



Asthma

3 May 2021



Key facts

- Asthma is a major noncommunicable disease (NCD), affecting both children and adults.
- Inflammation and narrowing of the small airways in the lungs cause asthma symptoms, which can be any combination of cough, wheeze, shortness of breath and chest tightness.
- Asthma affected an estimated 262 million people in 2019 and caused 461000 deaths (1).
- Asthma is the most common chronic disease among children.
- Inhaled medication can control asthma symptoms and allow people with asthma to lead a normal, active life.
- Avoiding asthma triggers can also help to reduce asthma symptoms.
- Most asthma-related deaths occur in low- and lower-middle income countries, where under-diagnosis and under-treatment is a challenge.
- WHO is committed to improving the diagnosis, treatment, and monitoring of asthma, to reduce the global burden of NCDs and make progress towards universal health coverage.

What is asthma?

Asthma is a long-term condition affecting children and adults. The air passages in the lungs become narrow due to inflammation and tightening of the muscles around the small airways. This causes asthma symptoms: cough, wheeze, shortness of breath and chest tightness. These symptoms are

intermittent and are often worse at night or during exercise. Other common “triggers” can make asthma symptoms worse. Triggers vary from person to person, but can include viral infections (colds), dust, smoke, fumes, changes in the weather, grass and tree pollen, animal fur and feathers, strong soaps, and perfume.

The impact of asthma on daily life

Asthma is often under-diagnosed and under-treated, particularly in low- and middle-income countries.

People with under-treated asthma can suffer sleep disturbance, tiredness during the day, and poor concentration. Asthma sufferers and their families may miss school and work, with financial impact on the family and wider community. If symptoms are severe, people with asthma may need to receive emergency health care and they may be admitted to hospital for treatment and monitoring. In the most severe cases, asthma can lead to death.

Causes of asthma

Many different factors have been linked to an increased risk of developing asthma, although it is often difficult to find a single, direct cause.

- Asthma is more likely if other family members also have asthma – particularly a close relative, such as a parent or sibling.
- Asthma is more likely in people who have other allergic conditions, such as eczema and rhinitis (hay fever).
- Urbanisation is associated with increased asthma prevalence, probably due to multiple lifestyle factors.
- Events in early life affect the developing lungs and can increase the risk of asthma. These include low-birth weight, prematurity, exposure to tobacco smoke and other sources of air pollution, as well as viral respiratory infections.
- Exposure to a range of environmental allergens and irritants are also thought to increase the risk of asthma, including indoor and outdoor air pollution, house dust mites, moulds, and occupational exposure to chemicals, fumes, or dust.
- Children and adults who are overweight or obese are at a greater risk of asthma.

Reducing the burden of asthma

Asthma cannot be cured, but good management with inhaled medications can control the disease and enable people with asthma to enjoy a normal, active life.

There are two main types of inhaler:

- bronchodilators (such as salbutamol), that open the air passages and relieve symptoms; and
- steroids (such as beclometasone), that reduce inflammation in the air passages. This improves asthma symptoms and reduces the risk of severe asthma attacks and death.

People with asthma may need to use their inhaler every day. Their treatment will depend on the frequency of symptoms and the different types of inhalers available.

It can be difficult to coordinate breathing using an inhaler – especially for children and during emergency situations. Using a “spacer” device makes it easier to use an aerosol inhaler and helps the medicine to reach the lungs more effectively. A spacer is a plastic container with a mouthpiece or mask at one end, and a hole for the inhaler in the other. A homemade spacer, made from a 500-ml plastic bottle, can be as effective as a commercially-manufactured inhaler.

Access to inhalers is a problem in many countries. In 2019, only half of people with asthma had access to a bronchodilator and less than one in five had access to a steroid inhaler in public primary health-care facilities in low-income countries (2).

People with asthma and their families need education to understand more about their asthma, their treatment, triggers to avoid, and how to manage their symptoms at home. It is also important to raise community awareness, to reduce the myths and stigma associated with asthma in some settings.

WHO strategy for prevention and control of asthma

Asthma is included in the WHO Global Action Plan for the Prevention and Control of NCDs and the United Nations 2030 Agenda for Sustainable Development.

WHO is taking action to extend diagnosis of and treatment for asthma in a number of ways.

The WHO Package of Essential Noncommunicable Disease Interventions (PEN) was developed to help improve NCD management in primary health care in low-resource settings. PEN includes protocols for the assessment, diagnosis, and management of chronic respiratory diseases (asthma and chronic obstructive pulmonary disease), and modules on healthy lifestyle counselling, including tobacco cessation, and self-care.

Reducing tobacco smoke exposure is important for both primary prevention of asthma and disease management. The Framework Convention on Tobacco Control is enabling progress in this area as are WHO initiatives such as MPOWER and mTobacco Cessation.

Global Alliance against Chronic Respiratory Diseases

The Global Alliance against Chronic Respiratory Diseases (GARD) contributes to WHO's work to prevent and control chronic respiratory diseases. GARD is a voluntary alliance of national and international organizations and agencies from many countries committed to the vision of a world where all people breathe freely.

References

1. *Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019*. *Lancet*. 2020;396(10258):1204-22
2. *Assessing national capacity for the prevention and control of noncommunicable diseases: report of the 2019 global survey*. Geneva: World Health Organization; 2020. Licence: CC BY-NC-SA 3.0 IGO