

ASTHMA

Understand Your Lungs. Take Control.

Asthma is a long-term condition where your airways are more sensitive. Triggers can cause **inflammation**, narrowing and excess mucus, making it harder to breathe. With the right diagnosis, **personalised treatment** and regular review, most people can achieve excellent control and live active, healthy lives.

WHAT HAPPENS IN ASTHMA?

Asthma is an inflammatory condition of the airways. During an asthma episode, three main things happen:



NORMAL AIRWAY

- Open airway with a healthy lining

INFLAMED AIRWAY

- Swollen lining
- Increased mucus
- More sensitive to triggers

NARROWED AIRWAY DURING AN ATTACK

- Tightened muscles
- Thicker, inflamed lining
- Excess mucus
- Reduced airflow



Airway inflammation
(irritation and swelling)



Airway narrowing
(tightened muscles)



Excess mucus
(blocks airflow)



Increased sensitivity to triggers

COMMON SYMPTOMS



Wheeze
(a whistling sound)



Shortness of breath
(especially with exercise or at night)



Cough
(may be dry or with mucus)



Chest tightness
(heaviness or pressure)



Variable symptoms
may be worse at night, with exercise, or during viral infections

COMMON TRIGGERS

Everyone is different. Identifying and managing your personal triggers can help reduce symptoms and prevent attacks.



Allergens
(pollen, dust mites, pets, moulds)



Viral infections
(colds, flu, COVID-19)



Exercise
(in some people)



Cold air
and weather changes



Tobacco smoke
and vaping



Air pollution
and chemicals



Occupational exposures
(dusts, fumes)



Strong perfumes
and cleaning products



Stress
(in some people)

ASTHMA PHENOTYPES

Asthma is not the same in everyone. Different patterns (phenotypes) can help guide treatment.



ALLERGIC ASTHMA

Triggered by allergens such as pollen, dust mites or pets.



EOSINOPHILIC ASTHMA

Often associated with higher levels of eosinophils in blood or airways.



NON-TYPE 2 ASTHMA

May be related to infections, obesity, irritants or other factors.



EXERCISE-INDUCED ASTHMA

Symptoms mainly during or after exercise.



OCCUPATIONAL ASTHMA

Triggered by work-related exposures.

HOW ASTHMA IS DIAGNOSED

Diagnosis is based on your symptoms, history and tests that assess airflow, airway inflammation and triggers.



MEDICAL HISTORY

Your symptoms, triggers and pattern over time.



LUNG FUNCTION TESTS

Spirometry measures how much air you can breathe in and out (FEV1, FVC) and if airflow improves with a reliever.



AIRWAY INFLAMMATION

FeNO (fractional exhaled nitric oxide) and/or blood eosinophils can indicate type 2 inflammation.



ALLERGY TESTING

Skin prick or blood tests can identify sensitivities.



OTHER TESTS

May include exercise testing, sputum analysis or imaging in selected cases.

BIOMARKERS AND GENOMICS: A MORE PERSONALISED APPROACH

Newer tests can help understand the underlying biology of your asthma and guide treatment, especially if symptoms are not well controlled.



TYPE 2 BIOMARKERS

- Blood eosinophils
- Fractional exhaled nitric oxide (FeNO)
- Immunoglobulin E (IgE)
- Can help predict response to certain biologic treatments.



GENOMIC AND MOLECULAR TESTS

- Can identify specific inflammatory pathways and endotypes.
- May help explain why asthma behaves differently in each person.
- Supports more targeted, personalised therapy.



WHAT THIS MEANS FOR YOU

- More accurate diagnosis and classification.
- Helps select the most appropriate treatment, including biologics.
- May reduce trial-and-error and improve outcomes.
- Particularly useful in moderate to severe asthma or when symptoms remain uncontrolled.

TREATMENT GOALS



Control symptoms



Maintain normal daily activities



Prevent asthma attacks



Optimise lung function



Minimise medication side effects



Improve long-term lung health

ASTHMA CAN BE CONTROLLED

- ✓ Fewer symptoms
- ✓ Better sleep and energy
- ✓ Stay active and perform at your best
- ✓ Fewer or no asthma attacks
- ✓ Better long-term lung health

TREATMENT OPTIONS

Treatment is tailored to your asthma type, severity, symptoms and personal goals. Options may include:

1 INHALER MEDICATIONS



- Preventer (usually inhaled corticosteroid with or without a long-acting bronchodilator)
- Reliever (as needed)

2 ADD-ON THERAPIES



- Leukotriene receptor antagonists (e.g. montelukast)
- Long-acting muscarinic antagonists (LAMA)
- Other add-on options in selected cases

3 BIOLOGIC THERAPIES



- Targeted treatment for moderate to severe asthma with specific biomarkers
- Reduce inflammation and asthma attacks
- Given by injection (usually 2-8 weekly)

4 TRIGGER MANAGEMENT



- Allergen avoidance
- Manage occupational exposures
- Treat coexisting conditions (e.g. hay fever, sinusitis, reflux, sleep apnoea)
- Healthy lifestyle and vaccinations

5 REGULAR REVIEW



- Check symptoms, inhaler technique and adherence
- Monitor lung function and inflammation
- Adjust treatment to your needs

INHALER TECHNIQUE MATTERS

Good inhaler technique ensures the right amount of medication reaches your lungs. We will check your technique at every review.

- 1 Shake (if required)
- 2 Breathe out gently
- 3 Inhale slowly and deeply
- 4 Hold for ~10 seconds



BIOLOGICS FOR ASTHMA

For people with moderate to severe asthma with specific biomarkers, biologic therapies can target the underlying inflammation.



Omalizumab
(anti-IgE)
Allergic asthma with high IgE



Mepolizumab
(anti-IL-5)
Eosinophilic asthma



Reslizumab
(anti-IL-5)
Eosinophilic asthma



Benralizumab
(anti-IL-5Rα)
Eosinophilic asthma



Dupilumab
(anti-IL-4Rα)
Type 2 asthma (eosinophilic and/or allergic)



Tezepelumab
(anti-TSLP)
Severe asthma regardless of eosinophil or allergy status



Reduce asthma attacks



Improve lung function



May reduce need for oral steroids



Improve quality of life

YOUR ASTHMA ACTION PLAN

Work with your healthcare team to develop a personalised plan. This typically includes:

EVERYDAY ZONE (Well controlled)

- ✓ Take your preventer(s) as prescribed
- ✓ Use reliever only as needed
- ✓ Monitor symptoms
- ✓ Keep active

CAUTION ZONE (Worsening symptoms)

- ✓ Increase reliever use as advised
- ✓ Consider additional medication if instructed
- ✓ Monitor closely
- ✓ Seek medical advice if not improving

ACTION ZONE (Severe symptoms)

- ✓ Use reliever as directed
- ✓ Start any rescue medication as advised
- ✓ If severe breathlessness, difficulty speaking or no improvement → seek urgent medical attention

ONGOING MONITORING



Regular reviews with your respiratory specialist



Lung function tests (spirometry)



Monitor symptoms (e.g. asthma control questionnaires)



Check inhaler technique and adherence



Assess and manage triggers and coexisting conditions



Adjust treatment based on your progress



ASTHMA EMERGENCY

Severe breathlessness, difficulty speaking, drowsiness or collapse
CALL 000 immediately and follow your personalised asthma action plan.

