

Air Apparent: The Ins & Outs of Asthma

By Shelley Herron | August 29, 2019

One of the most common chronic diseases in the United States, asthma affects about 13 percent of Californians during their lifetime. And according to the California Department of Public Health, asthma rates have increased dramatically in the past three decades.

Because allergies can lead to asthma, environmental triggers from plant growth due to winter rains are contributing to more cases seen in the clinic.



Other asthma triggers include poor air quality — such as smog and smoke from wildfir

es — pet dander, mold, exercise, stress, tobacco exposure, dust mites, and especially infections like colds and flu, according to Nathan Painter, PharmD, a clinical professor at Skaggs School of Pharmacy and Pharmaceutical Sciences at UC San Diego .

“The prime time for symptoms to appear is ages 5 to 12,” Painter says. “Many do not have asthma symptoms in adulthood but their lung function can still be affected.”

Painter added that genetics can play a role, as a child of a parent with asthma has a 50 percent chance of developing the condition.

Asthma symptoms include coughing, wheezing, chest tightness, infections and difficulty breathing. “The diagnosis is based on symptoms,” Painter said, adding that assessment of lung function usually begins at age 5 if asthma is suspected.

Although there is no cure for asthma, it can be controlled. According to Painter, the three main hallmarks of asthma treatment include:

- → **Short-acting “rescue” medicines** (bronchodilators) that give quick relief. These widen the bronchial air passages to allow increased airflow in and out of the lungs. They are used during acute asthma attacks and to prevent exercise-induced asthma. The effect is immediate and can last up to four to six hours. “Sometimes this is all that’s needed,” said Painter. “It’s especially helpful if you have asthma that is induced by exercise. If you know the trigger and can’t avoid it, you can have this medicine on hand.”
- → **Inhaled corticosteroids** help prevent asthma symptoms. When used daily, they decrease the number and severity of asthma attacks, but they do not relieve an asthma attack that has already started.
- → **Inhaled long-acting beta-agonists** open your airways by relaxing the smooth muscles around them.

In 2019, the asthma guidelines were updated to reflect that people with at least moderate intermittent asthma should be on all 3 types of inhalers. However, the role of inhaled corticosteroids for those with mild asthma is unclear. Patients should talk with their doctor or pharmacist about the role of inhalers for their asthma symptoms.

Epinephrine (Trimatine Mist®) is an over-the-counter option for ages 12 and up. This is for temporary relief of mild symptoms of intermittent asthma and is not recommended for people with heart disease or high blood pressure.

Over half of patients with asthma continue to suffer from poor asthma control. “I do like to make sure patients discuss how to use these products so we can check their technique. I have them show me how they are using the inhaler,” said Painter, who is also a pharmacist at UC San Diego Health’s [Scripps Ranch and La Jolla locations](#).

People whose asthma is getting worse should get a lung function test to make sure the inflammation is controlled, he added.

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