

# Triple-drug therapy safely cuts serious asthma flares

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Researchers have found that the inclusion of a third drug to commonly used dual-drug inhalers can reduce asthma exacerbations and improve control over the disease in children, adolescents, and adults with

moderate-to-severe asthma.

A team from McMaster University and The Research Institute of St. Joe's Hamilton announced their findings from a systematic review and meta-analysis. Data from 20 randomized controlled trials, which included a total of almost 12,000 patients, were analyzed in the study.

Dual-drug inhalers used to treat asthma typically contain an [inhaled corticosteroid](#) (ICS) to reduce inflammation, as well as a long-acting beta-adrenoceptor agonist (LABA) that acts as a bronchodilator. High-certainty evidence showed that the inclusion of a third drug to ICS-LABA combination therapy, known as a long-acting muscarinic antagonist (LAMA), reduced severe [asthma exacerbations](#) and slightly improved asthma control without an increase in adverse events.

Previously, the benefits and harms of adding a LAMA to ICS-LABA therapy for [asthma treatment](#) were unclear and based off of only 1300 patients—mainly adults—leading to weak recommendations in treatment guidelines.

"Our findings provide clear, high-quality evidence on the benefits and harms of triple therapy that will inform asthma care and should prompt revision of current asthma guidelines," said Dr. Derek Chu, lead author of the study.

Dr. Chu is a clinical scholar in the Departments of Medicine and Health Research Methods, Evidence, and Impact (HEI) at McMaster University and an affiliate of The Research Institute of St. Joe's Hamilton.

"If we can reach optimal control of patients' asthma and reduce asthma exacerbation rates through the LAMA add-on [therapy](#), patients may be able to avoid other treatments that carry a higher risk of adverse events, such as oral corticosteroids, or therapies that are substantially more expensive, such as biologics," said Lisa Kim, a clinical scholar in the

Department of Medicine at McMaster and co-author of the study.

Inhaled LAMAs are currently available in separate inhalers or as three-in-one inhalers that also contain an ICS and LABA. According to the study, both approaches to administering the third drug work similarly.

More than 8 percent of Canadians over the age of 12 have been diagnosed with asthma, making it the most common chronic condition among children. The disease is characterized by constriction of the bronchial tubes, which impedes air flow to and from the lungs. Symptoms can include coughing or wheezing attacks, shortness of breath, chest tightness, and more. The exact causes of [asthma](#) may vary, adding to treatment complexity.

The study was published in the *Journal of the American Medical Association (JAMA)* in coordination with a presentation by the authors at the Advances in Asthma Therapies symposium. The symposium is part of the American Thoracic Society's annual conference—ATS 2021—which is being held virtually this year.

**More information:** Lisa H. Y. Kim et al. Triple vs Dual Inhaler Therapy and Asthma Outcomes in Moderate to Severe Asthma: A Systematic Review and Meta-analysis. *JAMA*. Published online May 19, 2021. [DOI: 10.1001/jama.2021.7872](https://doi.org/10.1001/jama.2021.7872)

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