

# Improved medication use could reduce severe asthma attacks

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Researchers at Henry Ford Hospital have found that one-quarter of severe asthma attacks could be prevented if only patients consistently took their medication as prescribed.

Moreover, an asthma attack was only significantly reduced when patients used at least 75 percent of their prescribed dose, according to the study.

Patients often poorly take their medication based on the onset and degree of symptoms.

Henry Ford researchers say this is the first time that [asthma medication](#) use has been tracked closely over time and related to the likelihood of severe [asthma attacks](#).

The findings are published online in the December issue of The [\*Journal of Allergy and Clinical Immunology\*](#).

"Our findings demonstrated a relationship between [medication adherence](#) and asthma events in a manner that accounts for the changing patterns of inhaler use over time," says lead author Keoki Williams, M.D., MPH, an Internal Medicine physician and associate director of Henry Ford's Center for [Health Policy](#) and Health Service Research.

More than 20 million Americans, or approximately 1 in 15, suffer from asthma, which accounts for nearly 500,000 hospitalizations in the United States annually, according to the American Academy of Allergy, Asthma

and Immunology. [Inhaled corticosteroid](#) (ICS) medication is the most effective treatment for controlling symptoms and preventing attacks, which can lead to a visit to the [emergency department](#) or hospitalization or death if left untreated.

Working from their theory that ICS use changes with the episodic nature of asthma, Dr. Williams and his team of researchers set out to measure changes in medication use over time and to estimate the effect of ICS use on asthma attacks among 298 patients. Patients were followed on average for two years and had 435 asthma attacks during that time.

"We found that every 25 percent increase in ICS adherence was associated with an 11 percent decrease in asthma attacks," Dr. Williams says. "But most importantly, we found that causal use of these medications is not enough, especially among patients whose asthma is not controlled. Patients must use their asthma controller medication as prescribed if they want to have the best chance of preventing serious asthma attacks."

Provided by Henry Ford Health System

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