

Few parents use kids' asthma meds correctly, study finds

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The result: inaccurate dosing and uncontrolled symptoms.

(HealthDay)—Most adults who help children take inhaled asthma medications don't know all of the steps involved for their proper use, new research finds.

Using inhalers improperly often means a child receives too little medication, which can lead to continuing symptoms or worsening [asthma](#), the study authors noted.

"Of the 10 steps for accurate technique, we were surprised to learn that only one out of 169 caregivers knew all 10 steps," said study author Dr. Marina Reznik, an assistant professor of pediatrics at Albert Einstein College of Medicine in New York City.

Reznik said the findings point to a need for better education when prescribing these asthma medications and devices, and she said it's

important that health-care providers follow up with [parents](#) and caregivers at subsequent appointments to make sure the devices are being used correctly.

Most asthma medications are inhaled, and delivered through devices known as metered-dose inhalers. Because it's not always easy for children to use these inhalers, a device called a spacer is often used in conjunction with the [inhaler](#). The spacer holds the medication in a special chamber that allows the child to inhale the drug in several breaths, rather than one. Many spacers are also fitted with a mask that makes them easier for young children to use.

For this study, published online Oct. 21 in the *Journal of Asthma*, the researchers identified the critical steps for proper use of a spacing device with an inhaler, based on national guidelines and manufacturer's instructions.

Of these 10 steps, the researchers zeroed in a five they considered "essential" for adequate medication delivery: shaking the inhaler before use; forming a seal between the device and the child's face; pressing down on an inhaler just once (single actuation); taking at least six slow and deep breaths before using another actuation, and waiting at least 30 seconds after the six breaths before doing the second actuation.

A total of 169 New York City families participated in this study. All had children between the ages of 2 and 9 who had persistent asthma and had had an asthma flare-up that required hospitalization, an emergency room visit or an acute care visit during the past year. Three-quarters were Hispanic, and 23 percent were black. Most of the study questions were answered by the mothers of the children (95 percent), and the average age of the child's caregiver was 32.

Parents were asked to demonstrate how to administer [asthma medication](#)

using a stuffed toy.

Only one was able to demonstrate all 10 steps, and just six parents or caregivers—fewer than 4 percent—were able to demonstrate the five essential steps, according to the study.

Where most of the adults fell short was in having the child take six slow, deep breaths for each actuation of the inhaler, and waiting at least 30 seconds after those breaths before giving the second dose of medication, the researchers found.

Reznik said this study couldn't tell why the caregivers didn't know all the steps. "We don't know how it was explained to the [caregivers](#). Maybe the providers don't know exactly how to use the device, maybe they didn't have the device there to show the caregiver or maybe they didn't have the time to explain how to use it and then have the caregiver show them," Reznik said.

"If you ask parents to show you, you'll know right away the steps you need to repeat," she said.

Parents of a child with asthma should ask a pharmacist, nurse educator, primary care physician or a specialist to teach them the proper way to use these medications, another expert said.

"A lot of physicians will hand patients prescriptions for nasal sprays and [asthma inhalers](#) and not teach them how to use them," said Dr. Jennifer Appleyard, chief of allergy and immunology at St. John Hospital and Medical Center in Detroit.

"Make sure you know how to use these devices properly. It has a huge effect," she advised. "If you don't know how to use them, you'll end up with more medications than you need and maybe even hospitalizations."

Asthma rates in the United States continue to rise. Currently, almost 10 percent of U.S. [children](#) have this potentially deadly respiratory condition, reports the U.S. Centers for Disease Control and Prevention.

More information: Learn more about proper use of spacers from the [American Lung Association](#).

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