

What causes asthma?



Asthma is a respiratory disease characterized by the inflammation and swelling of the airways, leading to a narrower airway and difficulty in breathing. There is no one cause of asthma. Even simply laughing too much could lead to an asthma attack.^{1,2} Below are several known triggers of asthma. How many of them apply to you?

1. Allergies

Allergic reactions to allergens such as pollen, pet dander, dust mites, pests, etc., could trigger an asthma attack. To prevent attacks, being able to keep yourself away from your known allergies can help you manage symptoms more effectively. Use allergen-proof mattresses and pillowcases, wash beddings often, keep pets out of the bedrooms, have your home vacuumed frequently if you have pets, keep your home humidity relatively low, and use an air conditioner if necessary.

2. Tobacco smoke

While tobacco smoke is unhealthy for everyone's lungs, it is most especially unhealthy for people with asthma. Tobacco smoke contains fine dust and a mixture of gases. Asthma attacks usually occur when there is something that "triggers" and irritates the airways, and it can surely irritate your airways and cause inflammation and bronchoconstriction, making it harder to breathe. That is why if you have asthma, it is better to quit smoking.^{1,3,4}

¹Common asthma triggers. Centers for Disease Control and Prevention.

<https://www.cdc.gov/asthma/triggers.html>. Published August 21, 2020. Accessed August 10, 2021.

² Emotions as asthma triggers. Asthma UK. <https://www.asthma.org.uk/advice/triggers/emotions>. Published June 2019. Accessed August 10, 2021.

³ Asthma and Secondhand smoke. Centers for Disease Control and Prevention.

<https://www.cdc.gov/tobacco/campaign/tips/diseases/secondhand-smoke-asthma.html>. Published February 15, 2021. Accessed August 10, 2021.

Secondhand smoke is also dangerous not only for people with asthma but also for everyone. It contains more than 7,000 chemicals, more than a hundred of which are toxic.³ Inhaling secondhand smoke could irritate and trigger an asthma attack and cause the aggravation of asthma attack symptoms.⁴

3. Food and food additives

Food allergies can cause asthma attacks that could range from mild to life-threatening. Food additives that are used to preserve food such as sodium bisulfate, potassium bisulfite, sodium metabisulfite, and other chemicals used in food processing and preparation can trigger asthma attacks.⁴ Make sure to read food labels to check if you are allergic to any of the ingredients.

4. Strong emotions

Strong emotions such as stress, laughter, panic, and excitement can all cause an asthma attack. People who have bad asthma have the highest risk of suffering from these psychological triggers. In fact, 28% of people with asthma have reported that their most frequent asthma triggers are psychological ones such as anger, stress, and laughter. This is because hyperventilation caused by these intense strong emotions could trigger bronchoconstriction and airway inflammation by cytokine production, which causes airway narrowing, making it harder to breathe. Furthermore, a phenomenon called parasympathetic rebound, which occurs during prolonged/intense stress, may exacerbate the symptoms of asthma attacks.^{2,5,6}

Being aware of your triggers can help you manage the symptoms of asthma and reduce the risk of having an asthma attack. The more aware you are, the safer you will be. What other asthma triggers do you have?

This does not substitute the advice of your HCP.

November 2021

DGM-2021-09-11 WEB

⁴ Ambardekar N. Smoking and Asthma: Tobacco, Second-Hand Smoke, and More. WebMD. <https://www.webmd.com/asthma/guide/smoking-and-asthma>. Published June 14, 2020. Accessed August 10, 2021.

⁵ Lehrer PM, Hochron SM, Mayne T, Isenberg S, Lasoski AM, Carlson V, Gilchrist J, Porges S. Relationship between changes in EMG and respiratory sinus arrhythmia in a study of relaxation therapy for asthma. *Appl Psychophysiol Biofeedback*. 1997;22(3):183-91.

⁶ Stress and Anxiety as Asthma Triggers. Asthma UK. <https://www.asthma.org.uk/advice/triggers/stress/>. Accessed August 10, 2021.