

Sporadic steroids may be as effective as daily dose for some preschoolers with wheezing

May 26 2016, by Suzanne Leigh

Children aged 6 and under with intermittent wheezing triggered by colds may not need to take inhaled steroids on a daily basis to limit the flare-ups that can result in emergency treatment.

The news may be welcomed by some parents who are troubled by the [side effects](#) of inhaled steroids, despite studies indicating that they are minimal, due to the fact that the drug is delivered directly to the lungs.

The results of an analysis of 22 studies, published in the journal *Pediatrics* on May 26, 2016, found that inhaled steroids should be taken daily for [children](#) aged 6 and under with persistent wheezing, which is a common symptom of asthma—a condition caused by swelling of the airways that may not be diagnosed until a child is older.

While this finding is consistent with the current guidelines of the National Asthma Education and Prevention Program of the National Heart, Lung and Blood Institute, the results of the analysis took a departure from them in addressing young children whose intermittent wheezing is brought on by a cold.

"These children don't experience wheezing between colds and for them limiting frequency of inhaled steroids to the duration of a cold was as effective," said lead author Sunitha Kaiser, MD, of the Department of Pediatrics at UCSF.

Current guidelines out of date in addressing second group of patients

The researchers analyzed data from studies of more than 4,500 children aged 6 and under who had suffered at least two episodes of asthma or wheezing in the last year, by comparing incidences of severe flare-ups that require higher-dose systemic steroids that may need to be administered in a hospital's emergency department.

Data from 15 studies showed that among children on inhaled steroids taken daily, most of whom had persistent asthma or wheezing, there was a 30 percent reduction in the risk of serious flare-ups, compared to placebo.

The researchers looked at six studies that focused on sporadic use of inhaled steroids, in children whose wheezing was provoked by a cold. They found a 35 percent reduction in severe flare-ups among treated children, compared to placebo.

Two studies contrasting the effects of daily inhaled steroids with intermittent inhaled steroids in children whose wheezing resulted from a cold found no difference in the amount of severe flare-ups. There were no studies that contrasted daily and intermittent inhaled steroid dosing in children with [persistent asthma](#) or wheezing.

"It makes sense that these children with frequent symptoms require daily treatment, whereas those who wheeze just during viral illnesses may only need treatment during illnesses," said Kaiser.

Reducing frequency reduces risk of side effects

The researchers examined conflicting data on the impact of inhaled

steroids on height, a side effect that makes many parents skeptical of the drug. Studies showed mild growth suppression that generally improved over time.

"We have no definitive data to indicate that intermittent dosing of inhaled steroids impacts growth differently than daily dosing, but it's generally accepted that reducing frequency of a drug will minimize side effects. Children should be followed closely to monitor benefits and side effects," said Kaiser.

"Our analysis confirms that inhaled steroids are first-line treatment for children with asthma and wheezing. The more we can control their symptoms with [inhaled steroids](#), the less the need to treat children with systemic high-dose steroids."

Approximately 20 million people including 9 million children have asthma, according to the National Institutes of Health. Half of all children aged 5 and under have had one or more episodes of wheezing.

More information: Preventing Exacerbations in Preschoolers With Recurrent Wheeze: A Meta-analysis. [pediatrics.aappublications.org ... 05/24/peds.2015-4496](https://pediatrics.aappublications.org/doi/10.1542/peds.2015-4496)

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