

Folic acid may help treat allergies, asthma

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Folic acid, or vitamin B9, essential for red blood cell health and long known to reduce the risk of spinal birth defects, may also suppress allergic reactions and lessen the severity of allergy and asthma symptoms, according to new research from the Johns Hopkins Children's Center.

In what is believed to be the first study in humans examining the link between blood levels of folate - the naturally occurring form of folic acid — and allergies, the Hopkins scientists say results add to mounting evidence that folate can help regulate inflammation. Recent studies, including research from Hopkins, have found a link between folate levels and inflammation-mediated diseases, including heart disease. A report on the Hopkins Children's findings appears online ahead of print in the *Journal of Allergy & Clinical Immunology*.

Cautioning that it's far too soon to recommend folic acid supplements to prevent or treat people with asthma and allergies, the researchers emphasize that more research needs to be done to confirm their results, and to establish safe doses and risks.

Reviewing the medical records of more than 8,000 people ages 2 to 85 the investigators tracked the effect of folate levels on respiratory and allergic symptoms and on levels of IgE antibodies, immune system markers that rise in response to an allergen. People with higher blood levels of folate had fewer IgE antibodies, fewer reported allergies, less wheezing and lower likelihood of asthma, researchers report.

"Our findings are a clear indication that folic acid may indeed help regulate immune response to allergens, and may reduce allergy and [asthma symptoms](#)," says lead investigator Elizabeth Matsui, M.D. M.H.S., pediatric allergist at Hopkins Children's. "But we still need to figure out the exact mechanism behind it, and to do so we need studies that follow people receiving treatment with folic acid, before we even consider supplementation with folic acid to treat or prevent allergies and asthma."

The current recommendation for daily dietary intake of folic acid is 400 micrograms for healthy men and non-pregnant women. Many cereals and grain products are already fortified with folate, and folate is found naturally in green, leafy vegetables, beans and nuts.

Other findings of the study:

- People with the lowest folate levels (below 8 nanograms per milliliter) had 40 percent higher risk of wheezing than people with the highest folate levels (above 18 ng/ml).
- People with the lowest folate levels had a 30 percent higher risk than those with the highest folate levels of having elevated IgE antibodies, markers of [allergy](#) predisposition.
- Those with the lowest folate levels had 31 percent higher risk of atopy (allergic symptoms) than people with the highest folate levels.
- Those with lowest folate levels had 16 percent higher risk of having asthma than people with the highest folate levels.

Blacks and Hispanics had lower blood folate levels — 12 and 12.5 nanograms per milliliter, respectively — than whites (15 ng/ml), but the differences were not due to income and socio-economic status.

The Hopkins team is planning a study comparing the effects of [folic acid](#) and placebo in people with allergies and [asthma](#).

Source: Johns Hopkins Medical Institutions

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