓS A LOS CHINCHES! GUÍA RÁPIDA PARA LA DESINFESTACIÓN

For any queries please visit us at www.poltiusa.com.

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This guide does not replace the instruction manual, which we ask you to read carefully before using Polti Cimex Eradicator.
This guide is intended to provide a number of helpful hints and suggestions for ecological disinfestation of bedbugs without using chemicals.
It cannot provide complete safety and operation information.
Please read the instructions manual carefully and keep it for future reference.

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Introduction

The bedbug is an ancient parasite which has been known to man for as long as we can remember. Extremely common until the World War II, the insect seemed to have disappeared almost entirely following the start of the first synthetic chemical insecticides and widespread improvements in hygiene and living conditions. In the second half of the '90s, bedbugs began to make an unexpected comeback all over the developed world, quickly becoming a source of annoyance and worry for humans again.

What are bedbugs?

The bedbug (Cimex lectularius) is a small parasitic insect which feeds exclusively on blood. Unlike many other human parasites, these insects do not live on the human body, but come into contact with it only to feed, preferring to spend the rest of their time in hidden corners close to the place where humans sleep or spend a lot of time. Bedbugs are mostly active at night.

Description and life cycle

The bedbug (Cimex lectularius) is an oval-shaped rusty red insect measuring no more than 0.20-0.23 in (5-6 mm) long in adulthood. During adulthood, which normally lasts 4-6 months, a female may lay an avera- ge of 5 eggs a day, laying a total of between 200 and 500 eggs in her lifetime. The eggs are elongated, slightly curved and pearly white in color, and measure about 0.04 in (1 mm) long. When laid they are covered with a layer of an adhe- sive substance that attaches them firmly to the surface where the female has chosen to lay them. Eggs are normally laid in the places where the insects nest. After 7-10 days a nymph emerges from each egg which is about 0.06 in (1 millimetre and a half) long and translucent dirty white in color; it immediately seeks a host to feed on.

The insects reach adulthood after 5 developmental stages. They need to feed at least once on blood before passing from one stage to the next.
The result is that the constant presence of an available host means an infestation will develop rapidly, while occasional or intermittent presence of the host will slow it down.

Ethology and dynamics of infestations

This species tends to avoid the light, hiding by day and going into action at night, or in the absence of light. Bedbugs prefer to nest in narrow spots (crevices, folds in fabric, seams, cracks, etc.) very close to its host. It consumes blood by using its mouth parts to perforate the host's bare skin while injecting an anaesthetic and an anticoagulant. The bite itself is painless and hard to see, but the substances introduced can cause bothersome allergic reactions in sen- sitive people. During the interval between meals bedbugs remain in their hiding places in small groups to digest their meal. A nest normally also contains large quantities of faeces and urine stains, eggs and abandoned exoskeletons. When the bedbug population in a nest becomes too large, the insects tend to colonize new hiding places in the immediate vicinity, preferring places "free" of the presence of other bedbugs. This is why any object (clothing, luggage, etc.) from outside placed near an infestation will be particularly inviting to them, as it is not "already occupied", and it is quite likely that some of the bugs will attempt to colonize it by hiding in a fold, zipper or seam. It is also possible to introduce an infestation into the home by bringing home objects from infested places, such as discarded or used furniture (if not disinfested) containing bedbugs or their nests.

High risk situations

All places and businesses in which people sleep or spend some time, especially dark areas, are at risk of contracting an infestation, for instance:

- **TEMPORARY ACCOMMODATIONS**
(hotels, motels, hostels, B&Bs, cruises, etc.)
- **PUBLIC TRANSPORTATION**
(trains, ships, ferries, buses, trucks, cars, motorhomes, etc.)
- **COMMUNITIES**
(barracks, boarding schools, college dorms, prisons, hospitals, etc.)
- **CINEMAS AND THEATERS**
- **PRIVATE HOMES**
- **OFFICES AND SHOPS**

Why use Polti Cimex Eradicator dry superheated steam against bedbugs?

There are many good reasons to choose dry superheated steam to get rid of bedbugs:

- it's effective: a few seconds of exposure to the flow of steam from Polti Cimex Eradicator is enough to kill adults and nymphs, as well as eggs. (According to the tests carried out by Pest2000 & Pest3000, Pest Control Management Services, Milan, Italy)
- it's convenient: steam can be generated quickly and easily anywhere, as long as you have an electrical outlet, water and a few minutes of time.
- it's inexpensive: no materials of any kind are required except water.
- **it's good for the environment and human health: no potentially toxic substances** are released in such a crucial place as the bedroom, where people spend a large percentage of their time.
- it's sanitizing: as well as killing bedbugs, it kills up to 99,999% of corona viruses*.
- it eliminates odors: combined use of Polti HPMed* and steam neutralizes the odor characteristic of these insects.

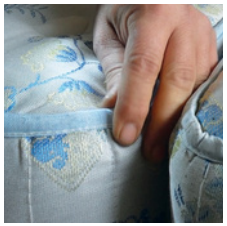
*Learn more about the effectiveness test at https://poltiusa.com/pages/professional-disinfection-1

Leaving no residue behind, other than a veil of moisture which will disappear within a few seconds, superheated dry steam also permits use of treated objects, furnishings and rooms within minutes of the completion of treatment.

*HPMed is Polti's detergent and can be used in combination with Polti Cimex Eradicator.

Superheated dry steam to fight bedbugs: instructions

The flow of superheated dry steam is powerful enough to effectively penetrate crevices and cracks, or pass through one or two layers of fabric without causing any bedbugs to be dislodged and spread about the room. The ideal application is spraying with the nozzle at a distance of 2-2.3 in (5-6 cm) from the surface to be treated, moving at a speed of about 4 in/sec. (10 cm/sec.). In these conditions the flow of superheated dry steam serves as a "lethal ray", killing insects and devitalizing their eggs throughout all areas treated. In what is a true "bedbug hunt", you should steam-treat both areas with evident traces of infestation and areas where your merely suspect the insects might nest, even if they are hard to inspect visually.



The nozzle may be fitted with two accessories to concentrate the flow, reducing its width and thereby increa- sing its power to penetrate. Their use is recommended in all situations in which the normal flow of superheated dry steam might not pene- trate deep enough. The "straight extension accessory" is normally used, while the "curved extension accessory" is used only for particularly hard-to-reach spots. For brevity's sake we will use the abbreviation FC (Flow Concentrator) to refer to both.

How to treat a bedroom

Below are detailed instructions for treatment of a bedroom under normal conditions.

TREAT refers to application of superheated dry steam from a distance of about 2-2.3 in (5-6 cm) from the surface at a speed of about 4 in/sec. (10 cm/sec.)

WASH refers to one of the following options:
- washing at 140°F (60°C)
- dry cleaning
- treating in the dryer, on high temperature, for at least 30 minutes.

SUSPEND refers to all objects which, once treated, should be eliminated from the room if possible, until the problem has been completely solved.

Start with the bed, then gradually work outwards.

Ornamental pillows: treat seams, zippers and embroidery.
If elaborately embroidered or complex, wash and suspend.

Bedcover: wash at 140°F (60°C) or dry clean, the simplest and most secure treatment. Suspend.

Pillow: though not the ideal place for bedbugs, you should treat seams and zippers, if present. Wash pillowcases.

Blanket/duvets: treat seams, stitching and zippers, if any. Alternatively, wash.

Sheet/mattress cover: wash.

Mattress: treat seams and, if present, zippers, air intakes, handles and buttons on quilting.

BED BASE

• wooden slats: treat the entire surface of the slats, working particularly carefully where the slats fit into the frame (from both sides, with the FC). If the frame is also made of wood, treat the entire frame. • springs: either heat each spring until very hot for a few seconds or treat the inside of the springs with the FC. • metal mesh: treat the densest points of the mesh. The two metal cross-pieces to which the mesh is attached must be treated for a very long time (3-4 very slow consecutive passages), while also attempting to get superheated dry ste- am to penetrate inside the points using the FC. • composite: follow the suggestions for the other types of bed base.

BED FRAME

• wood: dismantle the entire structure if possible and treat every component thoroughly (surfaces, crevices, holes for screws and tie rods, etc.). • metal: metal structures are unlikely to be infested, but can offer a hiding pla- ce for isolated bugs. Treat crevices and joints between components and use the FC on any holes communicating with interior cavities. • upholstered: proceed as in the case of wooden structures, treating all folds and seams very carefully. Use the FC to disinfest any gaps between pieces of upholstery. • composite: follow the suggestions for the other types of bed frames.

Remember that in most cases, the infestation will tend to be concentrated primarily near the head of the bed, which must in all cases be inspected and treated very thoroughly.

Bedside table: treat the back and underside. Remove drawers, empty them and treat them inside and outside. Then treat the interior, especially the drawer guides and the joints between components.

Paintings: treat the back of the painting, using the FC if the frame is complex in shape and has deep crevices. Also treat the wall behind the painting.

Jets of steam under high pressure may be dangerous if improperly used. Do NOT direct jets of steam towards people, electrical appliances while plugged in or the steam appliance itself.

Wall lamps: remove the lamp from the wall and **unplug it before treating** the inside of the wall connection and the part of the wall it connects to.
If the lamp has a fabric lampshade, treat it as well.
Wait until the lamp is completely dry before plugging it in.

How to treat a bedroom

BASE BOARDS

• wood: loosen the base board and detach it from the wall, then treat the crevice and base with the FC. Alternatively, remove the base board and treat the inside of it and the part of the wall behind it. If the base board is not removable, treat the top and the base with the FC, working at half the regular speed. • tiles: treat the upper part and the base. If there are any cracks, treat them with the FC.

Curtains: wash and suspend, especially if close to the bed.

Other items of furniture: treat backrests and lower parts. Unless the infestation is severe, it is unlikely that furniture far away from the bed will be affected, especially inside. If in doubt, or in the presence of evident signs of infestation, thoroughly treat cracks, joints, holes, etc. If an item of furniture is infested on the inside, its con- tents must be disinfested by washing (clothes, linens) or exposed to superhe- ated dry steam (shoes and other not washable items).

Books: Bedbugs tend to nest in bookshelves, in the spaces between the books and the wall (or behind the bookshelf), or in small spaces between pages (for instance, if pages have been folded over, there is enough space for a bedbug to nest) or in “classic” bound books in the space between the spine and the binding of the book. If the infestation is limited (as in the first two cases), treat with superheated dry steam; if not, seal books in plastic bags and put them in the freezer or deep freezer for at least 15 days.

Walls: treat cracks in the plaster, nail and screw anchor holes and all wall surfaces behind infested items of furniture. Individual bedbugs may be eliminated by resting the nozzle against the wall (trapping the insect) and briefly giving off superheated dry steam. By doing this, you will prevent accidental detachment of the bug from a surface to which it cannot adhere well.

Door and window frames: treat the crack between the frame and the wall and joints with the FC.

Bags, luggage, and shoes: treat seams, zippers and hook&loop closures on the inside and outside.

Clothes, linens, etc.: wash if stored in infested items of furniture.

Chairs: if located near the bed or definitely infested, treat all parts, especially the bottom of the seat.

Sofas and armchairs: treat following the instructions for upholstered bed frames, carefully treating seams, folds in the fabric, crevices and screw holes.

Sofa beds: Treat in the same way as a bed.

BASE BOARDS

The majority of materials can be treated with superheated dry steam following the instructions given without any problems. However there is a risk of damage to certain materials, such as: • very light non-woven fabrics: often used to cover the underside of cheaper sofas, they can form holes if the steam nozzle is held too close to them or held in the same position for too long. • low quality porous particleboard: this material sometimes tends to swell somewhat if exposed to superheated dry steam for too long. • plastic: some cheaper kinds of plastic can be deformed by heat. Treat these materials from double the usual distance.

POLTI DISCLAIMS ANY LIABILITY FOR ANY DAMAGES WHICH MIGHT OCCUR TO HOUSEHOLD OR OTHER ITEMS WHEN TREATED WITH THE POLTI CIMEX ERADICATOR.

Strategy for continued treatment

Effective disinfestation requires more than one treatment, as some bugs are likely to escape the first treatment, especially those in crevices.

Even experts prefer to adopt a strategy based on at least two treatments, as they are perfectly aware that even with the most thorough treatment, it is almost inevitable that some bugs may be left alive. The first treatment has the essential purpose of reducing the infestation as dra- stically as possible, reducing the disturbance caused by the insects to a more tolerable level. In addition, elimination of the majority of the bugs present ma- kes many of the most desirable nesting locations (the ones closest to the host) “available” once again, and they tend to be rapidly reoccupied by the surviving bedbugs in the area, which were hidden in more distant places. Because of this, it is best to wait 10-15 days after the first treatment to allow the insects to “regroup” around the bed. Proceed with a second treatment at this time, following the same procedure, but limiting treatment to the bed and an area of 3-5 ft (1-1.5 metres) around it. One or two additional treatments may be necessary, of the same type as the second, again waiting 15 days between treatments. A bedbug infestation may be considered permanently eliminated when the host has no bites and no bugs (or traces of their presence) are found for at least two months following the most recent treatment.

Q&A - Questions and answers

Are bedbugs invisible to the naked eye?

No. Bedbugs are perfectly visible with the naked eye at all stages in their life cycle. It may be more difficult, especially for an untrained eye, to identify new-born nymphs and eggs, because of their small size but they are visible.

Are bedbugs attracted by dirt?

No, not at all. Bedbugs are not interested in hygiene, but only in the opportunity to feed on a host and nest close by.

Is it true that bedbugs have reappeared because DDT has been prohibited?

No. This rumor is false. The first bedbugs resistant to DDT were discovered only a few years after the product was introduced on the market, and less than twenty years later, DDT was already not recommended for treating bed-bugs as they had become resistant to it all over the world.

I read on the internet that bedbugs can throw themselves onto hosts from the ceiling. Is this true?

It is true that bedbugs can fall onto a host from the ceiling, but this is the result of a chance combination of events rather than a specific voluntary act of the insect. It may happen, but they don’t do it on purpose.

I read on the internet that as steam has no residual effect, it must be combined with chemical treatment. Is this true?

No. Steam is normally used as an alternative to insecticides to prevent undesired side effects. These are two completely different approaches to disinfestation which are hard to combine. Moreover, the type of steam these websites are talking about is different from the superheated dry steam produced by Polti Cimex Eradicator, and do not achieve the same results.

What makes Polti Cimex Eradicator steam different?

A conventional steam generator produces steam at a temperature of 248°F (120°C) to 302°F (150°C); Polti Cimex Eradicator produces saturated superhea- ted dry steam at a temperature of 356°F (180°C), which is much more effective for disinfestation as it does not generate condensation. It causes a significant increase in temperature change which kills bedbugs and their eggs on contact.

What is HPMed and what does it add? Can I use Polti Cimex Eradicator without HPMed?

HPMed is a natural detergent which, combined with the steam, eliminates the characteristic smell of bed bugs. It does not prevent, destroy, repel or mitigate pests. Polti Cimex Eradicator may be used also without HPMed.

How long will a bottle of HPMed last? Can I leave it on the appliance after use?

A bottle of HPMed lasts for about one hour of continuous steam production. In view of the speed at which the appliance works, about 10 seconds per square feet, a single bottle of HPMed may be used to help clean about 430 square feet (40 square metres) of surfaces. You may leave the bottle of HPMed connected to the appliance unit till its next use.

Where can I find bottles of HPMed?

You can buy bottles of HPMed from www.poltieradicator.com.

Can I use Polti Cimex Eradicator on electrical appliances while they are plugged in?

Polti Cimex Eradicator may only be used on electrical appliances when they are unplugged. Unplug appliances before treating them with Polti Cimex Eradicator.

DO NOT USE POLTI CIMEX ERADICATOR ON APPLIANCES CONNECTED TO AN ELECTRICAL SOURCE

Won't the jet of steam blow bedbugs off surfaces?

There is no risk of spreading the bedbugs around. Some insects may fall to the ground if they are on walls or vertical surfaces when struck by the steam and killed. They fall off because they are dead.

Is it true that bedbugs can hide practically anywhere?

Yes and no. Bedbugs are very good at exploiting every possible hiding point, so they really can adapt to practically any situation. But by nature they are driven to nest close to their hosts, which is why infestations always tend to develop, starting from the point where the host rests and growing outwards. Insects may really "hide everywhere" only if the whole room has become in- fested, or if the bedbugs have been disturbed and dispersed due to incorrect practices, such as use of unsuitable insecticides.

Do bedbugs carry diseases?

At the moment there is no scientific evidence that bedbugs can carry diseases directly, even though the insects have been found to contain various pathogens. It is possible that the insects may be capable of indirectly transmitting the hepatitis B agent, but the specific conditions required for this to happen are not normally found in the home.

Is it true that bedbugs bite three times in a row?

They may do this, but it is not typical behavior. The high frequency of bites "in a row" is a result of the fact that bedbugs try not to climb onto their host's skin, preferring to bite while staying on a sheet in contact with the skin, for example. As the edge of a piece of fabric is normally straight, bites tend to appear in a row.