Medical Xpress

New national study links asthma to allergies

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Researchers at the National Institutes of Health (NIH) have found that more than 50 percent of the current asthma cases in the country can be attributed to allergies, with approximately 30 percent of those cases attributed to cat allergy.

“It has long been debated whether people who develop asthma have a genetic propensity to develop allergies, or atopy,” said Darryl C. Zeldin, M.D., a senior investigator at the National Institute of Environmental Health Sciences (NIEHS). “This new research shows that 56.3 percent of asthma cases are attributed to atopy.” Atopy is a condition that results from gene-environment interactions and can be measured by a positive skin test to allergens (or allergy causing substances in the environment).

The study, available online today in the *Journal of Allergy and Clinical Immunology*, was conducted by researchers at the National Institute of Environmental Health Sciences (NIEHS) and the National Institute of Allergy and Infectious Diseases, both parts of the NIH. The data come from the Third National Health and Nutrition Examination Survey (NHANES III), a nationally representative sample of the population of the United States.

“Sensitization to cat appears to be a strong risk factor for asthma in this study,” said Zeldin. Zeldin and his co-authors, however, point out that some research shows that exposure to cats, particularly early in life, may be a protective factor. “We are not advocating parents get rid of pets, but if you suspect that you or your child might have cat allergies or get asthmatic-like symptoms, you should consult with a physician about the

best course of action for your family," added Zeldin.

The NIH researchers looked at skin test data for ten allergens. A positive skin test reaction to cat allergens accounted for 29.3 percent of the asthma cases, followed by the fungus Alternaria at 21.1 percent and white oak at 20.9 percent. "Each of 10 allergen-specific skin tests was strongly associated with asthma; however, after adjustment by a variety of subject characteristics and all the allergens, only skin tests to cat, Alternaria and white oak were independently and positively associated with asthma," said Peter Gergen, M.D., M.P.H, of NIAID's Division of Allergy, Immunology and Transplantation, a co-author on the paper.

Other allergens tested include: Ragweed, dustmites, Russian thistle, Bermuda grass, peanuts, perennial rye and german cockroach. Approximately 10,500 individuals participated in the skin testing. During these tests, skin was exposed to allergy-causing substances (allergens) and a positive test was determined by the size of the reaction on the skin.

"This study tells us that allergy is a major factor in asthma," Gergen said. "But this study also tells us is that there are many people who get asthma who don't have allergies. We need to do more research to understand what is causing the asthma that is not related to allergies."

"This study confirms that the environment plays a major role in the development of asthma," said Zeldin. "Given the complexity of this disease it won't be easy, but if we can prevent, block or reverse atopy, we could reduce a large proportion of asthma cases."

Source: National Institute of Environmental Health Sciences