

ASTHMA TREATMENT GUIDELINES

Definition:

Asthma is a **chronic inflammatory respiratory disease**. It can affect people of **any age**, but often starts in **childhood**. It is characterised by **attacks (also known as exacerbations) of breathlessness and wheezing**, with the severity and frequency of attacks varying from person to person. The attacks are associated with variable airflow obstruction and inflammation within the lungs, which if left untreated **can be life-threatening**, however with the appropriate treatment **can be reversible**

CONTROL OF ASTHMA, DEFINED AS:

- No daytime symptoms
- No night time awakening due to asthma
- No need for rescue medications
- No limitations on activity including exercise
- Normal lung function
- No asthma attacks

With minimal side effects using the lowest effective doses

BEST PRACTICE

- Review patients regularly Considering Step Up & Down accordingly
- A Spacer device is recommended when using a MDI-
- Check Inhaler technique and compliance at each appointment and before starting any additional therapy
- Use an in-check device to measure inspiratory effort
- The least costly product that is suitable for an individual should be used
- Consider total steroid load when reviewing patient
- All patients should have a written self-management plan
- Reconsider the diagnosis in patients who continue to have symptoms

Asthma is not controlled at any step if using SABA: 3 times a week or more: having symptoms 3 times a week or more: waking at least once a week.

Regular Inhaled Preventer

Inhaled Corticosteroid (ICS)

<12yrs Very Low Dose ICS
200mcgs

≥12yrs Low Dose ICS
400mcgs

Initial Add on Therapy

<5yrs

ADD Leukotriene
Receptor Antagonist

5yrs of age (or 6-11yrs
unable to use a DPI)

Low Dose ICS
400mcgs/day in an MDI

>5yrs ADD in a Long Acting B₂ Agonist
(LABA) in a combination inhaler

6-11yr Very Low Dose ICS + LABA
200mcgs

12+ Low Dose ICS + LABA 400mcgs

Review after ONE MONTH

<5yrs

IF GOOD RESPONSE TO LTRA – CONTINUE

IF POOR OR NO RESPONSE RECONSIDER DIAGNOSIS
REFER TO RESPIRATORY PAEDIATRICIAN

5yrs (or 6-11yrs unable to use a DPI)

IF GOOD RESPONSE TO ICS – CONTINUE

>5yrs

IF GOOD RESPONSE TO LABA - CONTINUE

IF SOME RESPONSE OR **NO RESPONSE** THEN GO TO ADDITIONAL ADD ON THERAPY BELOW

Additional Add on Therapy

SOME RESPONSE to LABA

EITHER

INCREASE ICS in a combinations inhaler (ICS+LABA)

6-11yrs

Low Dose (ICS+LABA)
*400mcgs BDP

12+yrs

Medium Dose (ICS+LABA)
*800/*1000mcgs BDP

OR

CONTINUE WITH ICS+LABA (in a combination inhaler) and add a LTRA

NO RESPONSE TO LABA – STOP LABA in a combinations inhaler (ICS+LABA) and increase ICS alone

6 – 11 years

Low Dose ICS
400mcgs BDP

12+ years

Medium Dose ICS
800mcgs BDP

5yrs (or 6-11yrs unable to use a DPI) add in a LABA

Low Dose ICS
400mcgs BDP (MDI + Spacer)

<18yrs REFER TO RESPIRATORY PAEDIATRICIAN

18+ years Consider patients who may be suitable for Maintenance and Reliever therapy SMART/MART

>18yrs CONSIDER TRIAL OF LAMA – Long Acting Muscarinic Antagonist

HIGH DOSE THERAPIES

Consider trials of:-

Addition of a 4th drug

- LTRA
- LAMA

Increasing ICS up to 2000mcgs/day BDP

18+ years Refer to Respiratory Consultant

Short Acting B₂ Agonist (SABA)

Prescribe as required

Asthma is not controlled at any step if using SABA: 3 times a week or more: having symptoms 3 times a week or more: waking at least once a week

KEY:

MDI	Metered Dose Inhaler
SABA	Short Acting B₂ Agonist
ICS	Inhaled Corticosteroids
DPI	Dry Powder Inhaler
BDP	Beclometasone
LTRA	Leukotriene Receptor Antagonist
LABA	Long Acting B₂ Antagonist
LAMA	Long Acting Muscarinic Antagonist
mcgs	micrograms
BTS	British Thoracic Society
SIGN	The Scottish Intercollegiate Guidelines Network

MAINTENANCE & RELIEVER THERAPY 18+ years

The use of a single inhaler for both maintenance and reliever therapy in asthma
Adult patients (≥ 18 years) use an adequate fixed maintenance dose and additional reliever inhalations of Symbicort/Fostair as required

Symbicort 200/6 Turbohaler SMART

One inhalation twice a day plus as required OR

Two inhalations once daily plus as required OR

Two inhalations twice a day plus as required

A maximum of 12 inhalations per day (maintenance and reliever):

The use of a separate reliever inhaler is NOT required

Fostair 100/6 Metered Dose Inhaler MART

One inhalation twice a day plus one as required

A maximum of 8 inhalations per day (maintenance and reliever):

The use of a separate reliever inhaler is NOT required

Patients requiring frequent use of rescue inhalations daily should be strongly recommended to seek medical advice. Their asthma should be reassessed and their maintenance therapy should be reconsidered

12+ Years Recommended Asthma Treatment Choices - First Line

	12 to 17	18+	Brand Name	ICS	LABA	Dosage Regime	Total Daily Dose ICS	TDD BDP equivalent
REGULAR PREVENTER (ICS)	✓	✓	Clenil 100 MDI	Beclometasone		2 Puffs twice a day	400mcgs = 400mcgs	
	✓	✓	Budesonide 100 Easyhaler	Budesonide		1 Puff twice a day	400mcgs = 400mcgs	
	✓	✓	Pulmicort 200 Turbohaler	Budesonide		1 Puff twice a day	400mcgs = 400mcgs	
INITIAL ADD ON THERAPY (ICS+LABA)	✓	✓	Symbicort 100/6 Turbohaler	Budesonide	Formoterol	2 Puffs twice a day	400mcgs = 400mcgs	
	✓	✓	Flutiform 50/5 MDI	Fluticasone propionate	Formoterol	2 Puffs twice a day	200mcgs = 400mcgs	
ADDITIONAL ADD ON THERAPIES (ICS+LABA)	✓	✓	Symbicort 200/6 Turbohaler	Budesonide	Formoterol	2 Puffs twice a day	800mcgs = 800mcgs	
	✓	✓	Flutiform 125/5 MDI	Fluticasone propionate	Formoterol	2 Puffs twice a day	500mcgs = 1000mcgs	
	✗	✓	Fostair 100/6 MDI/Nexthaler	Beclometasone Extrafine	Formoterol	2 puffs twice a day	400mcgs = 1000mcgs	
ADDITIONAL ADD ON THERAPIES (ICS)	✓	✓	Clenil 200 MDI	Beclometasone		2 Puffs twice a day	800mcgs = 800mcgs	
	✓	✓	Budesonide 400 Easyhaler	Budesonide		1 Puff twice a day	800mcgs = 800mcgs	
	✓	✓	Pulmicort 400 Turbohaler	Budesonide		1 Puff twice a day	800mcgs = 800mcgs	
HIGH DOSE THERAPY (ICS+LABA)	✗	✓	Flutiform 250/10 MDI	Fluticasone propionate	Formoterol	2 Puffs twice a day	1000mcgs = 2000mcgs	
	✗	✓	Fostair 200/6 MDI/Nexthaler	Beclometasone Extrafine	Formoterol	2 Puffs twice a day	800mcgs = 2000mcgs	

	Low Dose ICS
	Medium Dose ICS
	High Dose ICS

TDD - Total Daily Dose
BDP - Beclometasone
ICS - Inhaled Corticosteroid
LABA - Long Acting Beta Agonist

12+ Years - Other Asthma treatment choices - 2nd Line

	12 to 17	18+	Brand Name	ICS	LABA	Dosage Regime	Total Daily Dose ICS	TDD BDP equivalent
REGULAR PREVENTER	✓	✓	Qvar 50 MDI	Beclometasone Extrafine		2 Puffs twice a day	200mcgs =	500mcgs
INITIAL ADD ON THERAPY (ICS + LABA)	✓	✓	Seretide 50/25 MDI	Fluticasone propionate	Salmeterol	2 Puffs twice a day	200mcgs =	400mcgs
	✓	✓	Seretide 100/50 Accuhaler	Fluticasone propionate	Salmeterol	1 Puff twice a day	200mcgs =	400mcgs
ADDITIONAL ADD ON THERAPIES (ICS+LABA)	✓	✓	Seretide 125/25 MDI	Fluticasone propionate	Salmeterol	2 Puffs twice a day	500mcgs =	1000mcgs
	✓	✓	Seretide 250/50 Accuhaler	Fluticasone propionate	Salmeterol	1 Puff twice a day	500mcgs =	1000mcgs
ADDITIONAL ADD ON THERAPIES (ICS)	✓	✓	Qvar 100 MDI	Beclometasone Extrafine		2 Puffs twice a day	400mcgs =	1000mcgs
HIGH DOSE THERAPIES (ICS+LABA)	✓	✓	Seretide 250/25 MDI	Fluticasone propionate	Salmeterol	2 Puffs twice a day	1000mcgs =	2000mcgs
	✓	✓	Seretide 500/50 Accuhaler	Fluticasone propionate	Salmeterol	1 Puff twice a day	1000mcgs =	2000mcgs

	Low Dose ICS
	Medium Dose ICS
	High Dose ICS

TDD - Total Daily Dose
BDP - Beclometasone
ICS - Inhaled Corticosteroid
LABA - Long Acting Beta Agonist

<12 Years Asthma Inhaler Treatment Choices

	<5	5 to 11	Brand Name	ICS	LABA	Dosage Regime	Total Daily Dose ICS	TDD BDP equivalent
REGULAR PREVENTER	✓	✓	Clenil 50 MDI	Beclometasone		2 Puffs twice a day	200mcgs = 200mcgs	
			Pulmicort 100 Turbohaler	Budesonide		1 Puff twice a day	200mcgs = 200mcgs	
		✓6+	Budesonide 100 Easyhaler	Budesonide		1 Puff twice a day	200mcgs = 200mcgs	

INITIAL ADD ON PREVENTER (ICS + LABA)		✓6+	Symbicort 100/6 Turbohaler	Budesonide	Formoterol	1 Puff twice a day	200mcgs = 200mcgs	
	<i>If 5 years of age or 6-11 yrs and unable to use Dry Powder Inhaler (Turbohaler) then:</i>							
		✓	Clenil 100 MDI	Beclometasone		2 puffs twice a day	400mcgs = 400mcgs	

ADDITIONAL ADD ON THERAPIES (ICS + LABA)		✓6+	Symbicort 100/6 Turbohaler	Budesonide	Formoterol	2 Puffs twice a day	400mcgs = 400mcgs	
		✓	Seretide 50/25 MDI	Fluticasone propionate	Salmeterol	2 Puffs twice a day	200mcgs = 400mcgs	

ADDITIONAL ADD ON THERAPIES (ICS)		✓	Clenil 100 MDI	Beclometasone		2 Puffs twice a day	400mcgs = 400mcgs	
		✓6+	Budesonide 100 Easyhaler	Budesonide		2 Puffs twice a day	400mcgs = 400mcgs	
		✓	Pulmicort 200 Turbohaler	Budesonide		1 Puff twice a day	400mcgs = 400mcgs	
		✓	Flixotide 50 MDI	Fluticasone		2 Puffs twice a day	200mcgs = 400mcgs	

HIGH DOSE THERAPIES (ICS + LABA)		✓	Clenil 100	Beclometasone		4 Puffs twice a day	800mcgs = 800mcgs	
		✓	Seretide 125/25 MDI	Fluticasone propionate	Salmeterol	2 Puffs twice a day	500mcgs = 1000mcgs	

	Very low dose ICS
	Low Dose ICS
	Medium Dose ICS

TDD - Total Daily Dose
 BDP - Beclometasone
 ICS - Inhaled Corticosteroid
 LABA - Long Acting Beta Agonist

SABA – Short Acting B₂ Antagonist

	<5	5 to 11	12 to 17	18+	Brand Name	SABA	Dosing Regime
Short Acting Bronchodilators	✓	✓	✓	✓	Ventolin 100mcgs MDI	Salbutamol	2 puffs as required up to a max of 4 times a day
		✓	✓	✓	Salamol Easibreathe 100mcgs MDI	Salbutamol	2 puffs as required up to a max of 4 times a day
		✓	✓	✓	Bricanyl Turbohaler 500mcgs	Terbutaline	1 puff as required up to a max of 4 times a day
		✓	✓	✓	Salbutamol Easyhaler 100mcgs	Salbutamol	2 puffs as required up to a max of 4 times a day

NOTE:

Asthma is not controlled at any step if using SABA: 3 times a week or more: having symptoms 3 times a week or more: waking at least once a week.

LAMA – Long Acting Muscarinic Antagonist

	18+	Brand Name	LAMA	Dosage Regime
Long Acting Muscarinic Antagonists (LAMA)	✓	Spiriva Respimat 2.5 micrograms	Tiotropium	2 Puffs once daily
(This is indicated as an add on bronchodilator treatment in adult patients with asthma who are currently treated with a maintenance combination inhaler (ICS+LABA) at 800mcgs/day BDP equivalent and who experienced one or more severe exacerbations in the previous year)				

LTRA - Leukotriene Receptor Antagonist

Leukotriene Receptor Antagonists (LTRA)	6 months to 5 years Once daily at night	Montelukast 4mg Chewtab or 4mg granules (do not mix with fluid but can be mixed with food)
	6-14 years Once daily at night	Montelukast 5mg Chewtab
	15+ years Once daily at night	Montelukast 10mg tablet

SPACER DEVICES

Wash your spacer once a month using detergent, such as washing-up liquid.

Don't scrub the inside of the spacer as this affects the way it works.

Leave it to air-dry as this helps to prevent the medicine sticking to the sides of the chamber and reduces static

Wipe the mouthpiece clean of detergent before you use it again. Don't worry if your spacer looks cloudy - that doesn't mean its dirty

Your spacer should be replaced at least every year, especially if you use it daily, but some may need to be replaced sooner - ask your GP, asthma nurse or pharmacist if you're unsure

Ensure the inhaler is compatible with the spacer device

Aerochamber Infant Device with Mask	(Orange)	0-18 months
Aerochamber Child Device with Mask	(yellow)	1 year – 5 years
Aerochamber plus with Mask	(Blue)	5+ years
Volumatic with Facemask		0+ years
Volumatic		3+ years
Aerochamber Plus	(Blue)	5+ years