Anti-inflammatory reliever is the recommended starting treatment for asthma

National Asthma Council | Australian Asthma Handbook

Recommendations have changed for the initial treatment of asthma in patients aged 12 years and over:

- The National Asthma Council's Australian Asthma Handbook now recommends against starting asthma treatment with as-needed salbutamol or terbutaline.
- Budesonide-formoterol, taken as needed, is recommended in place of salbutamol or terbutaline.
- All adults and adolescents with asthma should receive treatment that includes inhaled corticosteroid (ICS).
- The lowest acceptable level of treatment is now as-needed budesonide-formoterol (Figure 1). This approach is called 'anti-inflammatory reliever-only' (AIR-only) therapy. It is suitable for patients who don't need daily maintenance treatment.

What is AIR-only therapy?

The patient uses an inhaler containing both an ICS (budesonide) and a rapid-acting bronchodilator (formoterol) whenever they have asthma symptoms, without the need for daily maintenance treatment. It requires a prescription (Table 1) and is subsidised by the Pharmaceutical Benefits Scheme.

Who can be prescribed AIR-only therapy?

AIR-only therapy is suitable for most adults and adolescents with newly diagnosed asthma, for those with well-controlled asthma stepping down from daily maintenance treatment with a low dose of ICS, and for those switching from as-needed short-acting $beta_2$ agonists (SABA) alone (no longer recommended).

Who should NOT be prescribed AIR-only therapy?

AIR-only therapy is unsuitable for patients with frequent or severe symptoms and those at high risk of severe exacerbations. These patients need daily maintenance ICS-containing treatment as a minimum (level 2 or higher).

What are the advantages of AIR-only therapy?

This regimen is effective for preventing severe exacerbations and convenient for patients. For those using only as-needed SABA to manage their asthma, switching to AIR-only therapy reduces the risk of severe exacerbations requiring systemic corticosteroids by more than half, and significantly reduces hospital admissions and emergency department visits.[1] AIR-only therapy is equally effective as daily maintenance low-dose ICS (plus SABA taken as needed) for preventing severe asthma exacerbations.[1]

Symptom-driven dosing lets patients adjust their own treatment level, and overcomes the common problem of low adherence to daily maintenance treatment among those with infrequent symptoms. Extra doses taken to relieve symptoms help prevent severe exacerbations over the following few weeks.[2,3] Both the ICS and bronchodilator components contribute to prevention of exacerbations,[4] which can be mainly due to either inflammation or bronchoconstriction.[5] If necessary to control asthma symptoms, the patient can step up to maintenance-and-reliever therapy (MART) with ICS-formoterol (Figure 1).

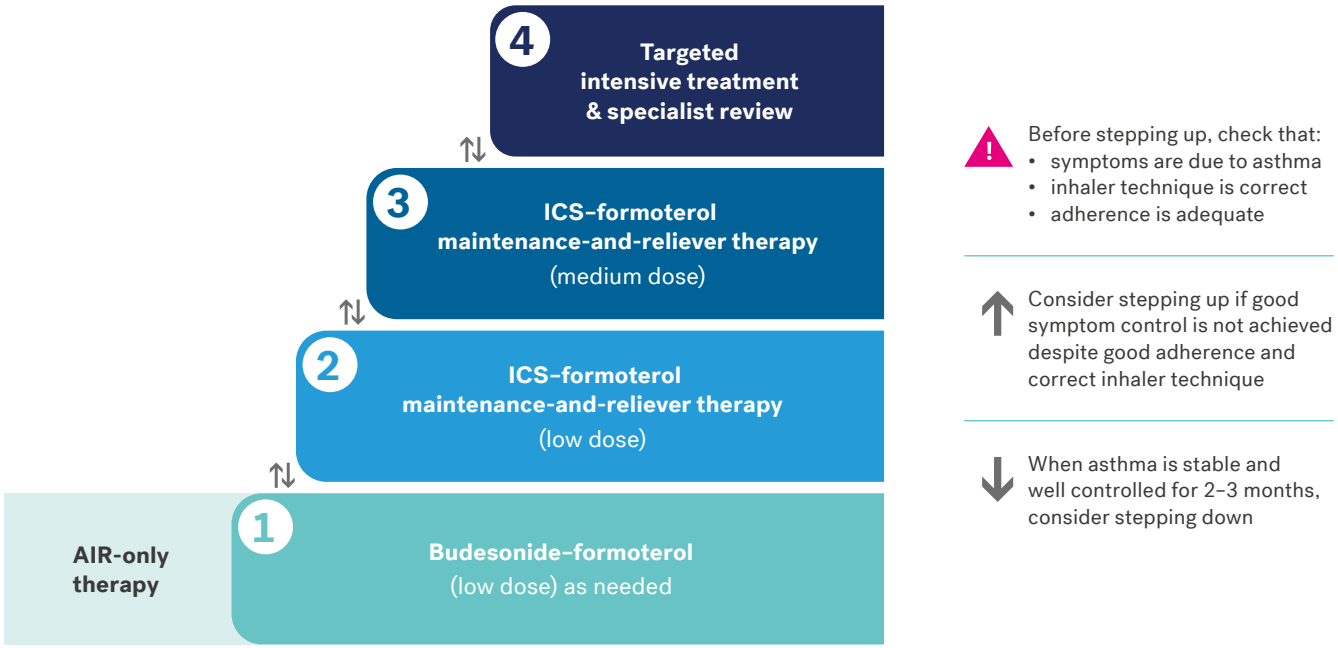
Can other ICS-bronchodilator combinations be used for AIR-only therapy?

No, only the inhalers shown in Table 1 and Figure 2. Other strengths of ICS-formoterol are inappropriate. Other long-acting beta$_2$ agonists either have a longer onset of action, or are not approved for multiple doses in one day.

Do patients still need to carry a 'blue puffer'?

No, patients prescribed an anti-inflammatory reliever should not also use SABA. Each patient's personalised written asthma action plan should include instructions on when to take more reliever doses and when to go to the emergency department or call an ambulance during a severe exacerbation.

Figure 1. Recommended approach to asthma treatment for adults and adolescents



AIR: anti-inflammatory reliever; ICS: inhaled corticosteroids

Figure shows recommended regimens only. For more information on these and other treatment options, visit asthmahandbook.org.au

Figure 2. Budesonide-formoterol inhalers for AIR-only therapy

Budesonide-formoterol 100/3 microg	Budesonide-formoterol 200/6 microg		
			
***Rilast Rapihaler* 100/3** ***Symbicort Rapihaler* 100/3**	***Bufomix Easyhaler* 200/6**	***Rilast Turbuhaler* 200/6** ***Symbicort Turbuhaler* 200/6**	***DuoResp Spiromax* 200/6**

Table 1. Budesonide-formoterol inhalers for AIR-only therapy

Brand name (Inhaler type)	Age restriction (years)	Strength (microg)*	Dose (inhalations)	Maximum dose† (inhalations)	PBS code	Streamlined authority code	Maximum quantity (2 repeats)	Inhalations per device
Rilast Rapihaler ***Symbicort Rapihaler*** (pMDI)	≥ 12	100/3	2	12 per occasion 16 per day 24 in one day temporarily	12042T	10482	2	120
Bufomix Easyhaler (DPI)	≥ 12	200/6	1	6 per occasion 8 per day 12 in one day temporarily	14166N 12041R	10464 10464	2 1	60 120
Rilast Turbuhaler ***Symbicort Turbuhaler*** (DPI)	≥ 12	200/6			12041R	10464	1	120
DuoResp Spiromax (DPI)	≥ 18	200/6			12029D	10464	1	120

AIR: anti-inflammatory reliever; DPI: dry powder inhaler; PBS: Pharmaceutical Benefits Scheme; pMDI: pressurised metered-dose inhaler

** Budesonide/formoterol per inhalation.*

† Maximum doses as stated in Therapeutic Goods Administration (TGA)-approved product information (daily maximum rarely needed in practice). Check TGA-approved indications and Pharmaceutical Benefits Scheme (PBS) restrictions before prescribing.

Key messages for patients

Old message

We used to say you must take your asthma preventer every day, forever.

That is still the best option for some people.

NEW message

For people aged 12 years and over, there is a type of combination preventer and reliever that you take just when you have symptoms, not every day.

It is for people who don't often have asthma symptoms and have had no recent severe asthma flare-ups. It lowers the total amount of steroid you take over time, while still helping to prevent asthma attacks.

What has changed

No-one aged 12 years or older with asthma should rely entirely on a 'blue puffer' without any other asthma treatment, even if they rarely have asthma symptoms. It only treats the symptoms, not the cause.

If a blue puffer is your only asthma treatment, you could be at risk of severe asthma attacks and excessive use of emergency treatments that can have serious side-effects.

What hasn't changed

If you have been prescribed asthma treatment to take every day, you should follow the instructions to prevent severe flare-ups.

REFERENCES: 1. Crossingham I, et al. BMJ Evid Based Med 2022; 27: 178-184. **2.** O'Byrne PM, et al. Lancet Respir Med 2021; 9: 149-158. **3.** Buhl R, et al. Respir Res 2012; 13: 59. **4.** Rabe KF, et al. Lancet 2006; 368: 744-753. **5.** Wark PA, et al. Thorax 2006; 61: 909-915.

For more information, refer to the National Asthma Council's Australian Asthma Handbook: asthmahandbook.org.au

Asthma and COPD medications chart: nationalasthma.org.au/living-with-asthma/resources/health-professionals/charts/asthma-copd-medications-chart

Asthma treatment levels for adults and adolescents chart: nationalasthma.org.au/living-with-asthma/resources/health-professionals/charts/asthma-treatment-levels-adults-adolescents

Asthma in adults quick reference guide: nationalasthma.org.au/living-with-asthma/resources/health-professionals/qrg/asthma-in-adults-quick-reference-guide

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