North Central London Health and Care
Integrated Care System

NHS

Jump to Full Inhaler Guidance for hyperlinked rationale, references, prescribing advice

Children's Asthma Inhaler Choice Quick Reference Guidance

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Approved by NCL ICB Medicines CRG 14/07/2025
Due for review in July 2028 unless review is triggered by changes to guidance or licensing in the interim

Pathways for inhaled therapies for asthma for 12-17y – see inhalers

NICE National Institute for Health and Care Excellence

Escalate to next step in therapy in uncontrolled asthma

De-escalate to previous step in therapy in controlled asthma

Jump to Full Inhaler Guidance for more information via links

New Diagnosis of Asthma at 12+ – MART pathway

Should we start at step 1 (AIR) or step 2-3 (MART)

Symptoms 4+ days per wk
Night symptoms ≥1d per wk
Abnormal lung function
High risk features present:
START WITH MART

Symptoms ≤3d per week
Night symptoms <1d per week
No high risk features

Anti-inflammatory Reliever (AIR) – Step 1:
As required ICS/formoterol combination therapy
No SABA required

Maintenance – Step 2:
Low dose Maintenance & Reliever Therapy (MART)
No SABA required*

Maintenance – Step 3:
Moderate dose Maintenance & Reliever Therapy (MART)
No SABA required*

*There are a few exceptions where a specialist may recommend an emergency SABA with MART

Control poor at step 3 despite good adherence and inhaler technique

Retest FENO (if available) and blood eosinophils

FENO <20ppm and/or
Eosinophils <0.4 x10^9/L

Maintenance – Optional step
Consider a 8-12 weeks trial of either:
LTRA (montelukast)
or LAMA
in addition to moderate-dose MART

No improvement

Secondary care referral

FENO >20ppm
or
Eosinophils >0.4 x10^9/L

Secondary care referral

ICS Dose ranges per 24h for 12y+
- **Low dose** – 200-500mcg beclomethasone or budesonide or 100-250mcg fluticasone
- **Mod dose** – 600-800mcg beclomethasone or budesonide or 300-500mcg fluticasone
- **High dose** – 1000-2000mcg beclomethasone or budesonide or 500-1000mcg fluticasone

Maintenance – Step 4:
Regular high dose ICS/LABA or ICS/LABA/LAMA
(Specialist initiation)
+ SABA as needed

Previous/alternative pathway

ALWAYS switch to AIR or MART

No preventer or non-adherent
NEVER INITIATE SABA ONLY REGIMEN
+ SABA as needed

If control poor, switch to MART

Maintenance – Step A1:
Low dose ICS therapy
+ SABA as needed

If control poor, switch to MART

Maintenance – Step A2:
Low to medium dose ICS+LABA combination
+ SABA as needed

Unable to tolerate MART

Secondary care referral

Inhalers on the NCL Joint Formulary for 12-17y – see pathway

Jump to Full Inhaler Guidance for more information via links

PREFERRED PATHWAY (AS PER NICE)

AIR Step 1: PRN ICS/formoterol	Maintenance Step 2: low dose MART	Maintenance Step 3: moderate dose MART
Symbicort Turbohaler Budesonide/ Formoterol	**Symbicort Turbohaler** Budesonide/ Formoterol	**Symbicort Turbohaler** Budesonide/ Formoterol
200/6mcg device: 1 dose PRN (up to 8 doses daily) CO_2: LOW DPI	**100/6mcg device:** 1 dose BD & 1 dose PRN Usually up to 8 doses daily; max 12 doses daily Max 6 at any one time CO_2: LOW DPI	**200/6mcg device:** 1-2 dose BD & 1 dose PRN Usually up to 8 doses daily; max 12 doses daily Max 6 at any one time CO_2: LOW DPI
Duoresp Spiromax Budesonide/ Formoterol	**Duoresp Spiromax** Budesonide/ Formoterol	**Duoresp Spiromax** Budesonide/ Formoterol
160/4.5mcg device: 1 dose PRN (up to 8 doses daily) CO_2: LOW DPI	**160/4.5mcg device:** 1 dose BD & 1 dose PRN Usually up to 8 doses daily Max 6 at any one time CO_2: LOW DPI	**160/4.5mcg device:** 2 dose BD & 1 dose PRN Usually up to 8 doses daily Max 6 at any one time CO_2: LOW DPI
Symbicort pMDI§ Budesonide/ Formoterol	**Symbicort pMDI** Budesonide/ Formoterol	**Symbicort pMDI** Budesonide/ Formoterol
100/3mcg device: 2 dose PRN (up to 16 doses a day) § NB: Unlicenced CO_2: HIGH pMDI	**100/3mcg device:** 2 dose BD & 2 dose PRN Up to 16 doses daily Max 12 at any one time CO_2: HIGH pMDI	**100/3mcg device:** 2-4 dose BD & 2 dose PRN Usually up to 16 doses daily; max 24 doses daily Max 12 at any one time CO_2: HIGH pMDI

Spacers should always be used with pMDIs:

Offer patient's preferred spacer type

Prescribe by age and +- mask

PREVIOUS/ALTERNATE PATHWAY

Maintenance Step A1: Low-dose ICS	Maintenance Step A2: Low to medium dose ICS/LABA	
Pulmicort Turbohaler* Budesonide **100mcg device:** 2 doses BD **200mcg device:** 1 dose BD CO_2: LOW DPI	**Symbicort Turbohaler*** Budesonide/ Formoterol **200/6 mcg device** Low dose: 1 dose BD Mod dose: 2 doses BD Other devices available CO_2: LOW DPI	**Relvar Ellipta*** Fluticasone furoate/ Vilanterol **92/22 mcg device** No low dose Mod dose: 1 dose OD CO_2: LOW DPI
Clenil Modulite* Beclomethasone **100mcg device:** 2 doses BD CO_2: HIGH pMDI	**Seretide*** Fluticasone / Salmeterol **Low dose: 50 Evohaler** 2 doses BD **Mod dose: 125 Evohaler** 2 doses BD DO NOT use for MART CO_2: HIGH pMDI	**Duoresp Spiromax*** Budesonide/ Formoterol **160/4.5mcg device:** 1-2 dose BD CO_2: LOW DPI

****Always prescribe by brand only****

Share a video: How to use your inhaler

Optional step:

Montelukast

(Mod dose MART+) **Montelukast 5-10mg nocte**
8-12 week trial
Discuss risk of neuropsychiatric side effects before prescribing
CO_2: LOW
PO

LAMA: Spiriva Respimat

(Moderate dose MART+) **Spiriva Respimat 2.5 mcg device:** 2 doses OD
8-12 week trial
CO_2: LOW
SMI

*** MART inhalers are the preferred choice for 12+y**

SABA is not required with MART

Specialist initiation – specialist should issue first prescription and give inhaler technique education)

Step 4: High dose ICS/LABA	Step 4: Triple therapy (ICS/LABA/LAMA)
Symbicort Turbohaler Budesonide/ Formoterol **400/12 mcg device:** 2 doses BD CO_2: LOW DPI	**High-dose ICS/LABA with Spiriva Respimat** (Tiotropium) **High-dose ICS/LABA plus Spiriva Respimat 2.5 mcg device:** 2 doses OD CO_2: LOW SMI
Relvar Ellipta Fluticasone furoate/ Vilanterol **184/22 mcg device:** 1 dose OD CO_2: LOW DPI	**Duoresp Spiromax** Budesonide/ Formoterol **320/9mcg device:** 1 dose BD CO_2: LOW DPI
Seretide Fluticasone / Salmeterol **250 Evohaler** 2 doses BD DO NOT use for MART CO_2: HIGH pMDI	

Consider steroid safety card for high dose ICS

RELIEVERS

Additional reliever therapy – SABA – Only for Step 4 or Alternative Pathway

Easyhaler Salbutamol*
Salbutamol – **6 month expiry once opened**
1-2 puff(s) as required
Dose indicator goes red when 20 doses remain
CO_2: LOW
DPI

Bricanyl Turbohaler*
Terbutaline
1-2 puff(s) as required
Dose indicator goes red when 20 doses remain
CO_2: LOW
DPI

Salamol CFC-Free MDI*
Salbutamol – contains ethanol
1-2 puff(s) as required
NO DOSE COUNTER
CO_2: HIGH
pMDI

SABA prescribing advice

Dose Counters and Indicators

- **Children have died after using empty Salbutamol inhalers.**
- Inhalers will still "puff" when no active ingredient remains.
- Patients and parents must be counselled to count doses when used and discard inhaler after 200 doses.

Pathways for inhaled therapies for asthma for 5-11y – see inhalers

NICE National Institute for Health and Care Excellence

Escalate to next step in therapy in uncontrolled asthma

De-escalate to previous step in therapy in controlled asthma

Jump to Full Inhaler Guidance for more information via links

Maintenance – Step 1:
Paediatric low dose ICS therapy

+ SABA reliever

Click here to find out more about MART.
MART for 5-11yo

Assess ability to manage MART regimen (Click for more information):

Assessment by a tier 3 trained clinician

- **The child must never have had a PICU admission or life-threatening attack to consider MART <12yo**
- **Is the child able to use a Symbicort Turbohaler (DPI)? (Check with an Incheck Dial or inhaler whistle device)**
- **Is there adequate understanding and social support to allow the child to follow a flexible MART regimen?**
- **Strongly consider MART if the child approaching secondary school transition where they may need to carry their own inhaler.**

Able to manage MART

Unable to manage MART

Maintenance – Step 2:
Paediatric low-mod dose Maintenance & Reliever Therapy (MART)
No SABA required*

*There are a few exceptions where a specialist may recommend an emergency SABA with MART

Secondary care referral

Maintenance – Step A1+
Consider a 8-12 week trial of
LTRA (montelukast)
in addition to paediatric low dose ICS.

+ SABA reliever

Maintenance – Step A2:
Paediatric low-moderate dose ICS/LABA combination therapy

+ SABA reliever

Secondary care referral

Maintenance – Step 4:
High-dose ICS/LABA regular combination therapy
(Specialist initiation)

+ SABA reliever

ICS Dose ranges per 24h for 5-12y

- **Paediatric Low dose** – 100-200mcg beclomethasone or budesonide or 100mcg fluticasone
- **Paediatric Mod dose** – 300-400mcg beclomethasone or budesonide or 150-200mcg fluticasone
- **Paediatric High dose** – 500-800mcg beclomethasone or budesonide or 250-400mcg fluticasone

Inhalers on the NCL Joint Formulary for 5-11y – see pathway

Jump to Full Inhaler Guidance for more information via links

UNIVESRSAL START POINT

Always prescribe by brand only

Maintenance Step 1: Low-dose ICS

Clenil Modulite
Beclomethasone

50mcg device:
2 doses BD
100mcg device:
1 dose BD

CO_2: HIGH
pMDI

Pulmicort Turbohaler
Budesonide

100mcg device:
1 dose BD

CO_2: LOW
DPI

Share a video: How to use your inhaler with a spacer

MART PATHWAY

Maintenance Step 2: Low paed dose MART

Symbicort Turbohaler
Budesonide/ Formoterol

100/6mcg device:
1 dose BD & 1 dose PRN
Max 8 doses/24h;
Max 4 doses at any one time

CO_2: LOW
DPI

Share a video: How to use your symbicort turbohaler

Spacers should always be used with pMDIs:

Offer patient's preferred spacer type

Prescribe by age and +- mask

CONVENTIONAL PATHWAY

Maintenance – step A1+:

Montelukast

(Low dose ICS +) montelukast 4-5mg nocte
8-12 week trial
Discuss risk of neuropsychiatric side effects before prescribing

CO_2: LOW
PO

Maintenance Step A2: Paed low - mod dose ICS/LABA

Seretide
Fluticasone / Salmeterol

Low dose: 50 Evohaler
1 dose BD
Mod dose: 50 Evohaler
2 doses BD
DO NOT use for MART

CO_2: HIGH
pMDI

Symbicort Turbohaler
Budesonide/ Formoterol

100/6 mcg device
Low dose: 1 dose BD
Mod dose: 2 doses BD

Other devices available

CO_2: LOW
DPI

Specialist initiation – specialist should issue first prescription and give inhaler technique education)

Step 4: Mod-high dose MART

Symbicort pMDI
Budesonide/ Formoterol

100/3mcg device:
1-2 dose BD&2 dose PRN
Max 16 doses/24h;
Max 8 doses at any one time

CO_2: HIGH
pMDI

Symbicort Turbohaler
Budesonide/ Formoterol

100/6mcg device:
1-2 dose BD&1 dose PRN
Max 8 doses/24h;
Max 4 doses at any one time

CO_2: LOW
DPI

Step 4: High dose ICS/LABA

Seretide
Fluticasone / Salmeterol

125 Evohaler
2 doses BD
DO NOT use for MART

CO_2: HIGH
pMDI

Consider steroid safety card for high dose ICS

RELIEVERS

Additional reliever therapy – SABA – Only for Step 4 or Alternative Pathway

Easyhaler Salbutamol
Salbutamol – **6 month expiry once opened**

1-2 puff(s) as required
Dose indicator goes red when 20 doses remain

CO_2: LOW
DPI

Bricanyl Turbohaler
Terbutaline

1-2 puff(s) as required
Dose indicator goes red when 20 doses remain

CO_2: LOW
DPI

Salamol CFC-Free inhaler
Salbutamol – contains ethanol

1-2 puff(s) as required
NO DOSE COUNTER

CO_2: HIGH
pMDI

SABA prescribing advice

Dose Counters and Indicators

- **Children have died after using empty Salbutamol inhalers.**
- Inhalers will still "puff" when no active ingredient remains.
- Patients and parents must be counselled to count doses when used and discard inhaler after 200 doses.

Pathways for inhaled therapies for asthma for <5y and inhalers

NICE
National Institute for Health and Care Excellence

Escalate to next step in therapy in uncontrolled asthma

De-escalate to previous step in therapy in controlled asthma

Jump to Full Inhaler Guidance for more information via links

Child under 5yo with:
- **Suspected asthma and symptoms indicating need for maintenance therapy or**
- **Severe acute episodes of difficulty breathing and wheeze**

Trial of treatment: Consider 8 to 12 week trial of Paediatric Low-dose ICS

No resolution of symptoms with trial of treatment

Symptoms improve during trial

Consider stopping ICS and SABA after trial & review symptoms after further 3 months

Symptoms recur on stopping

Restart Paediatric low-dose ICS

Titrate up to Paediatric mod-dose ICS if needed

Secondary care referral

Consider an LTRA (Montelukast) in addition to ICS for trial of 8-12 weeks, then stop if ineffective or side effects

Secondary care referral

Refer to Secondary Care for further investigation and management

Spacers should always be used

Offer patient's preferred type

Prescribe by age and +- mask

Clenil Modulite
Beclomethasone

50mcg device:
2 doses BD

CO_2: HIGH
pMDI

Salamol CFC-Free inhaler
Salbutamol – contains ethanol

1-2 puff(s) as required
NO DOSE COUNTER

CO_2: HIGH
pMDI

Clenil Modulite
Beclomethasone

50mcg device:
2 doses BD

CO_2: HIGH
pMDI

Clenil Modulite
Beclomethasone

100mcg device:
2 doses BD

CO_2: HIGH
pMDI

Montelukast

(Low dose ICS +) montelukast 4-5mg nocte
8-12 week trial
Discuss risk of neuropsychiatric side effects before prescribing

CO_2: LOW
PO

SABA prescribing advice

+ SABA reliever

Share a video: How to use your inhaler with a spacer