


# Guidelines for the Management of Children (5 - 11 years) with Confirmed Asthma

Based on a combination of the [NICE 2021 Asthma, Guidance](#) [BTS / SIGN British Guideline on the Management of Asthma](#) July 2019 and [GINA guidance](#) May 2022

(Diagnosis is not covered by this guidance)



**Consider carbon footprint of inhaler choice.** – In younger children a pMDI and spacer with a mouthpiece are the preferred method of delivery of  $\beta$ 2 agonists or inhaled corticosteroids. Switch to a low carbon footprint, dry powder inhaler when able to use. **Prescribe ALL inhalers by BRAND.** See [NICE Patient Decision Aid – Inhalers for Asthma](#). If a DPI is not suitable, a pMDI + spacer with mouthpiece is more effective and preferred to pMDI alone and as effective as DPI

If you need urgent advice at any stage contact:

SWH: WHHT hotline on 01923 436 672 Mon-Fri 12-2pm  
WE: PAH hotline on 01279 652556 Mon-Fri 12-1pm  
ENH: none at present

OR



paediatric consultant via the [consultant connect app](#) available ICS wide  
Mon-Fri 9am-8pm, Weekends and Bank holidays 9am-5pm

Assess control e.g. [ACT](#) or [Ardens](#). Step up to improve control (after checking [TTT](#); Therapy compliance/adherence, inhaler Technique, Trigger factors) as needed and step down to find and maintain lowest controlling therapy  
**SABA required at all steps. If using SABA >3 times per week = POOR CONTROL, patients must be reviewed and stepped up.**

## Step 1: Regular Preventer

Very Low (Paediatric dose) ICS \*+ Salamol 100mcg PRN + spacer with mouthpiece for symptom relief

\*pMDI option: **Clenil 50mcg 2PU BD** (licensed from 2 years)

## Step 2: Initial add-on therapy

Very Low (Paediatric Dose) ICS (Clenil 50mcg 2PU BD + spacer with mouthpiece)

+ [Montelukast](#) (considered more effective with an allergic component <sup>see page 4</sup>) trial for 6 weeks and review. ([see Drug Safety Update for side effects](#)) **If inadequate response to montelukast stop and try inhaled LABA + ICS (as below)**

**OR**

Inhaled LABA + ICS\*

\***DPI option: Symbicort 100/6 1 PU BD** (licensed from 6 years) (link for inhaler technique [HERE](#))

\***pMDI option: Seretide Evohaler 50/25 2PU BD +Spacer with mouthpiece** (Note Seretide is not available as a very low dose) (licensed from 4 years)

\*ICS and LABA inhalers should not be prescribed as separate inhalers

## Step 3: Additional controller therapies

(1) If no improvement with LABA added, stop the LABA and try:

- an increase from very low dose to low-dose of ICS\*  
\***pMDI option: Clenil 100mcg 2PU BD + spacer with mouthpiece**

(2) If there is a partial improvement when a LABA is added:

- continue LABA and increase to low dose of ICS\*  
\***DPI option: Symbicort 100/6 2PU BD**  
\***pMDI option: Seretide Evohaler 50/25 2PU BD + spacer with mouthpiece** (if it hasn't been tried at Step 2 previously)
- OR**
- continue LABA and very low-dose ICS\* and consider a trial of a [Montelukast](#) ([see Drug Safety Update for side effects](#)) (considered more effective with an allergic component <sup>see page 4</sup>) trial for 6 weeks and review  
\***DPI option: Symbicort 100/6 1PU BD**

**CONSIDER REFERRAL TO INTEGRATED CYP ASTHMA/WHEEZE SERVICE OR SECONDARY CARE (SWH)/SECONDARY CARE (ENH and WE) FOR SPECIALIST INPUT IF ASTHMA REMAINS UNCONTROLLED**

## Step 4: High Dose Therapy

**REFERRAL TO INTEGRATED CYP ASTHMA/WHEEZE SERVICE OR SECONDARY CARE (SWH)/SECONDARY CARE (ENH and WE) FOR SPECIALIST INPUT**

Ensure routine clinical review at least annually. Review after 6-8 weeks at each step up/down. If asthma uncontrolled, check diagnosis, inhaler technique (and correct if necessary), adherence, use of rescue medication, lung function, exposure to smoking & triggers, side effects and suitability of treatment. **Complete control of asthma is defined as:** no daytime symptoms, no night-time awakening due to asthma, no need for rescue medication, no exacerbations, no asthma attacks, minimal side effects, no limitations on activity including exercise, normal lung function (in practical terms Forced expiratory volume [FEV1] and/or peak expiratory flow [PEF] >80% predicted or best).

# Guidelines for the Management of Children (12- 17 years) with Confirmed Asthma

Based on a combination of the [NICE 2021 Asthma , Guidance](#) [BTS / SIGN British Guideline on the Management of Asthma](#) July 2019 and [GINA guidance](#) May 2022

(Diagnosis is not covered by this guidance)



In younger children a pMDI and spacer with mouthpiece are the preferred method of delivery of  $\beta_2$  agonists or inhaled corticosteroids. Switch to a low carbon footprint, dry powder inhaler when able to use. See [NICE Patient Decision Aid – Inhalers for Asthma](#). If a DPI is not suitable, a pMDI +spacer is more effective and preferred to pMDI alone and as effective as DPI

If you need urgent advice at any stage contact:

SWH: WHHT hotline on 01923 436 672 Mon-Fri 12-2pm

WE: PAH hotline on 01279 652556 Mon-Fri 12-1pm

ENH: none at present

OR



paediatric consultant via the [consultant connect app](#) available ICS wide Mon-Fri 9am-8pm, Weekends and Bank holidays 9am-5pm

Assess control e.g. [ACT](#) or [Ardens](#). Step up to improve control (after checking TTT; Therapy compliance/adherence, inhaler Technique, Trigger factors) as needed and step down to find and maintain lowest controlling therapy  
**SABA required at all steps (UNLESS ON SMART THERAPY). If using SABA >3 times per week = POOR CONTROL, patients must be reviewed and stepped up.**

## Step 1: Regular Preventer

CONSIDER SMART\*\* using Symbicort 100/6- see page 3

Low Dose ICS\*+ Salamol 100mcg inhaler use as required + spacer for symptom relief

\*DPI option: Pulmicort turbohaler 100mcg 2PU BD (licensed from 6 years)

\*pMDI option: Clenil 100mcg 2PU BD + spacer (licensed from 2 years)

## Step 2: Initial add-on therapy

SMART\*\* Regimen if not already started, consider titrating up according to response (see table on page 3)

OR

Low Dose ICS\* + Inhaled LABA

Either Fixed dose ICS + LABA regimen

\*DPI option: Symbicort 200/6 1PU BD (licensed from 12 years)

\*pMDI option: Seretide Evohaler 50/25 2 PU BD + spacer (licensed from 4 years)

If NO response to Fixed Dose ICS+ LABA consider a trial of SMART\* using Symbicort 200/6 – see page 3

## Step 3: Additional controller therapies

If no improvement with LABA added, stop the LABA and try:

- an increase from low dose to medium dose of ICS\*  
\*DPI option: Pulmicort Turbohaler 200mcg 2PU BD  
\*pMDI option: Clenil 200mcg 2PU BD + spacer (Issue a steroid card - [paediatric-steroid-treatment-card.pdf](#) ([endocrinology.org](#)))

If there is a partial improvement when a LABA is added:

- continue LABA and increase to medium dose of ICS\*  
\*DPI option: Symbicort 200/6 2 PU BD (issue steroid card)

OR

- continue LABA and low dose ICS\*  
\*DPI option: Symbicort 200/6 1PU BD and consider a trial of a [Montelukast](#) (considered more effective with an allergic component <sup>see page 4</sup>) trial for 6 weeks and review. ([see Drug Safety Update for side effects](#))

**CONSIDER REFERRAL TO INTEGRATED CYP ASTHMA/WHEEZE SERVICE OR SECONDARY CARE (SWH)/SECONDARY CARE (ENH and WE) FOR SPECIALIST INPUT IF ASTHMA REMAINS UNCONTROLLED**

## Step 4: High Dose Therapies

REFERRAL TO INTEGRATED CYP ASTHMA/WHEEZE SERVICE OR SECONDARY CARE (SWH)/SECONDARY CARE (ENH and WE) FOR SPECIALIST INPUT

**AMBER INITIATION:** (started by secondary care, continued by primary care)

DPI Option: Relvar Ellipta 92/22 micrograms starting dose of 1PU OD (licensed from 12 years)

High strength only to be started after specialist review if low strength has been ineffective

DPI Option: Relvar Ellipta 184 micrograms/22 micrograms (licensed from 12 years)

Ensure routine clinical review at least annually. Review after 6-8 weeks at each step up/down. If asthma uncontrolled, check diagnosis, inhaler technique (and correct if necessary), adherence, use of rescue medication, lung function, exposure to smoking & triggers, side effects and suitability of treatment. **Complete control of asthma is defined as:** no daytime symptoms, no night-time awakening due to asthma, no need for rescue medication, no exacerbations, no asthma attacks, minimal side effects, no limitations on activity including exercise, normal lung function (in practical terms Forced expiratory volume [FEV1] and/or peak expiratory flow [PEF] >80% predicted or best).

# Single Maintenance and Reliever therapy (SMART) Regimen (12-17 years)

- SMART uses a daily maintenance dose of Symbicort (Budesonide-Formoterol) PLUS Symbicort as needed in response to symptoms. In less severely affected patients, a maintenance dose might not be needed.
- SMART is licenced for children aged  $\geq 12$  years. **GINA advocates use of the SMART regimen from step 1.**
- **A short acting bronchodilator (e.g. Salbutamol) is not used with this approach to treatment.**
- **Ensure inhaler technique training has been given at the time of prescribing. Use [RightBreathe](#) link for training video.**
- Younger children might have difficulties using a Turbohaler when unwell.
- Combination inhalers containing Salmeterol cannot be used for SMART.
- Note: Not all inhalers are licensed for SMART in children.
- Appropriate for patients on Step 1, Step 2 and Step 3 with a Personalised Asthma Action Plan (PAAP) able to self-manage and are compliant with their own treatment.

Device	SMART	
	Symbicort® Turbohaler 100 micrograms/6 micrograms / inhalation	Symbicort® Turbohaler 200 micrograms/6 micrograms / inhalation
Active ingredients	Budesonide 100 micrograms/inhalation and formoterol fumarate dihydrate 6 micrograms/inhalation	Budesonide 200 micrograms/inhalation and formoterol fumarate dihydrate 6 micrograms/inhalation
Licensed age	Adults and adolescents (12 years and older)	Adults and adolescents (12 years and older)
Maintenance dose	2 inhalations per day, given either as one inhalation in the morning and evening or as 2 inhalations in either the morning or evening	2 inhalations per day, given either as one inhalation in the morning and evening or as 2 inhalations in either the morning or evening. For some patients a maintenance dose of 2 inhalations twice daily may be appropriate
As required dose	1 additional inhalation as needed in response to symptoms. If symptoms persist after a few minutes, an additional inhalation should be taken	1 additional inhalation as needed in response to symptoms. If symptoms persist after a few minutes, an additional inhalation should be taken
Maximum number of puffs in 24 hours	Not more than 6 inhalations should be taken in one occasion. A total daily dose of more than 8 inhalations is not normally needed; however, a total daily dose of up to 12 inhalations could be used for a limited period. Patients using more than 8 inhalations daily should be reviewed urgently. They should be reassessed, and their maintenance therapy should be reconsidered.	

- The total regular dose of ICS should not be decreased
- Patients taking regular (more than 3 rescue doses a week or once at night), rescue doses of their combination inhaler should have their treatment reviewed
- Ensure the correct amount is prescribed as patient will be using the inhaler as maintenance and relief i.e. 4 inhalers every 3 months maximum

Symbicort® SMART Asthma Action Plan Template can be found here: [MART-no-logo.pdf \(beatasthma.co.uk\)](#)

## Patient Education

### Personalised Asthma Action Plans (PAAP)

All diagnosed asthma patients should be provided individual, self-management written guidance in the form of a PAAP. Should contain:

- Current treatment regime and good inhaler technique
- Symptom triggers and what to avoid to maintain good control.
- Recognising poor control/exacerbations/asthma attacks
- How to increase reliever and maintenance therapy or SMART with worsening symptoms and when to start steroids and seek (urgent) medical attention.
- Best PEFr, how to recognise decline and adjust treatment  
**PEF >80% best: good control**  
**PEF 40-60% best: urgent action: commence oral steroids and seek medical advice**  
**PEF <40%: call 999**
- Use community pharmacy New Medicines Service (NMS) where appropriate.
- **Check adherence with therapy at every opportunity and reinforce technique at every visit.**
- Raise concerns if SABA overuse or underuse of ICS is noted.
- Choose an alternative device if technique remains a problem.

### Examples from Asthma UK

### Inhaler Technique

- Provide training on the use of the device and ensure good technique. Consider use of placebo inhaler for training.
- Be consistent with device choice (DPI or pMDI); prescribing mixed inhaler can lead to confusion and increased errors
- [Asthma UK OR RightBreathe.com](#) for training videos for inhaler technique.

## Drug Delivery

**Spacers** see link to spacer document [HERE](#)

- Improves lung deposition, aids co-ordination, reduces oropharyngeal deposition and local side effects
- Should be compatible with the pMDI being used. See <https://www.rightbreathe.com/> for latest information
- Should be replaced every 12 months
- Spacers should be cleaned at least once a month; otherwise their performance is adversely affected. They should be washed in warm, soapy water and allowed to dry naturally in the air.

## ABBREVIATIONS

SABA – Short-acting beta<sub>2</sub> agonist  
ICS – Inhaled corticosteroid  
LABA – Long acting beta agonist  
SMART – Single Maintenance and Reliever Therapy

## Red flags for alternative diagnosis

- Failure to Thrive
- Stridor
- Abnormal Cry or Voice
- Dysphagia
- Persistent Wet or Productive Cough
- Nasal Polyps

**Refer to Specialist if any Red Flags Present**

## Allergic components to consider for asthma

- Allergy (inc. food allergy) or atopic disease with sensitivity to environmental or occupational triggers e.g. Pollen, pets or dust
- Eczema
- Allergic rhinitis – consider therapy

## Common Asthma Triggers

- [cigarette smoke](#)
- exercise
- colds and viruses
- pollution
- pet hair
- Mould/damp
- Aerosols and Sprays  
<https://www.asthma.org.uk/advice/triggers/dust-mites/>
- For more information on triggers and how to avoid them see Asthma + Lung UK | Asthma triggers - [link](#)

## Components of Asthma Review

Assess Symptom Control:

- Validated Symptom Score e.g. [ACT](#)
- Exercise Tolerance
- Bronchodilator Use
- Time off School/Activities

Future Attack Risk Review:

- Past history of attacks
- Tobacco Exposure
- Obesity
- Indoor and Outdoor Air Pollution
- Amount of inhaler usage

Investigations:

- PEFr (peak expiratory flow rate)
- Consider height/weight
- Consider Spirometry

To do:

- Review of inhaler technique
- Explanation and provision of PAAP (Personalised Asthma Action Plan)

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