

Maintenance-and-reliever therapy for asthma



National
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Australian
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Handbook

Recommendations have changed for the initial treatment of asthma in adults and adolescents:

- The National Asthma Council's [Australian Asthma Handbook](#) now recommends that day-to-day asthma symptoms in patients aged 12 years and over should be managed with anti-inflammatory relievers, in preference to salbutamol or terbutaline (Figure 1).
- **Anti-inflammatory relievers** are inhalers that contain an inhaled corticosteroid (ICS) in combination with formoterol, a rapid-onset bronchodilator.
- **Maintenance-and-reliever therapy** (MART) is recommended for patients who need maintenance treatment. MART means the patient uses their ICS-formoterol inhaler for daily/twice-daily preventive treatment, and takes extra doses when needed for symptom relief.

What is MART?

The patient takes daily doses of either beclometasone-formoterol or budesonide-formoterol, once or twice daily according to dose requirement (Table 1). Using the same inhaler, the patient takes extra doses to manage asthma symptoms.

Who should be prescribed MART?

MART is recommended for:

- (stepping up) patients using budesonide-formoterol as needed (the minimal recommended treatment level) if they are using it on 3 or more days per week
- (switching) patients with exacerbations or persistent asthma symptoms despite maintenance treatment with low-dose ICS plus as-needed short-acting beta₂ agonist (SABA).

What are the advantages of MART?

This regimen is effective for preventing severe exacerbations and convenient for patients. It reduces the risk of severe exacerbations, compared with maintenance treatment with a combination of ICS and long-acting beta₂ agonist (LABA) plus a short-acting beta₂ agonist (SABA),

such as salbutamol or terbutaline. MART reduces severe exacerbations by approximately 32% compared with the same maintenance dose of ICS-LABA plus SABA, and by 23% compared with a higher maintenance ICS-LABA dose plus SABA.¹ Both the ICS and bronchodilator components contribute to prevention of exacerbations,² which can be mainly due to either inflammation or bronchoconstriction.³ Occasional high doses of budesonide-formoterol in one day are well tolerated.

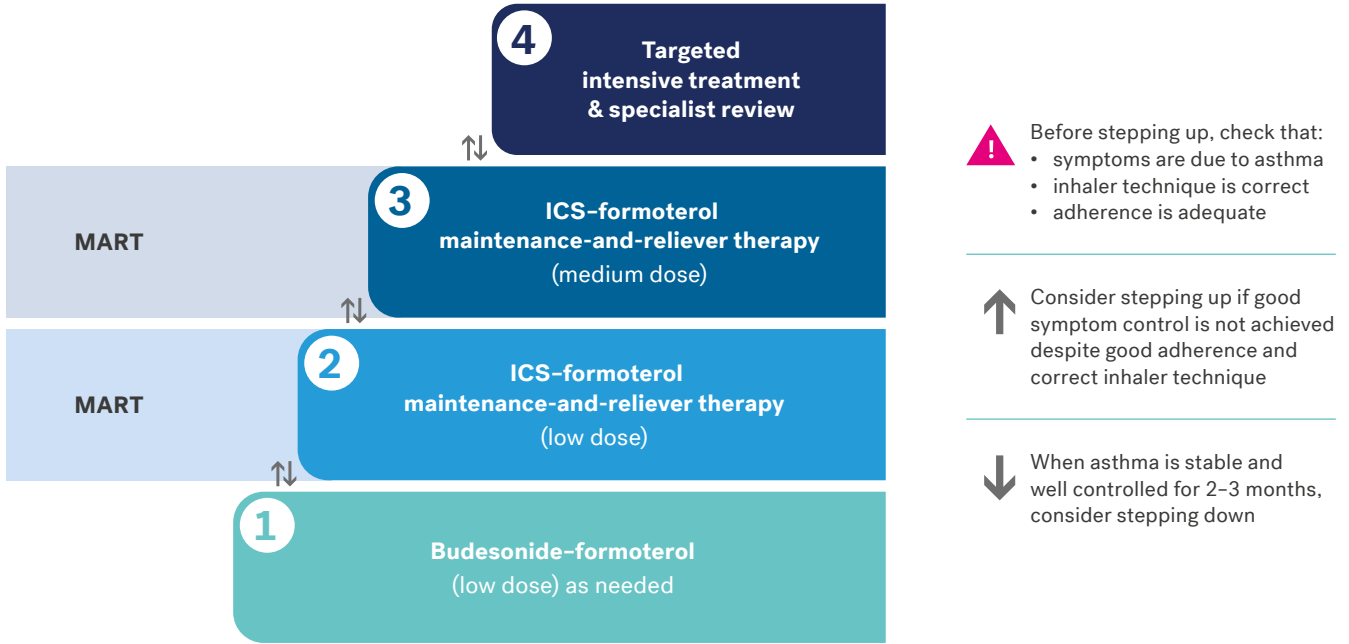
Can other ICS-bronchodilator combinations be used as MART?

No, only the inhalers that are shown in Table 1. Other strengths of ICS-formoterol are not currently recommended. Other LABAs 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 MART 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



ICS: inhaled corticosteroids; MART: maintenance-and-reliever therapy

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

Figure 2. ICS-formoterol inhalers for MART

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

* Only indicated in adults (18 years and over)

**Table 1. ICS-formoterol inhalers for MART**

Active ingredients	Brand name (Inhaler type)	Age restriction (years)	Strength (microg)*	Dose (inhalations)			PBS code	Streamlined authority code	Maximum quantity (5 repeats)	Inhalations per device
				Maintenance	Reliever	Maximum†				
Beclometasone dipropionate-formoterol	Fostair (pMDI)	18	100/6	1 twice daily	1	6 per occasion	12183F	15469	1	120
						8 per day	14376P‡	15599	2	
Budesonide-formoterol	Rilast Rapihaler Symbicort Rapihaler (pMDI)	12	100/3	2 twice daily (may increase to 4 twice daily)	2	12 per occasion	10015D	4397	2	120
						16 per day	14467K‡	15702	4	
	Symbicort Turbuhaler (DPI)	12	100/6	2 per day in 1 dose or 2 divided doses	1	6 per occasion	8796Y	4380	1	120
						8 per day	14440B‡	15755	2	
	Rilast Turbuhaler Symbicort Turbuhaler (DPI)	12	200/6	2 per day in 1 dose or 2 divided doses	1	6 per occasion	8625Y	7970	1	120
						8 per day	14439Y‡	15680	2	
Bufomix Easyhaler (DPI)	12	200/6	2 per day in 1 dose or 2 divided doses (may increase to 2 twice daily)	1	6 per occasion	14151T	7970	2	60	
					8 per day	15240D‡	18055	4	60	
DuoResp Spiromax (DPI)	18	200/6	2 per day in 1 dose or 2 divided doses	1	12 in one day temporarily	8625Y	7970	1	120	
						14439Y‡	15680	2	120	
DuoResp Spiromax (DPI)	18	200/6	2 per day in 1 dose or 2 divided doses	1	6 per occasion	11273H	7970	1	120	
					8 per day	14434Q‡	15680	2		

AIR: anti-inflammatory reliever; DPI: dry powder inhaler; MART: maintenance-and-reliever therapy; pMDI: pressurised metered-dose inhaler

* Inhaled corticosteroid/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.

‡ Condition must be stable for the prescriber to consider the listed maximum quantity of this medicine suitable for this patient (60-day prescribing).

Key messages for patients

Old message

Your preventer inhaler is for every day and your reliever inhaler (e.g. 'blue puffer') is for when you have asthma symptoms.

Current message

There is a recommended treatment option for people age 12* and over that uses the same inhaler for everyday planned doses and for rapid relief of symptoms when needed. This treatment option has been available for many years and its effectiveness and safety are well established.

What hasn't changed

Frequent or heavy use of a 'blue puffer' is risky in itself and also shows that your asthma is poorly controlled. This puts you at risk of severe asthma attacks and excessive use of emergency treatments that can have serious side-effects.

* Beclometasone-formoterol and budesonide-formoterol (Spiromax) are only indicated for adults (18 years and over).

REFERENCES: 1. Sobieraj DM, et al. JAMA 2018; 319: 1485-1496. 2. Rabe KF, et al. Lancet 2006; 368: 744-753. 3. Wark P, et al. Thorax 2006; 61: 909-915.



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