

Oral drops can give kids needle-free relief from asthma, allergies

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Allergy shots are commonly used to treat children with severe environmental allergies and asthma, but under-the-tongue drops may offer yet another beneficial—and stick-free—option for pediatric allergy sufferers, according to a Johns Hopkins Children's Center review of existing scientific evidence.

The new research comes on the heels of another recent Hopkins study, which showed that oral drops provide a safe and effective alternative for adult [allergy sufferers](#).

The new review, appearing May 6 in the journal *Pediatrics*, is an analysis of 34 previously published clinical trials and suggests that both drops and injections work well in alleviating the bothersome symptoms of allergic rhinitis and asthma, the research team says. In addition to being better tolerated by needle-averse children, the oral treatment can be given at home, sparing the family a visit to the doctor's office.

"Our findings suggest the needle-free approach is a reasonable way to provide much-needed relief to millions of children who suffer from asthma or seasonal allergies," says lead author Julia Kim, M.D., M.P.H., a pediatric research fellow at Johns Hopkins Children's Center.

Allergy shots, which contain tiny amounts of proteins found in [environmental allergens](#) such as [dust mites](#) and pollen, are a standard treatment for severe seasonal allergies in children who do not get relief from medication. However, under-the-tongue drops are not approved for

use by the U.S. [Food and Drug Administration](#) and are only offered off label by some physicians. The needle-free approach is widely available in Europe, where patients are commonly treated with sublingual pills and drops, the researchers say.

The new findings, Kim notes, are encouraging enough to prompt a second look at oral drops as a treatment option.

The Hopkins researchers first looked at 13 studies that involved 920 children and compared the efficacy of allergy injections to either placebo or standard allergy medication. Overall, the researchers found that injections provide better [symptom relief](#) than placebo and standard medication for children with asthma or allergic rhinitis. The team next analyzed 18 trials involving 1,580 children treated with oral-drop therapy, placebo or standard medication for asthma and rhinitis or either condition alone. In this group, the researchers also found that oral drops provided superior relief of asthma symptoms, compared with patients who got the placebo and/or standard drugs. Oral drops also provided better symptom relief than placebo and standard medication in children with allergic rhinitis or rhino-conjunctivitis, a condition marked by runny nose and itchy, red and swollen eyes.

Only three of the 34 studies in the review directly compared shots and drops and, the investigators say, more head-to-head comparisons may shed better light on the comparative effectiveness of the two treatments. However, the researchers add, the results of the 31 remaining studies they looked at indicate both oral drops and allergy shots can successfully rid children of coughing, sneezing, runny noses, itchy eyes and wheezing.

The three studies that directly compared injections versus oral drops for symptom relief of dust mite-induced asthma and rhinitis showed no strong evidence that children given shots fared better than children who

got oral drops, Kim said.

Both treatments, overall, caused relatively mild side effects, such as itching of the mouth, skin rashes or wheezing. A single severe reaction was reported following an injection.

More than 6 million [children](#) in the United States suffer from [asthma](#), while [allergic rhinitis](#) affects 40 percent of American kids.

Provided by Johns Hopkins University School of Medicine

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