

African American Children Respond Differently to Asthma Medications

BARD Trial Suggests Shortcomings in Treatment Guidelines and Demonstrates Need for Trials of Specific Subgroups

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DENVER — African Americans suffer asthma more often and more severely than Caucasian patients. However, clinical trials that have shaped treatment guidelines have included few African Americans. A new report demonstrates a shortcoming of that history. Researchers at National Jewish Health and their colleagues around the nation in the National Heart, Lung & Blood Institute's AsthmaNet report that African American children respond differently than African American adults and Caucasian adults and children to step-up therapies for inadequately controlled asthma.



“Asthma is a tremendously variable disease,” said [Michael Wechsler, MD](#), professor of medicine at National Jewish Health and first author on the study published in the *New England Journal of Medicine*. “We need to more closely study subgroups of asthma patients, especially those disproportionately burdened by disease, such as African Americans.”

The researchers evaluated 280 children, ages 5-11, and 294 adolescents/adults of African American ancestry whose asthma was inadequately controlled with low doses of inhaled corticosteroids. Treatment guidelines call for adding a long-acting beta agonist as the preferred step-up therapy. Researchers several medication strategies – adding long-acting beta agonists, increasing inhaled steroids alone and both increasing inhaled steroids and adding long-acting beta agonists.

The researchers measured response by evaluating several factors including exacerbations, asthma control days and lung function.

More adult African Americans responded better to adding long-acting beta agonists (49 percent) versus increasing inhaled steroids alone (28 percent). Caucasians have shown a similar response in previous trials.

However, even numbers of African American children responded better to increasing the dose of inhaled corticosteroids along (46 percent) and adding long-acting beta agonists (46 percent).

“These results indicate that asthma treatment guidelines do not necessarily apply to African American children and that physicians should consider alternatives,” said Dr. Wechsler. “We need to do a better job of understanding how different subgroups respond to asthma treatment.”

The researchers also looked at several biological and genetic factors to determine if any could predict treatment response. However, they did not find that any biomarkers or percentage of African American ancestry was associated treatment response.

National Jewish Health is the leading respiratory hospital in the nation. Founded 123 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the [media resources page](#).

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