



INHALERS FOR TREATING ASTHMA

WHAT IS ASTHMA?

Asthma is a **long-term** condition that causes swelling (**inflammation**) in the **airways** of the lungs which makes it harder to breathe. It can start at **any age**, but commonly happens for the first time in childhood. Your chances of getting asthma are higher if you have a family member with asthma, or if you have allergies such as eczema or allergic rhinitis.^{1,2}

Asthma symptoms are often **triggered** by dust mites, smoke, pollen, mould, animal fur, exercise, changes in temperature or weather, or viral infections such as colds and flu. They can be **different** for **each person** and sometimes, there is no obvious trigger. Asthma symptoms occur when muscles of the airways **tighten** and become **narrower**, and the airways can become blocked by a **thick mucus** leading to symptoms such as:

In Singapore:
Asthma affects about
1 in 5 children



1 in 20 adults



Wheezing
(a whistling sound
when breathing)



Shortness of breath



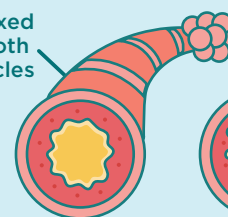
Cough



Tightness
in the chest

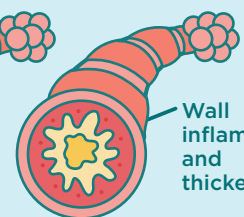


Relaxed
smooth
muscles



**Normal
airway**

Wall
inflamed
and
thickened



**Narrow airway
during attack**

Symptoms of asthma can vary from mild to severe and are often worse at night, in the early morning or during exercise. Without proper management, symptoms can affect your daily activities and cause you to miss school or work.

WHAT IS AN ASTHMA ATTACK?

If symptoms get worse or are suddenly very severe, this is known as an **asthma attack**. Some people may need to be admitted to hospital for **immediate medical attention** during a severe attack because it can be **life-threatening**.

HOW IS ASTHMA TREATED?

Effective treatments are available to control asthma symptoms, avoid hospital stays, and allow people to have a **full** and **active** life.



Asthma is treated with **inhalers**, which are devices that deliver drugs **directly** into your airway.^{3,4} There are two main types of inhalers:

Controllers (Preventers)

- Used **daily** even when you feel well and have no symptoms
- Reduce airway inflammation and mucus, keeping the airways open to **control** symptoms and **prevent** asthma attacks
- Do not work immediately and usually take 7 to 10 days to take full effect

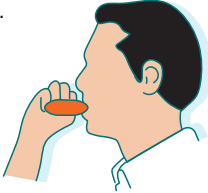
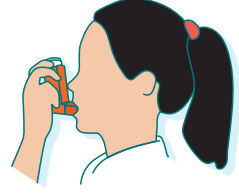
Relievers

- Used only when you have **symptoms (as needed)**
- Provide short-term relief of symptoms but do not control symptoms or prevent asthma attacks
- Work quickly within a few minutes to relax the lung muscles and open the airways

Other treatments may be needed if your asthma is severe and cannot be controlled with inhalers.

USING YOUR ASTHMA INHALER

Controllers and relievers come in different types of devices:

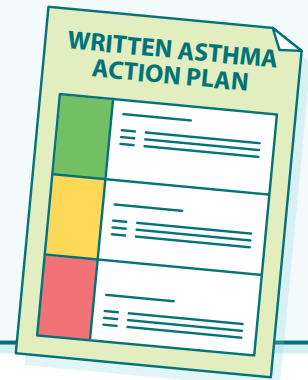
Dry powder inhaler (DPI)	Metered dose inhaler (MDI)
<p>Delivers the drug as a fine powder. After loading the device (the method differs between inhalers), the patient must take a fast and deep breath to take in the drug.</p> 	<p>Delivers the drug as a spray. Patients must take a slow and deep breath and press the inhaler at the same time to take in the drug. It can be used with a spacer for people who find it difficult to use an MDI or take a deep breath.</p> 

Your doctor can discuss with you which type of inhaler device works best for you by assessing how severe and frequent your symptoms are, whether you can use the inhaler correctly, your treatment goals, as well as your **personal needs** and **preferences**.



Your doctor or nurse will create a **Written Asthma Action Plan (WAAP)** with you to remind you which inhalers to use when you are feeling well, what to do on days when you have symptoms, and when you should seek medical help. A personalised WAAP is useful for all patients with asthma.

It is **important** that you use your inhaler **correctly** to get the right dose and full benefit of the treatment. Scan the QR code to learn more about **managing asthma** and **how to use your inhaler correctly**.



SUBSIDISED INHALERS ARE AVAILABLE

Inhaler type	Drug name, device type (subsidised brand) ^{5,6}
Controller	✓ Beclomethasone, MDI (all brands)
	✓ Budesonide, DPI (all brands)
	✓ Budesonide & formoterol, DPI (DuoResp Spiromax)*
	✓ Budesonide & formoterol, MDI (Symbicort Rapihaler)*
	✓ Budesonide & formoterol, DPI (Symbicort Turbuhaler)*
	✓ Fluticasone propionate, MDI (all brands)
	✓ Fluticasone propionate & salmeterol, DPI (Seretide Accuhaler)
	✓ Fluticasone propionate & salmeterol, MDI (Seretide Evohaler)
Reliever	✓ Fluticasone furoate & vilanterol, DPI (Relvar Ellipta)
	✓ Salbutamol, MDI (all brands)

Treatment costs are subsidised by **50% to 75%** for eligible patients



Key: DPI, dry powder inhaler; MDI, metered dose inhaler
*Also approved to be used as a reliever

KEY MESSAGES

Controllers and relievers are safe and effective for treating asthma when used according to your **written asthma action plan**. Many of them are subsidised, making treatment more affordable.

Asthma is a long-term condition that requires **regular follow-up** with your doctor. The treatment that you need to manage your asthma will depend on different factors such as your symptoms, ability to use the inhaler, medical history, and preferences. Talk to your **doctor** to discuss which treatment is suitable for you. You can also speak to a **medical social worker** if you need further financial assistance for any treatment.

Sources

1. Singapore National Asthma Programme. www.primarycarepages.sg/schemes-and-programmes/singapore-national-asthma-programme
2. www.healthhub.sg/a-z/diseases-and-conditions/695/common-childhood-illnesses-asthma
3. ACE Clinical Guidance on *Asthma: optimising long-term management with inhaled corticosteroid*, 2020
4. Global Initiative for Asthma. *Global strategy for asthma management and prevention*, 2022
5. ACE Technology Guidance on *Inhaled corticosteroids with long-acting beta₂ agonists for treating asthma*, 2023
6. www.moh.gov.sg/healthcare-schemes-subsidies/subsidised-drug-list



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