

Researchers improve severe asthma care through new, antibody-based treatment

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A team of researchers at McMaster University and St. Joseph's Healthcare Hamilton have successfully evaluated a new, antibody-based drug for certain patients with severe asthma. The drug – named mepolizumab – can replace traditional, steroid-based treatments for a specific subset of patients, resulting in improved outcomes and reduced side effects.

The study and manuscript, published in the *New England Journal of Medicine* was led in Canada by Dr. Parameswaran Nair, staff respirologist, Firestone Institute for Respiratory Health at St. Joseph's Healthcare Hamilton and professor of respirology at the Michael G. DeGroote School of Medicine at McMaster University. Dr. Nair and his colleagues recruited the largest number of participants for this global study.

"This new drug is the only therapy that has been proven to be effective in well-established clinical trials to help reduce doses of steroid-based treatments such as prednisone for those with severe [asthma](#)," said Dr. Nair, adding that the paper reconfirms the team's observation published in the *New England Journal of Medicine* in 2009.

Patients with severe asthma often require high doses of steroid-based treatments that can significantly impair their quality of life. These high doses can cause debilitating side effects including mood swings, diabetes, bone loss, skin bruising, cataracts and hypertension. Previous research at the Hamilton institutions has identified specific types of

patient with severe asthma have an overabundance of a particular type of white blood cell (eosinophils) present in their sputum. These patients often suffer from the most [severe asthma](#) symptoms and can only be treated through steroid-based medications such as prednisone.

"This is an exciting example of personalized medicine for asthma," said Nair. "This discovery now tells us by using a simple blood or sputum eosinophil count, we can identify which [asthma patients](#) can benefit from this new treatment.

Provided by McMaster University

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