

## Asthma

Asthma is a condition that causes breathing problems. Kids may cough, wheeze, or be short of breath. This happens because airways in the lungs get swollen, smaller, and filled with mucus. Asthma is common in kids and teens, and tends to run in families. It can be mild or so severe that it gets in the way of daily activities. With medicine and the right care plan, asthma symptoms can be managed so that kids and teens can do just about anything they want to do.

### Causes

No one knows exactly why some people develop asthma. Experts think it might be a combination of environmental factors and genes. People with asthma may have a parent or other close relative with asthma. Those who are overweight may be more likely to have it.

Normally, when someone breathes in, air goes in through the nose or mouth, down the windpipe (trachea), and into the airways (bronchial tubes) of the lungs. When people breathe out, air exits the body in the opposite direction.

With asthma, air has a harder time passing through. Airways swell and fill with mucus. The muscles around the airways tighten, making airways narrower. Things that can irritate the airways are called “triggers.” Common triggers include cigarette smoke, allergies, and exercise.

Triggers can lead to asthma flare-ups or “attacks.”

### Signs and symptoms

**Flare-ups** are when asthma symptoms get worse. They happen when airways get more irritated and swollen than usual. During a flare-up, kids might have:

- trouble breathing
- a tight chest
- a whistling sound while breathing (wheezing)
- a cough
- a fast heartbeat

Some flare-ups are serious, but others are mild. Flare-ups can happen suddenly or build up over time, especially if kids don't take their asthma medicines as directed.

Things that bring on a flare-up are called **triggers**. Triggers vary from person to person, but common ones include:

- allergies to things like pollen, mold, and pet dander
- irritants and pollutants in the air
- respiratory infections, like colds or flu
- weather conditions
- exercise (some kids only have asthma symptoms during or after exercise)
- gastroesophageal reflux

An important part of managing asthma is avoiding triggers. Your child's doctor will work with you to create a care plan that helps prevent flare-ups as much as possible. There's no cure for asthma, but it can be managed to prevent flare-ups. Asthma treatment involves two important things: avoiding triggers and taking medicine.

### Diagnosing asthma

To diagnose asthma, doctors will ask questions about a child's health, problems with breathing, and family medical history. They'll also ask about any allergies, illnesses, and exposure to things that may make breathing worse. Kids will have a physical exam and may have a lung function test. This usually involves testing breathing with a spirometer, a machine that analyzes airflow through the airways.

### Avoiding triggers

If pet dander or mold in your home trigger your child's asthma symptoms, you can make your home asthma-safe by changing the linens often, vacuuming regularly, and keeping the family pet out of your child's bedroom. Depending on the severity of your child's asthma, it may be recommended you don't own any indoor pets. If outdoor allergies (like pollen) are a problem, your child should avoid the outdoors on days when pollen counts are high. Keeping windows closed will help keep these airborne triggers out of your home.

If exercise is a trigger, the doctor may prescribe a medicine for your child to take before physical activity to prevent airways from tightening up. Doctors help people with exercise-induced asthma manage physical activity, not avoid it. Exercise can help people stay healthier overall (in fact, many pro athletes have asthma!).

Getting a yearly flu shot is also important, as illnesses like the flu can trigger asthma flare-ups.

### Asthma medicines

Most asthma medicines are breathed directly into the lungs (inhaled), but some are pills or liquids. There are two types of asthma medicines:

**Quick-relief medicines** act fast to open up tight airways. They can be used as needed during a flare-up. Quick-relief medicines act fast, but their effect doesn't last long. These kinds of medicines are also called “fast-acting” or “rescue” medicines.

**Long-term control medicines** manage asthma by preventing symptoms from happening. They reduce inflammation in the airways, which is the cause of the swelling and mucus. (Quick-relief medicines only treat the

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symptoms caused by the inflammation.) Long-term control medicines — also called “controller” or “maintenance” medicines — must be taken every day, even when kids feel well.

Some kids with asthma only need quick-relief medicine; others need both kinds of medicine to keep their asthma in check.

## Have an asthma action plan

An asthma action plan is a care plan that you'll develop with the doctor. The plan gives detailed instructions on how to manage asthma, including:

- what medicines your child needs and when
- what your child's triggers are and how to avoid them
- how to manage a flare-up
- when to get emergency medical care

Following the plan can help your child do normal everyday activities without having asthma symptoms. Keeping an asthma diary is another way to help manage asthma. Tracking your child's symptoms and medicines will help you know when your child is more likely to have a flare-up. A peak-flow meter can help too. This handheld tool measures breathing ability. When peak flow readings drop, it's a sign of narrowing airways.

By using these tools, giving medicines as prescribed, and avoiding triggers, you'll help keep your child healthy and breathing well.