

# Allergy Relief for Your Child

Children are magnets for colds. But when the sniffles and sneezing won't go away for weeks, the culprit may be something else: allergies.

Long-lasting sneezing, with a stuffy or runny nose, may signal the presence of allergic rhinitis—the collection of symptoms that affect the nose when you have an allergic reaction to something you breathe in and that lands on the lining inside the nose.

Allergies may be seasonal or they can strike year-round (perennial). In most parts of the United States, plant pollens are often the cause of seasonal allergic rhinitis—more commonly called hay fever. Indoor substances, such as mold, dust mites, and pet dander, may cause the perennial kind.

Up to 40 percent of children suffer from allergic rhinitis, according to the National Institute of Allergy and Infectious Diseases (NIAID). And children are more likely to develop allergies if one or both parents have allergies.

The U.S. Food and Drug Administration (FDA) regulates both over-the-counter (OTC) and prescription medicines that offer allergy relief as well as allergen extracts used to diagnose and treat allergies. And parents should take particular care when giving these products to children.

## Immune System Reaction

An allergy is the body's reaction to a specific substance, or allergen. Our immune system responds to the invading allergen by releasing histamine and other chemicals that typically trigger symptoms in the nose, lungs, throat, sinuses, ears, eyes, skin, or stomach lining.

In some children, allergies can



also trigger symptoms of asthma—a disease that causes wheezing or difficulty breathing.

If a child has allergies and asthma, “not controlling the allergies can make asthma worse,” says Anthony Durmowicz, M.D., a pediatric pulmonary doctor in FDA’s Division of Pulmonary, Allergy, and Rheumatology Products.

## Avoiding the Culprit

If your child has seasonal allergies, you may want to pay attention to pollen counts and try to keep your child

inside when the levels are high.

- In the late summer and early fall, during ragweed pollen season, pollen levels are highest in the morning.
- In the spring and summer, during the grass pollen season, pollen levels are highest in the evening.
- Some molds, another allergy trigger, may also be seasonal. For example, leaf mold is more common in the fall.
- Sunny, windy days can be especially troublesome for pollen allergy sufferers.

It may also help to keep windows closed in your house and car and run the air conditioner.

### Allergy Medicines

For most children, symptoms may be controlled by avoiding the allergen, if known, and using OTC medicines. But if a child's symptoms are persistent and not relieved by OTC medicines, it is wise to see a health care professional to assess your child's symptoms and see if other treatments, including prescription medicines, may be appropriate. There are seven options available (*see table on next page*) to help bring your child relief. Although some allergy medicines are approved for use in children as young as 6 months, Dianne Murphy, M.D., director of FDA's Office of Pediatric Therapeutics, has some cautions. "Always read the label to make sure the product is appropriate for your child's age," Murphy says. "Just because a product's box says that it is intended for children does not mean it is intended for children of all ages."

Another reason to carefully read the label is that even though the big print may say the product is for a certain symptom (sneezing, allergy, cough, etc.), different products may have the *same* medicine (active ingredient). So it might seem that you are buying different products to treat different symptoms, but in fact the same medicine could be in all the products. The result: You might accidentally be giving too much of one type of medicine to your child.

"Children are more sensitive than adults to many drugs," adds Murphy. "For example, some antihistamines can have adverse effects at lower doses on young patients, causing excitability or excessive drowsiness."

### More Child-Friendly Medicines

Recent pediatric legislation, including a combination of incentives and requirements for drug companies, has significantly increased research and development of drugs for children and

has led to more products with new pediatric information in their labeling. Since 1997, a combination of legislative activities has helped generate studies in children for 600 products.

Many of the older drugs were only tested in adults, says Durmowicz. "But we now have more information available for the newer allergy medications," he adds. "With the passing of this legislation, there should be more confidence in pediatric dosing and safety with the newer drugs."

The legislation also requires drugs for children to be in a child-friendly formulation, adds Durmowicz. So if the drug was initially developed as a capsule, it has to also be made in a form that a child can take, such as a liquid with cherry flavoring, rapidly dissolving tablets, or strips for placing under the tongue.

In February 2016, FDA approved a generic version of Flonase Allergy Relief, an over-the-counter-allergy symptom reliever nasal spray for the temporary relief of the symptoms of hay fever or other upper respiratory allergies. In March 2016, FDA approved the first generic version of Nasonex spray for the treatment of nasal symptoms of seasonal and perennial allergic rhinitis in adults and children 2 and older.

### Allergy Shots

Jay E. Slater, M.D., director of FDA's Division of Bacterial, Parasitic and Allergenic Products, who is also a pediatric allergist says that children who don't respond to either OTC or prescription medications, or who suffer from frequent complications of allergic rhinitis, may be candidates for allergen immunotherapy—commonly known as allergy shots. According to NIAID, about 80 percent of people with allergic rhinitis will see their symptoms and need for medicine drop significantly within a year of starting allergy shots.

After allergy testing, typically by skin testing to detect what allergens your child may react to, a health care professional injects the child with

"extracts"—small amounts of the allergens that trigger a reaction. The doses are gradually increased so that the body builds up immunity to these allergens.


Allergen extracts are manufactured from natural substances, such as pollens, insect venoms, animal hair, and foods. More than 1,200 extracts are licensed by FDA.

In 2014, FDA approved three new immunotherapy products to be taken under the tongue for treatment of hay fever caused by certain pollens, two of them for use in children. All of them are intended for daily use, before and during the pollen season. They are not meant for immediate symptom relief. Although they are intended for at-home use, these are prescription medications, and first doses are to be taken in the presence of a health care provider. The products are Oralair, Grastek, and Ragwitek (which is approved for use in adults only).


"Allergy shots are never appropriate for food allergies," adds Slater, "but it's common to use extracts to test for food allergies so the child can avoid those foods."

### Transformation in Treatment

"In the last 20 years, there has been a remarkable transformation in allergy treatments," says Slater. "Kids used to be miserable for months out of the year, and drugs made them incredibly sleepy. But today's products offer proven approaches for relief of seasonal allergy symptoms."

Forgoing treatment can make for an irritable, sleepless, and unhappy child, adds Slater, recalling a mother saying after her child's successful treatment, "I didn't realize I had a nice kid!" 

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## FDA-Approved Options for Treatment of Allergic Rhinitis (Hay Fever) in Children

Drug Type	How Used	Some Examples of Over-the-Counter (OTC) or Prescription (Rx) Drugs (many are available in generic form)	Common Side Effects
<b>Nasal corticosteroids</b>	Usually sprayed in nose once a day	<p>Rx:</p> <ul style="list-style-type: none"> <li>• Nasonex (mometasone furoate)</li> <li>• Flonase (fluticasone propionate)</li> </ul> <p>OTC:</p> <ul style="list-style-type: none"> <li>• Nasacort Allergy 24HR (triamcinolone acetonide)</li> <li>• Rhinocort Allergy Spray (budesonide)</li> <li>• Flonase Allergy Relief (fluticasone propionate)</li> </ul>	Stinging in nose
<b>Oral and topical antihistamines</b>	Orally (pills, liquid, or capsules), nasally (spray or drops), or eye drops	<p>Oral OTC:</p> <ul style="list-style-type: none"> <li>• Benadryl (diphenhydramine)</li> <li>• Chlor-Trimeton (chlorpheniramine)</li> <li>• Allegra* (fexofenadine)</li> <li>• Claritin* (loratadine)</li> <li>• Zyrtec (cetirizine)</li> </ul> <p><i>* non-sedating when taken as directed</i></p> <hr/> <p>Oral Rx:</p> <ul style="list-style-type: none"> <li>• Clarinex (desloratadine)</li> </ul> <p>Nasal Rx:</p> <ul style="list-style-type: none"> <li>• Astelin (azelastine)</li> </ul>	<p>Some antihistamines may cause drowsiness</p> <p>Some nasal sprays may cause a bitter taste in mouth, headache, and stinging in nose</p>
<b>Decongestants</b>	Orally and nasally (sometimes taken with antihistamines, which used alone do not treat nasal congestion)	<p>Oral Sudafed (pseudoephedrine*), Sudafed PE (phenylephrine)</p> <p>Oral OTC:</p> <ul style="list-style-type: none"> <li>• Allegra D, which has both an antihistamine (fexofenadine) and decongestant (pseudoephedrine*)</li> <li>• Claritin D (loratadine; pseudoephedrine)</li> <li>• Zyrtec D (cetirizine; pseudoephedrine)</li> </ul> <p><i>* Drugs that contain pseudoephedrine are non-prescription but are kept behind the pharmacy counter because of their illegal use to make methamphetamine. You'll need to ask your pharmacist and show identification to buy these drugs.</i></p> <hr/> <p>Nasal OTC:</p> <ul style="list-style-type: none"> <li>• Neo-Synephrine (phenylephrine)</li> <li>• Afrin (oxymetazoline)</li> </ul>	Using nose sprays or drops more than a few days may cause "rebound" effect, in which nasal congestion gets worse
<b>Non-steroidal nasal sprays</b>	Nasally used 3–4 times a day	<p>OTC:</p> <ul style="list-style-type: none"> <li>• NasalCrom (cromolyn sodium)</li> </ul> <hr/> <p>Rx:</p> <ul style="list-style-type: none"> <li>• Atrovent (ipratropium bromide)</li> </ul>	Stinging in nose or sneezing; can help prevent symptoms of allergic rhinitis if used before symptoms start
<b>Leukotriene receptor antagonist</b>	Orally once a day (comes in granules to mix with food, and chewable tablets)	<p>Rx:</p> <ul style="list-style-type: none"> <li>• Singulair (montelukast sodium)</li> </ul>	Headache, ear infection, sore throat, upper respiratory infection
<b>Sublingual Immunotherapy</b>	Tablet placed under the tongue daily—before and during allergy season	<p>Rx:</p> <ul style="list-style-type: none"> <li>• Oralair (Sweet Vernal, Orchard, Perennial Rye, Timothy, and Kentucky Blue Grass Mixed Pollens Allergen Extract)</li> <li>• Grastek (Timothy Grass Pollen Allergen Extract)</li> </ul>	Itching and swelling in the mouth and throat irritation
<b>Subcutaneous immunotherapy</b>	Injectations, weekly to monthly	<ul style="list-style-type: none"> <li>• Multiple</li> </ul>	Itching and swelling at the injection site