Protect the reputation of your hotel

Study of the main pests that affect the hospitality sector and preventive measures.

November 2017

Anticimex®

Introduction

At Anticimex, we offer a pest prevention and control service for many of the leading hotel chains. As a result, we know the importance of pest control in the sector, given that pests can result in economic, reputation and customer losses.

There are several types of pests that can affect hotels, but the worst of all are bed bugs *(Cimex lectularius)*. As these types of pests primarily affect the rooms in which guests stay, the probability of guests being the first to notice the pest is high.

In addition to bed bugs, there are other common pests that can affect hotels. Most of them can be found primarily in food storage areas and in kitchens. In these areas, we find cockroaches, moths, weevils, fruit flies, or rodents. Due to their high resilience and reproductive capacity, these pests can spread quickly to other areas of the hotel, thus making it difficult to eradicate the problem completely.

The Anticimex team consists of experts in the field of biology with more than 20 years of experience in pest control in the hotel sector. This has allowed us to perform a study of the main pests that can affect hotels, highlighting the most common pests and those that have seen the greatest growth in the past 5 years: bed bugs and cockroaches.

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80% of travelers consult a minimum of 5 reviews before completing a reservation.

Goal

Protect the hotel's reputation

Hotel businesses are one of the sectors most vulnerable to attack by pests, as a single isolated incident can jeopardize the reputation of the entire chain.

In addition, due to social networks and web pages, it's very easy nowadays for people to express opinions publicly about accommodation. Ratings received from other customers are often one of the main reasons why people decide to make hotel reservations, and if incidences of pests appear in a hotel, the bad reputation it receives can seriously affect its business.

Reviewed on 10 November 2010

This hotel has a real bed bug infestation!!!!!

We stayed four nights, and by the second night I was covered in pimples with massive itching. At first we thought it had been a spider, when we arrived in Madrid, as in Lisbon I had no reason to see a doctor; since the visit cost nothing more than 150 euros; my doctor on 12 October in Madrid diagnosed me with BED BUG bites. I DON'T RECOMMEND ANYONE TO STAY AT THIS HOTEL.
JULIA

Reviewed on 17 September 2016

Insect infestation and fraudulent information

Hygiene conditions leave much to be desired. ANTS, COCKROACHES and dirty sheets are some of the things that, for health and hygiene reasons, should not be allowed on any premises open to the public.

If you are on time, AVOID GOING.

Prevention and early detection

In hotels, it's especially necessary to prevent the appearance of pests, as they are establishments vulnerable to their emergence due to the large influx of people in their premises.

"The best tool for fighting common pests is prevention."

When pests attack hotels, simply controlling them is not enough; their complete eradication is essential. The problem with pests is that they have a tremendous capability for survival and reproduction. This means that they can reach a considerable population within a short period of time. The likelihood of eradicating pests successfully is directly proportional to their number, which is why it's so important to act at the first sign of infestation.

Preventing pest problems in hotels is based on:

Designing the premises in a way that makes cleaning easier.

Although many pests, such as cockroaches or bed bugs, are traditionally related to lack of hygiene, they are not actually associated with this factor. However, it's true that lack of cleaning facilitates their reproduction and subsequent spread. Therefore, **it's essential to design premises that allow for rapid daily cleaning and disinfection.**

Prevent the appearance of shelters that can be used by pests.

Keeping spaces open and free of clutter is one of the main ways of preventing the formation of shelters that can be used by pests.

The use of wooden baseboards, false ceilings or floating platforms is not recommended, as a large number of pests such as cockroaches, rodents, ants or bed bugs can find shelter in them. Joints between baseboards and frames should always be sealed.

The use of wallpaper is not recommended, as any imperfections can serve as shelters for small insects.

It is not recommended to make holes; it's better to use alternative methods to hang pictures or shelves, as they can serve as shelters.

Make it difficult for pests to enter the hotel.

It's important to inspect any external items that enter the hotel. This is especially important in the case of food brought into warehouses or kitchens.

To prevent the entry of pests, it's important to **keep doors and windows closed and seal any holes that communicate with the outside** and, in the case of drains or pipes, use screens to prevent the entry of pests.

In the case of bed bugs, one of the main routes of entry is through guest luggage, so for this reason rooms should be inspected periodically.

Hotel employees should perform bed inspections periodically.

Another key element is to perform periodic reviews of the premises to guarantee that they are free of pests and, if not, detect them early.

Avoid fixing furniture in a way that makes inspection difficult.

Bed bugs *(Cimex lectularius)*

Bed bug infestations have increased 95% in the last 5 years.

Bed bugs *(Cimex lectularius)* are the worst pest that can affect hotels as they affects the rooms where guests are staying.

Bed bugs are a very old pest that has been affecting humans for centuries. In Europe, the pest was controlled for decades due to aggressive spraying programs in the 1940s and 1950s. However, the small populations that were resistant re-emerged strongly at the end of the 20th century, managing to expand worldwide.

Today, cases of bed bug infestation are becoming more frequent. This problem is especially complicated in the hospitality industry, as a single bed bug incident can jeopardize the reputation of an entire hotel chain.

The bed bug is the pest species whose impact has increased the most, by 95% in the past five years, according to the Spanish National Association of Pest Control Companies (ANECPLA).

Main routes of spread

In recent years, the spread of this insect has been favored by an increase in international travel that allowed infested materials to be transported from one place to another in the world. Bed bugs can be regarded as the pest that causes the biggest impact on the hotel sector and all indications are that its presence will increase still further in the future. The other factor that has favored the spread of bed bugs is their resistance to a large number of insecticides.

"Their presence is not related to hygiene problems."

Any hotel, regardless of its category, can suffer from bed bug infestations, as its presence is not related to the tidiness or hygiene of the affected areas.

The main form of entry is through accidental transportation of infected objects. These insects have the ability to hide and easily go unnoticed in suitcases, luggage, bags and even people's own clothes. If we also consider the fact that hotels and other lodging premises are areas through which many people transit, the risk of suffering an infestation increases exponentially.

Consequently, hotels and other lodgings are highly susceptible to bed bug infestations, as numerous guests from different parts of the world are accommodated each day who may potentially have brought an infestation with them.

"The best prevention is early detection of the problem."

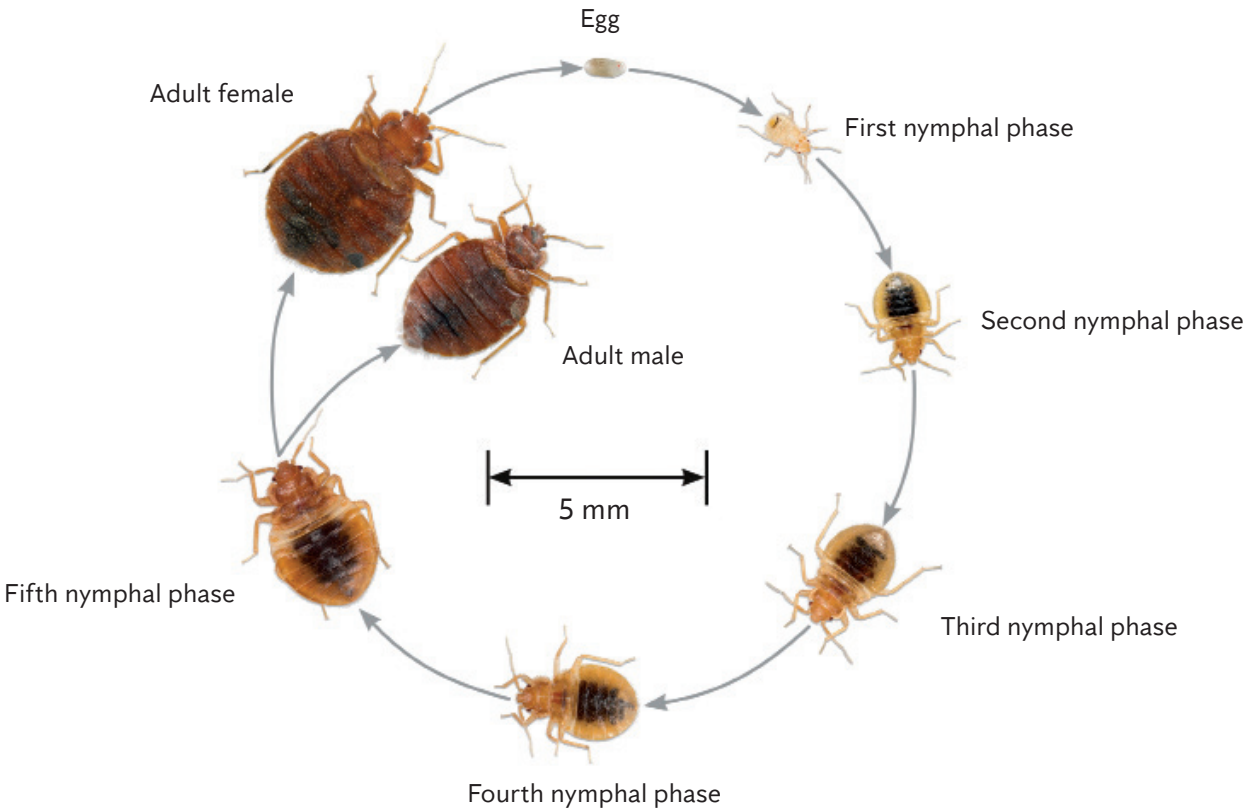
Morphology of *Cimex lectularius*

Bed bugs are wingless insects with a short, broad head, prominent eyes and an oval, flattened body. They have short, fine hairs on their body and three pairs of thin, well-developed legs. In females, the abdomen is oval and symmetrical, while in males it's more elongated and asymmetrical. The size of bed bugs depends on their phase of development. This insect goes through various stages of growth. In the adult stage, they have a length ranging between 5 and 10 mm. In contrast, juvenile bed bugs, called nymphs, can measure just over 1 mm.

Phases of bed bugs

Bed bugs go through 7 phases of development. The smallest bed bugs (nymphs) are cream-colored or translucent, taking on a dark brown color as they grow.

Nymphs and adults feed exclusively on blood and need to feed to molt and progress to the next phase or to reproduce.



Feeding habits

The common bed bug, having the scientific name *Cimex lectularius*, is an insect that bites its hosts, mainly people, to feed by sucking their blood.

"Its activity in hotels is basically nocturnal."

Bed bugs have nocturnal habits, staying hidden in shelters during the daytime. Shelters are often found in hotel rooms near beds: hidden in crevices in headboards or other nearby furniture, inside quilt seams, in curtains, on carpets and under floating platforms, wooden baseboards or false ceilings.

"Bed bugs can survive for up to a year without feeding."

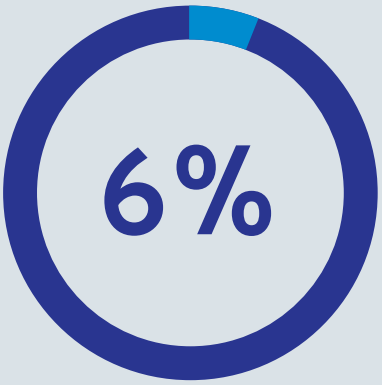
Bed bug bites cause an allergic reaction in only 30% of affected people, making them difficult to detect.

Their bites can provoke an intense skin reaction, causing swelling and redness in the affected area, with more or less intense itching and may be the main triggering event of claims in hotels.

Tips for early detection

The best method of early detection of bedbugs in hotels is by involving all staff to be alert to any symptoms of infestation. To achieve this, every employee, from reception staff to maintenance workers, should have specific knowledge about bed bugs: what they are, how they are identified, where they are found, what signs indicate their presence, etc.

20% of adjacent rooms are also infested.



6% of rooms above and below are also infested.

To receive such training, it's advisable to contact a pest control company specialized in bed bugs.

Normally, they can be found between 1 and 2 meters away from the bed, so the following measures are recommended for early detection:

When making the bed, cleaning staff should:

- Check for the presence of bloodstains on sheets.
- Check mattresses and beds with fecal stains. Bed bugs leave droppings around their hiding places. You can see small black spots on surfaces, furnishings and textiles.
- Avoid bringing cleaning carts into rooms. These should always be left out in the hallways. In addition, dirty bedding and towels should always be placed in well-sealed plastic bags for transport to the laundry.

Periodic routine inspection by maintenance staff:

- Check the bed head, structure and legs.
- Remove mattresses to make it easy to see live bed bugs or signs.
- Turn the bed on one side and check the structure for fecal stains.
- Check the sealing of the conduit and ducts that interconnect the rooms.

Staff may also introduce or spread these parasites in the premises accidentally. Therefore, it's very important that all staff areas in the hotel are also inspected.

What to do if presence is detected in a room

When pests are detected in a room and regardless of whether it's a bed bug infestation or not, the most important thing is to get an expert pest control technician to inspect the room and identify the problem, while not moving any object in the room outside or introducing anything from outside.

All rooms adjacent to the infested room should also be carefully inspected. Bed bugs can easily move from room to room through small holes or cracks in the walls. 20% of rooms adjacent to an infested room are also infested and 6% of rooms above and below the infested room are also infested.

And finally, hotel staff should be prevented from trying to eliminate the bed bug infestation themselves. The level of resistance that bed bugs have developed to the insecticides currently used to combat them favors the spread and growth of the pest.

Bed bug prevention and control treatments

The most effective and environmentally friendly method of controlling bed bugs is treatment using heat (dry steam) without using insecticides.

Unlike other treatments available in the market, by applying a constant temperature above 122° F, it's possible to eliminate all of the stages of bed bugs (eggs, nymphs and adults). Biocide-based treatments do not destroy the eggs and re-infestation after a few weeks is very common.

In addition, by not using insecticides, no safety period of any kind is required, making this the safest treatment for people's health and the environment:

- **100% Effective Treatment.** Ensures complete elimination of bed bugs in their different phases: eggs, nymphs and adults.
- **Treatment WITHOUT Biocides,** preventing the spread of the pest.
- **100% Environmentally Friendly Treatment,** with no need to vacate the area during/after treatment.

Complementary measures such as fitting 100% cotton bed bug covers avoid having to dispose of mattresses or cushions.

The German cockroach can produce

+30,000

individuals in one year.

Cockroaches

These are unsanitary insects that multiply rapidly. Their great ability to adapt and survive in almost any habitat make them a difficult pest to control.

Types of cockroaches in Spain

From the 3500 species of cockroaches that exist in the world, there are three main ones present in New England:

German cockroach: These are light brown, small (1-2 cm long) and have long, non-functional wings. They are characterized by having two dark lines on the pronotum (dorsal plate behind the head). Females always carry the ootheca, a kind of elongated capsule that contains the eggs and that is inserted in the back of the insect.

Oriental cockroach: These are dark brown, almost black in color, larger than German cockroaches (2-2.5 cm long). Females have rudimentary wings, unlike males that have well-formed wings, although neither sex can fly. Females only carry the ootheca for about 30 hours without waiting for the eggs to hatch.

American cockroach: This is the largest species, being able to reach 5 cm in length. They are reddish in color. In males, the wings can extend beyond their body. This species has the ability to fly. Females carry the ootheca until they find a safe place to drop it.

COCKROACH IDENTIFICATION TABLE			
			
	German cockroach *(Blattella germanica)*	Oriental cockroach *(Blatta orientalis)*	American cockroach *(Periplaneta americana)*
LENGTH	13 to 16 mm	20 to 35 mm	34 to 53 mm
COLOR	Light brown with two black bands on the pronotum (behind the head).	Dark, from reddish brown to black.	Brown with clear markings on the pronotum.
WINGS	They cover the tip of the abdomen.	Vestigial wings in females. Short wings in males	Only in adults. In females, it's the same length as the abdomen. In males, it extends beyond the tip of the abdomen.
REPRODUCTION	Yellow-brown ootheca. Incubation time: 14-28 days. A female can produce about 5 oothecae throughout its life, with an average of 30-40 eggs per ootheca. The time it takes to complete its lifecycle ranges from 54 to 215 days.	Almost black ootheca. Incubation time: 44 days. A female can produce between 5 and 10 oothecae throughout her life, with an average of 18 eggs per ootheca. The time required to complete the entire lifecycle is influenced by temperature, ranging from 200 to 800 days.	Dark ootheca. Incubation time: 50-55 days. A female can produce about 10 oothecae throughout its life, with an average of 14-16 eggs per ootheca. The time it takes for an egg to develop into an adult is highly influenced by temperature and ranges from 6 months to over 24 months.
EXCREMENT	Particles like pepper on the wall, near the shelters.	Similar to the mouse, with a rounded end and a pointed end.	Similar to the mouse but without a tip and ribbed.
HABITAT	Warm and humid areas (optimally 33°C). They prefer kitchens and bathrooms. They like to get into tight fissures.	Below ground level, in small, damp spaces, basements and drains. Optimal temperature between 20 and 29°C, although they are quite tolerant to low temperatures.	They prefer warm and humid basements (optimal between 21-33°C) and sewers. They search for food mainly on the first floor.
LONGEVITY	3 - 6 months	4 - 6 months	14 - 15 months

Reproduction

After fertilization, the cockroach lays the protected eggs inside a resistant capsule called the ootheca. Incubation time varies by species and environmental conditions, ranging from 2-4 weeks for the German cockroach to 50-55 days for the American cockroach. After the first molt, the nymphs are very similar to adults. An American cockroach female and her offspring can produce 800 individuals in one year. A female Oriental cockroach and its offspring can produce about 200 offspring in one year. The German cockroach is the most prolific and common in hotels. One female and her offspring can produce more than 30,000 individuals a year.

Feeding habits and behavior

During the night, their activities focus on searching for food, a mate or water and this is the time when they leave their hiding places. During the day, they often hide in cracks or crevices that offer warm temperatures and humidity, as well as environmental protection. Although they are not social insects, they live more or less in large groups depending on the degree of infestation in the area.

Cockroaches are basically active at night.

"The presence of cockroaches during the daytime is indicative of a large infestation."

Although they feed on almost anything, they show a clear preference for decomposing organic matter, grease, starch, sugar or fermented beverages like beer. These are foods that are readily found in the restaurant area of a hotel.

When the degree of infection is high and food is scarce, they can even eat hair, cosmetics, soap, and even clothing or paper.

"Cockroaches hide in hot and humid places."

A cockroach's body is fully adapted to cracks and crevices. Its oval and flattened dorsoventral area allows it to squeeze into almost any place.

Their favorite shelter is one that provides both heat and humidity, such as garages, warehouses, boiler rooms, or basements. Cockroaches also have a special preference for ovens, drawers, pipes and the underside of washing machines and refrigerators, since these areas often give them shelter and heat at the same time.

Cockroaches are a health risk

"The presence of these insects can represent a significant health risk."

Cockroaches can transmit different forms of gastroenteritis, dysentery or salmonellosis by transporting the microorganisms that cause these diseases on their legs and body, contaminating in turn the utensils or surfaces used for preparing food, or even the food itself. Cockroach debris can also contain allergens that provoke allergic responses in particularly susceptible people.

In addition, the presence of cockroaches can result in complaints from guests, affecting the reputation and image of the hotel in the market.

Detecting signs of a cockroach presence

Cockroaches are one of the most persistent and unpleasant pests. Furthermore, their high reproductive potential, ability to adapt to changing and hostile environments, and ease of hiding in inaccessible places allow them to reach high densities in a very short time. For this reason, early detection of cockroach infestations is vital to be able to eradicate it successfully, since the probability of elimination decreases as the population grows.

"When a cockroach infestation is suspected, the best proof of its presence is when one of them can be seen."

To find them, it's very important to keep in mind that cockroaches can be located both on the ground and in high places, as they can run on almost any surface, including ceilings and walls.

Night-time inspection is the most effective, since the insects are active at night. Because cockroaches often leave their colonies primarily to search for food and water, nighttime inspection should focus on places close to food or water sources such as pantries, sinks, or garbage.

Advice to prevent cockroach problems

Cockroaches enter hotels either from the street (through drains, for example), or by accidental transport from infected areas, such as inside bags of potatoes, or onions, plastic bags, egg cups, cardboard boxes, furniture or domestic appliances.

Once in our premises, cockroaches multiply very quickly and their elimination is very difficult, so prevention is the best strategy to avoid future problems.

Efforts should focus on eliminating factors that may contribute their proliferation, sealing off pathways and eliminating their sources of food and water:

Avoid sources of humidity: leaks in pipes and sinks, humidity produced by condensation in refrigerators, etc.

Seal cracks and crevices so that cockroaches cannot hide.

Inspect food products before storing them to detect an infestation in its place of origin.

Keep doors and windows closed.

Periodically run water from sinks and toilets to prevent access of cockroaches through dry siphons.

Keep areas under and behind appliances clean.

Deep-clean the floors.

Store food in closed containers.

Empty garbage cans frequently.

Cockroach prevention and control treatments

We develop quick, effective and discreet solutions that are adapted to the needs of each hotel, complying with all legislative requirements.

Situational diagnosis

The initial inspection of the facilities allows the initial diagnosis of the condition and situation of the pest so that an action plan can be prepared. It also allows for evaluation and assessment of those aspects that may favor the appearance or spread of a pest. In short, locate and identify the areas with the highest infestation risk and define the preventive measures and structural adaptations necessary to improve treatment results.

Treatments to control cockroaches

To perform the treatment, it's important to distinguish between 3 main areas of the hotel:

Food areas include all bars, restaurants, buffets, storerooms and other outbuildings where food and beverages are stored or handled. The main pest in these areas is *Blattella germanica*.

Insecticidal gels are applied in the areas identified as showing activity. At the same time, a monitoring system is implemented which gives us an idea of the degree of infestation, evolution and distribution of the pest.

Communal areas: this group includes all systems of manholes, treatment plants (if they exist), corridors, staff areas. Here we mainly find *Periplaneta americana* coming from the manhole systems of the enclosures, machine rooms of swimming pools, false ceilings, etc.

Manholes are treated by applying gel as a chemical barrier to covers and other areas identified as possible exits for the insects from the system to the outside.

Guest rooms. In guest rooms, the procedure is the same as in the food areas, i.e. using gels.

Conclusions

The main problem in the event of an infestation of bed bugs or cockroaches is that any hotel establishment, whatever its category, can be exposed to infestation. In addition, an infestation of these insects can grow and become established in just a few weeks, dramatically reducing the chances of eliminating it entirely.

"The main tool to prevent bed bug or cockroach infestations in hotels is prevention and early detection of the problem".

Since its reappearance at the end of the 20th century, the bed bug infestation has managed to spread worldwide, constituting what is already known as "the resurgence of bed bugs". An example of this would be Australia, where the bed bug population has increased 4,500% in just 7 years.

One of the factors that most favors their expansion is the movement of people on an international scale, since this is the main way of spreading the infestation. For this reason, the hotel industry is the sector most exposed to infestations.

Along with bed bugs, another of the most problematic pests in hotels is cockroaches. In both cases, their presence is popularly associated with lack of hygiene and cleanliness, although in reality those are not causative factors.

"Any incident involving these insects and hotel guests can ruin the business's reputation forever."

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