



## Letter to the Editor

**Cimex (bedbug) infestations in France: A call for action**

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Centuries ago, several industrialized countries, notably France, eradicated bedbug infestations. Recently, reemergence has been observed, partly attributable to increased travel worldwide, pest management tactics changes, and chemical resistance development among bedbugs. Data from Environmental and Occupational Health and Safety indicate that bedbug infestations were discovered in 11 % of French homes in 2017–2022. According to the agency, the annual cost to householders to cure their houses for persistent bugs is €230 million.

Bedbugs have become increasingly common in France, with peak infestations occurring in summer. The city is battling a bedbug infestation as the 2024 Summer Olympics in Paris draw nearby. There have been allegations of bedbug infestation in many businesses. These pests were first discovered in summer lodgings, including hotels and vacation rentals. There have been several claims from tourists about insects on the Paris transportation system, including the Métro, fast trains, and airports. Due to their concern about sitting on infected seats, several visitors have said they plan to stand when riding Métro or local trains [1, 2].

Parisian authorities have reported increased requests for help, and private businesses have reported an increased need for pest control services. Public and private pest treatment companies have been actively fighting bedbug infestations such as inspections, treatment, and the establishment of best practices for prevention and control. Despite these allegations, the French Minister of Health has reiterated that the nation is not "being invaded by bedbugs" and has advised the populace to maintain their calm [3].

People in France should be cautious and take precautions to avoid bedbug infestations, particularly during peak tourist seasons. Regular inspections, appropriate cleanliness, and bed bug education are necessary to reduce the spread of these pests. In France, people have become more aware of bedbugs and how to avoid them. Educational programs and initiatives have been developed to educate the public about bedbug infestation warning signs, preventative techniques, and how to handle infestations. Bedbug control remains daunting in many areas, particularly with the growth of insecticide-resistant bed bug populations. Various chemical and nonchemical treatments have been described in the literature; however, they are often insufficient or only partially

successful. Government organisations, companies, landlords, pest control experts, and the general population must collaborate to implement a thorough bedbug prevention strategy. Early identification, education, and preventive actions are critical for preventing bedbug infestations and reducing their effects on communities. Herein, we provide some proposals for resolving the epidemic as quickly as possible in Paris and preventing the further spread of bedbugs in other countries (Table 1).

To effectively control bed bug infestations, bed bug detection must be performed immediately. This early detection is essential for lowering bedbug management expenses and preventing the spread of bedbugs from affected homes to other areas. The agency strongly recommends that travellers promptly place their belongings on a washing machine upon arrival to avoid unintentionally transporting unwanted hitchhikers. The use of high drying temperatures could effectively eliminate these pests. The Environmental Protection Agency also cautions against storing suitcases under beds, emphasising the importance of inspecting luggage [4].

Increased vigilance measures should be established to avoid infiltration from the outside, as should more rigorous inspections of ship components from France to other nations. Pest management professionals should use visual inspections to detect bedbugs and assess the amount of infestation inside rooms, flats, or buildings. This technique thoroughly investigates the locations, including wall cracks, furniture gaps, electrical switch plates, and other possible hiding sites.

Monitoring devices are part of integrated pest management, an

**Table 1**

Recommendations for Prevention of Bedbugs. Control strategies for managing bedbugs require an interdisciplinary approach incorporating both chemical and non-chemical techniques, emphasising four primary goals.

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| (i) prevention,  |
| (ii) surveillance and the practice of Integrated Pest Management (IPM),                  |
| (iii) education and effective communication,   |
| (iv) exploring innovative, high-efficiency methods or compounds for eradicating bedbugs. |

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effective method for removing bedbugs. These tools can be divided into passive and active monitors. Active monitors use heat or carbon dioxide as attractants, whereas passive monitors use adhesive pads to catch pests. Hotels, furnished flats, dorms, homeless shelters, and other places that house transitory populations need managers to ensure staff members are taught to recognise bedbug activity and respond quickly if an infestation is discovered. Routine replacement of beds, mattresses, and other bedding components is a preventative step managers may use.

Utilising diverse communication channels, such as television, radio, social media, and informational pamphlets, for the dissemination of information; formulating and enforcing regulations about the sale and disposal of secondhand furniture and mattresses; initiating educational campaigns to educate the public about bedbugs, their habits, and methods of prevention; enacting legislation mandating swift action by property managers and landlords to address bed bug infestations; providing training and certification programs for pest control professionals specialising in bed bug management; allocating resources for research on innovative bed bug control methods, including the development of safer and more efficient chemical solutions.

Alternative approaches include preserving cleanliness in impacted areas, consistently decluttering through regular vacuuming and washing linens with hot water, positioning bed bug traps or interceptors at the bottom of beds and furniture, appropriate disposal of heavily infested items, and sealing wall holes and cracks where bedbugs might hide [5].

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#### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### References

- [1] Journal TWS. 'Punaise!' Paris Battles Bedbug Outbreak, Real or Imagined. <https://www.wsj.com/world/paris-bedbug-outbreak-22b6e915> 2023.
- [2] News C. Paris is crawling with bedbugs. They're even riding the trains and a ferry. <https://www.cbsnews.com/news/paris-bedbugs-france-infestation-hotels-homes-even-rains/2023>.
- [3] Travel C. France's health minister says country not 'invaded by bedbugs' and urges calm. <https://editioncnn.com/2023/09/30/travel/france-bedbugs-paris-intl-hnk/index.html> 2023.
- [4] Leisure T. What to Know About the Bed Bug Outbreak in France — and How to Prevent Bringing Pests Home.

<https://www.travelandleisure.com/paris-france-bedbug-outbreak-olympics-8304124> 2023.

- [5] Doggett SL, Lee CY. Historical and contemporary control options against bed bugs, cimex spp. *Annu Rev Entomol* 2023 Jan 23;68:169–90. <https://doi.org/10.1146/annurev-ento-120220-015010>. Epub 2022 Oct 5. PMID: 36198396.

Wael Hafez

*NMC Royal Hospital, 16th Street, Khalifa City, Abu Dhabi, United Arab Emirates*

*Medical Research Division, Department of Internal Medicine, The National Research Centre, Cairo, Egypt*

E-mail address: [Wael.hafez@nmc.ae](mailto:Wael.hafez@nmc.ae).

Waleed Farouk Mohamed

*Department of Internal Medicine, Healthpoint Hospital, Abu Dhabi, United Arab Emirates*

E-mail address: [dr.waleed.farouk@gmail.com](mailto:dr.waleed.farouk@gmail.com).

Feras Al-Obeidat

*College of Technological Innovations, Zayed University, Abu Dhabi, United Arab Emirates*

E-mail address: [feras.al-obeidat@zu.ac.ae](mailto:feras.al-obeidat@zu.ac.ae).

Sarya Swed\*, Hidar Alibrahim, Haidara Bohsas

*Faculty of Medicine, Aleppo University, Aleppo, Syria*

Bisher Sawaf

*Department of Internal Medicine, Hamad Medical Corporation, Doha, Qatar*

E-mail address: [BSawaf@hamad.qa](mailto:BSawaf@hamad.qa).

Asrar Rashid

*NMC Royal Hospital, 16th Street, Khalifa City, Abu Dhabi, United Arab Emirates*

*School of Computing, Edinburgh Napier University, Edinburgh, UK*

E-mail address: [asrar.rashid@napier.ac.uk](mailto:asrar.rashid@napier.ac.uk).

Alfonso J. Rodriguez-Morales

*Faculty of Health Sciences, Universidad Científica del Sur, Lima, Peru*  
*Gilbert and Rose-Marie Chagoury School of Medicine, Lebanese American*

*University, Beirut, Lebanon*

E-mail addresses: [arodriguezmo@cientifica.edu.pe](mailto:arodriguezmo@cientifica.edu.pe), [alphonso.morales@lau.edu.lb](mailto:alphonso.morales@lau.edu.lb).

\* Corresponding author. Faculty of Medicine, Aleppo University, Aleppo, Syria.

E-mail addresses: [sarya\\_swed@alepuniv.edu.sy](mailto:sarya_swed@alepuniv.edu.sy), [saryaswed1@gmail.com](mailto:saryaswed1@gmail.com) (S. Swed), [haideralibrahem1999@gmail.com](mailto:haideralibrahem1999@gmail.com) (H. Alibrahim), [www.haidara.bohsas@gmail.com](http://www.haidara.bohsas@gmail.com) (H. Bohsas).