

HEALTH

ACHES & CLAIMS | *By Laura Johannes*

Covers to Keep the Bedbugs Out—or In

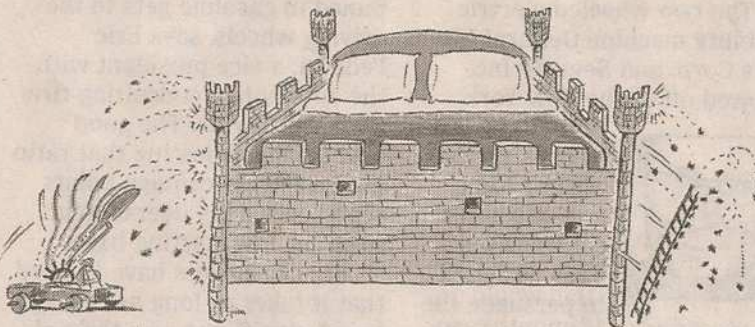
Bedbugs a bother? A growing number of companies are selling mattress encasements to combat bedbugs, protective covers they say can help prevent and control infestations of these nasty blood-sucking insects. Entomologists say encasements are a useful weapon against bedbugs, but these products by themselves won't usually solve the problem.

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Bedbugs, once nearly eradicated in the U.S., have been coming back in recent years. Transported from one location to another in suitcases and on clothing, the tiny brown insects infest homes, typically inhabiting mattresses and box springs, and feed on sleeping humans.

The bites can pass undetected, or leave itchy red welts. A literature review published earlier this month in the *Journal of the American Medical Association* found no evidence that bedbugs transmit disease. But bites can become infected with scratching, according to the article, and, in rare cases, an allergic reaction can result in difficulty breathing.

In recent years, companies have begun marketing mattress encasements that they say are impervious to bedbugs. Products range from inexpensive vinyl to higher-end soft polyester, sometimes with polyurethane laminate on the inside. The fabrics have pores too small to allow the bugs—about the size of an apple seed—to escape or bite through the fabric, the companies say. A queen-size bedbug-proof fabric encasement can cost \$45 to \$120 or



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more; box-spring covers—generally made out of cheaper material—costs about half as much.

Encasements are useful in combatting an infestation, says Ohio State University entomologist Susan C. Jones. A well-made one will trap bugs inside, where they will die of starvation within 18 months.

But encasements can give you “a false sense of security” since bedbugs elsewhere in your house can still crawl onto your bed and bite you, Dr. Jones adds. Bedbugs live in your bed frame, baseboards, furniture, lamps and even the space behind electrical-outlet covers. Buying a new mattress does no good until the infestation is clear, which is a complex process involving removing or killing bugs with heavy vacuuming, steam cleaning and pesticides.

Using encasements can protect a clean mattress and make it easier to detect an infestation early, entomologists say. But it is probably worth it only for people who travel a lot, increasing the risk they’ll bring home bugs, says Jerome Goddard, a medical entomologist at Mississippi State University and an author of the *JAMA* article.

It’s important to buy a good-quality cover, one with a zipper that stays in place and doesn’t have large gaps between the teeth, scientists say. The Pro-

tect-A-Bed, made by **JAB Distributors Inc.**, of Northbrook, Ill., uses a zipper with tiny teeth and a “bug lock” system, a fabric channel with foam backing that keeps bugs inside even if the zipper pulls open slightly.

In developing the Protect-A-Bed, JAB first tested fabric to make sure bugs couldn’t bite through (they couldn’t), then hired an independent lab to put starved, live bedbugs inside the zippered covers and tempt them with a human leg at regular intervals. For the lab test, JAB made three-foot-long test replicas of its encasements, with foam serving as “mattresses.” No bedbugs escaped during the monthlong test, and the company says the full-size versions it sells are made to the same standards as the models.

Companies with similar tests include **Mattress Safe Inc.**, of Cumming, Ga., and **Clean Brands LLC**, of East Providence, R.I., which sells the CleanRest brand. **National Allergy Supply Inc.**, of Duluth, Ga., stretched fabric and zippers over a Mason jar to see if bugs could bite through to human skin on the other side—they couldn’t.

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