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First National Survey Shows Americans' Bedding Can Make Them Sick; Allergens the Culprit

Researchers armed with vacuum cleaners collected samples of the dust in American bedding, and though they found no "lions, tigers or bears," they found plenty of cause for concern in terms of dust mite and cockroach allergens at levels associated with asthma and allergies.

Called The First National Allergen Survey, the study was led by scientists at the [National Institute of Environmental Health Sciences \(NIEHS\)](#), a part of the [National Institutes of Health](#), and done in collaboration with investigators at the [U.S. Department of Housing and Urban Development](#); [Harvard University](#), and [Westat, Inc.](#) Early results of the study will be presented at the [96th International Conference of the American Lung Association/American Thoracic Society](#) and their Canadian counterparts, Wednesday, May 10, at the Toronto Convention Center (Area D, Exhibit Hall, South Building, Level 800). Authors will be available to discuss the study between 11 a.m. and 1 p.m.

The study was done in light of mounting evidence that exposure to indoor allergens from dust mites and cockroaches is a risk factor for the development of allergic diseases and asthma. Indoor dust from five or six different sites in each of 831 homes from 75 different areas across the U.S. was collected, along with demographic and health information of home occupants. The 75 areas were selected as representative of the U.S. with respect to region, ethnicity, socioeconomic status and housing characteristics.

Survey results suggest that over 45 percent of the U.S. housing stock, or approximately 44 million homes have bedding with dust mite allergen concentrations that exceed 2 micrograms per gram of dust, a level that has been associated with the development of allergies. Of these, over 23 percent of U.S. homes or about 22 million dwellings, are estimated to have bedding with dust mite allergen concentrations that exceed 10 micrograms per gram dust, a level associated with the trigger of asthma symptoms in asthmatics who are allergic to these allergens.

Further, results indicate that 17 percent of household occupants reported problems with cockroach infestations in the year preceding the study. Cockroach allergen is estimated present at detectable levels in bedding in over 6 percent of all U.S. homes, representing almost 6 million households. The number of homes with detectable cockroach allergen is expected to be much higher since the kitchen is typically the most common site of cockroach activity. Data on kitchen levels of cockroach allergen will become available next year.

"This study suggests that a large number of U.S. homes contain dust mite allergen levels which pose a significant risk for the development of allergies and asthma," Patrick Vojta, Ph.D., of NIEHS, said. "There are housekeeping practices as well as allergen proof bedding covers that can be used to reduce exposures to high levels of allergens. For people who are not allergic to these allergens, steps to reduce exposure may reduce the chance of developing allergies and asthma. For those who are already allergic and/or asthmatic, steps to reduce exposure may decrease the frequency and severity of the symptoms of these diseases."

The study was selected as one of only 25, out of the approximately 5,000 presented, to be highlighted for special media attention by organizers of the ALA/ATS meeting.

Dr. Vojta will be available at NIEHS through May 5, at (919) 541-0981, or messages may be left for him at his Toronto hotel May 6-10, (416) 924-0611, or FAX (416) 924-1413. He will be back in his office at NIEHS on May 11.

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The URL for this press release is: <http://www.niehs.nih.gov/oc/news/bedding.htm>



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