

Investigational drug can reduce asthma flareups

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An investigational drug appears to cut the risk of severe asthma attacks in half for patients who have difficulty controlling the disorder with standard medications, according to results from two multicenter clinical trials.

The findings are published Feb. 24 in the journal *Lancet Respiratory Medicine*.

"The drug, reslizumab, reduces [asthma attacks](#) in a particular population of patients," said principal investigator Mario Castro, MD, the Alan A. and Edith L. Wolff Professor of Pulmonary and Critical Care Medicine at Washington University School of Medicine in St. Louis. "It helped prevent severe attacks that typically require patients to contact their physicians and that usually result in those patients being placed on oral steroids that come with a range of side effects."

The Phase 3 trials involved nearly 1,000 patients at more than 200 health centers worldwide. Each of the patients had [asthma](#) that was difficult to control with inhaled steroids, meaning they frequently experienced attacks that doctors refer to as [asthma exacerbations](#). Some exacerbations are serious enough to send patients to the emergency room or require hospitalization.

Patients in the studies also had high counts of a type of white blood cell called an eosinophil. Eosinophils contribute to inflammation and are believed to increase the severity of asthma in some patients.

In each study, patients were divided into two groups. All remained on their usual [asthma medications](#), but some also received intravenous infusions of reslizumab every four weeks, while the others were given a placebo. Over the course of one year, those treated with reslizumab were at least 50 percent less likely to experience asthma exacerbations.

Data from both of the studies indicate that 50 percent of patients who took a placebo experienced asthma exacerbations, compared with 32 percent of the patients who took the [investigational drug](#).

Patients who received reslizumab also showed other improvements in lung function.

"Within a matter of a week or two, their eosinophil counts were reduced," Castro said. "Those cells go into your lungs and cause airways to swell and inflame and turn red and produce mucus. The idea is that by keeping those cells from doing that damage, you can improve airflow through the windpipe. And that's exactly what we saw. Significant increases in [lung function](#) occurred within a few months of patients being on this therapy, and those improvements were sustained throughout the study."

Reslizumab is a monoclonal antibody against an inflammatory substance made in the body called interleukin-5. Castro said that although a similar drug hadn't helped patients very much in a previous study, those patients hadn't been screened for high eosinophil counts.

Castro estimates that 30-40 percent of [asthma patients](#) have elevated eosinophil counts, which can be detected with a standard blood test.

More information: "Reslizumab for inadequately controlled asthma with elevated blood eosinophil counts: results from two multicentre, parallel, double-blind, randomised, placebo-controlled, phase 3 trials." [DOI: 10.1016/S2213-2600\(15\)00042-9](#)

Provided by Washington University School of Medicine in St. Louis

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