

Control, treatment of bed bugs challenging

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A review of previously published articles indicates there is little evidence supporting an effective treatment of bites from bed bugs, that these insects do not appear to transmit disease, and control and eradication of bed bugs is challenging, according to an article in the April 1 issue of *JAMA*.

Bed bugs (*Cimex lectularius*) have been known as a human parasite for thousands of years, but scientific studies of this insect are recent and limited. International travel, immigration, changes in pest control practices and insecticide resistance may have contributed to a recent resurgence of this blood-sucking insect in developed countries. Bed bug infestations have been reported increasingly in homes, apartments, hotel rooms, hospitals, and dormitories in the United States since 1980, according to background information in the article. Hiding places are usually within about 3 to 6 feet of suitable hosts and include seams in mattresses, crevices in box springs, backsides of headboards, spaces under baseboards or loose wallpaper. Health consequences include biting and skin and systemic reactions. The potential for [bed bugs](#) to serve as transmitters of disease and optimal methods for bed bug pest control and eradication are unclear.

Jerome Goddard, Ph.D., of Mississippi State University, and Richard deShazo, M.D., of the University of Mississippi Medical Center, Jackson, examined the evidence regarding the health and medical effects of bed bugs and control and eradication strategies. The researchers conducted a search for articles on these topics, identified 53 articles that met criteria for inclusion, and summarized the findings.

The authors report that although transmission of more than 40 human diseases has been attributed to bed bugs, there is little evidence that they are transporters of communicable disease. A variety of clinical reactions to bed bugs have been reported, including skin and rarely systemic reactions. A review of case reports indicated that the usual response to a bed bug bite appears to be no reaction with a barely visible mark at the location of the bite. The most common reactions for which medical attention is sought are lesions. These usually itch, and if not made worse by scratching, resolve within a week. Some patients experience complex skin reactions.

The authors write that the use of any treatment strategy for symptomatic bed bug bites has not been established. Treatments of common and complex skin reactions are usually symptomatic and not evidence based. Treatments that have been used with varying results include antibiotics, antihistamines, topical and oral corticosteroids and epinephrine (adrenaline).

The authors add that bed bugs are extremely difficult to eradicate. No evidence-based interventions to eradicate bed bugs or prevent bites were identified. Pesticide control of bed bugs is complicated by insecticide resistance, lack of effective products, and health concerns about spraying mattresses with pesticides.

"Bed bugs are likely to be more problematic in the future due to travel, immigration, and insecticide resistance," the researchers write.

"Development of effective repellents and public education about bed bugs are also important goals. Research is needed to elucidate the pathogenesis of clinical reactions to bed bug bites so that optimal therapy may be identified."

More information: JAMA. 2009;301[13]:1358-1366

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