

This guideline should only be used in patients where a diagnosis of asthma has been made. A diagnosis is based on the clinical probability of asthma, informed by spirometric evidence of obstruction and objective evidence of variability.

Treatment aims of asthma management is maximum control of the disease with minimal side effects.

Control of asthma is defined as:

- No daytime symptoms
- No night time awakening due to asthma
- No need for rescue medication
- No exacerbations
- No limitations on activity including exercise
- Normal lung function (FEV1 and/or PEF > 80% predicted or best)
- Minimal side effects from medication

Asthma control

Assessing asthma control can be achieved by asking 3 simple questions: (Royal College of Physicians ACT)

In the last month:

1. Have you had difficulty sleeping because of asthma symptoms (including cough)?
2. Have you had your usual asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness)?
3. Has your asthma interfered with your usual activities (e.g. housework, work, school, etc.)?

Yes to any of these questions implies uncontrolled asthma.

Stepwise Approach to management of asthma

1. Start treatment at the step most appropriate to initial severity
2. Achieve early control
3. Maintain control by:
 - stepping up treatment as necessary
 - stepping down when control is good

Before initiating a new drug or changing therapy, check compliance with existing treatment, check satisfactory inhaler technique and eliminate trigger factors.

Flu vaccination should be offered to all asthmatics treated with inhaled steroids.

<https://www.asthma.org.uk/advice/inhalers-medicines-treatments/other/flu-vaccinations/>

Stepping Down

- Patients should be maintained at the lowest effective dose of inhaled steroid to achieve control
- Review treatment every 3 months, once stable, decrease dose by approximately 25-50% each time.
- After treatment is stepped down the patient should have their treatment reviewed within 6- 8 weeks.

See separate [stepping down in asthma guidelines](#)

Personal action plans

All patients should be provided with written personal asthma action plans which include warning signs of poor asthma control and what to do during an attack. Template personal action plans can be downloaded from

<https://www.asthma.org.uk/advice/manage-your-asthma/action-plan/>

Indicators for poorly controlled asthma

Identify and review all patients at high risk of exacerbations and death to ensure their management is improved through education and change of treatment if required:

- High SABA use – issued more than 6 SABA inhalers in the past 12 months. Urgent asthma review is required.
- Non-adherence to preventer ICS – 5 or fewer ICS inhalers in the past 12 months could indicate poor adherence.
- Patients taking a LABA alone for asthma
- Patients who have had more than 2 courses of oral steroids in the last 12 months.

The use of combination inhalers should be encouraged. Where LABA bronchodilators are prescribed for people with asthma, they should be prescribed with an ICS in a single combination inhaler.

Appendix I is a checklist for “assessment of poorly controlled asthma” emphasising which factors need to be considered when diagnosing and escalating therapy.

Inhaler treatment choices

- Inhaled steroids are the most effective treatment for asthma and the crucial aspect of asthma care is effective delivery, by an appropriate device. Minimum dose should be used to provide adequate control of symptoms.
- Choice of device for patients is the most important factor to ensure maximum patient benefit. Choose the inhaler device based on patients preference and technique.
- **DPI** - “Quick and deep” inspiration. **Go to DPI treatment pathway page 2.**
- **MDI** - “Slow and steady” inspiration. Use with **Aerochamber Plus Flow Vu**. **Go to MDI treatment pathway page 3.**
- Prescribe by brand to avoid the incorrect inhaler device being supplied to patients.
- Environmental impact may be an important factor for patients <https://greeninhaler.org/>
- MDIs contain hydrofluorocarbon gas (HFC), a greenhouse gas, in the propellant to deliver the active drug to the lungs. Environmental impact of inhalers in the treatment pathway will be indicated by the symbols in the box.
- Used devices still contain at least 30% of their propellant so patients should return these to community pharmacies for safe disposal by incineration.

Patients should remain on the same/similar device type unless there is a clinical reason to change the device.

Assessment of inhaler technique should be routinely undertaken and formally documented at annual review, and also checked by the pharmacist when a new device is dispensed.

Environmental impact of inhalers symbols key












CO ₂ e	Very high CO ₂ e - approx 25kg+kg CO ₂ e per inhaler
CO ₂ e	High CO ₂ e - approx 5kg-25kg CO ₂ e per inhaler
CO ₂ e	Low CO ₂ e – approx 1kg per inhaler

Guidelines for the Treatment of Chronic Asthma in Adults and Children over 12 Years

Inhaler pathway for DPI – “quick and deep” inspiration

Patients should start treatment at the step most appropriate to the initial severity of their asthma. Check concordance and reconsider diagnosis if response to treatment is unexpectedly poor

Stepping UP? Think I.T.T. Adherence with Itherapy Technique Irrigger factors

STEP 1 - regular preventer Add in regular low dose ICS		STEP 2 – Initial add on therapy Replace low dose ICS inhaler with LABA/low dose ICS combination		If no response to LABA/low dose ICS, recheck the diagnosis, assess adherence to existing medication and check inhaler technique before increasing therapy	STEP 3 – additional controller therapies		STEP 4
					Consider trial of increasing to LABA/ medium dose ICS	Consider trial of increasing to LABA/ high dose ICS on a careful individual basis **Higher risk of side effects - Only continue at these high doses if there is clear benefit**	Refer to respiratory specialist for additional investigation and advice if:
<p>FLIXOTIDE 100 Accuhaler</p> <p>Fluticasone propionate 100mcg 1 inhalation twice a day</p>  <p>CO2e</p>	<p>SERETIDE 100 Accuhaler</p> <p>Fluticasone propionate 100mcg + salmeterol 50mcg 1 inhalation twice a day</p>  <p>CO2e</p>	<p>RELVAR Ellipta 92/22</p> <p>Fluticasone furoate 92mcg + vilanterol 22mcg 1 inhalation ONCE a day</p>  <p>CO2e</p>	<p>RELVAR Ellipta 184/22</p> <p>Fluticasone furoate 184mcg + vilanterol 22mcg 1 inhalation ONCE a day</p>  <p>CO2e</p>		<p>‘Red flags’ and indicators of other diagnoses</p> <ul style="list-style-type: none"> • Diagnosis unclear • Suspected occupational asthma (symptoms that improve when patient is not at work, adult-onset asthma and workers in high-risk occupations) • Poor response to asthma treatment • Severe/life-threatening asthma attack <ul style="list-style-type: none"> • Prominent systemic features (myalgia, fever, weight loss) • Unexpected clinical findings (e.g. crackles, clubbing, cyanosis, cardiac disease, monophonic wheeze or stridor) • Persistent non-variable breathlessness • Chronic sputum production • Unexplained restrictive spirometry • Chest X-ray shadowing • Marked blood eosinophilia 		
<p>PULMICORT Turbohaler 200</p> <p>Budesonide 200mcg/dose 1 inhalation twice a day</p>  <p>CO2e</p>	<p>SYMBICORT turbohaler 100/6</p> <p>Budesonide 100mcg + formoterol 6mcg 1-2 inhalations twice a day</p>  <p>CO2</p>	<p>SYMBICORT turbohaler 200/6</p> <p>Budesonide 200mcg + formoterol 6mcg 2 inhalations twice a day</p>  <p>CO2e</p>	<p>SYMBICORT turbohaler 400/12</p> <p>Budesonide 400mcg + formoterol 12mcg 2 inhalations twice a day</p>  <p>CO2e</p>				
		<p>If control still inadequate consider addition of either:</p> <p>SPIRIVA respimat - Tiotropium 2.5mcg 2 puffs ONCE a day</p>  <p>CO2e</p>		<p>Montelukast tablet 10mg at bedtime</p>			
<p>MART – over 18years only Consider for patients who have a history of asthma attacks on medium dose ICS or ICS/LABA with a personal asthma plan and are able to manage their own treatment. Caution – can become expensive and needs closer monitoring of patient/prescriptions. Use SYMBICORT 100/6 - 1 inhalation BD as maintenance, take 1 additional inhalation as needed in response to symptoms. If symptoms persist after a few minutes, take another inhalation. Not more than 6 inhalations should be taken in any episode. More than 8 inhalations is not normally needed; however up to 12 inhalations could be used for a limited period. Patients using more than 8 inhalations daily should be strongly recommended to seek medical advice.</p>							
<p>Salbutamol 200mcg DPI  or Terbutaline 500mcg DPI  1 inhalation as required at each stage (unless using MART) – consider moving up if using three doses a week or more</p>							

Stepping DOWN - Maintain at the lowest effective dose of ICS to achieve control. Review treatment every 3 months, once stable, decrease dose by approximately 25-50% each time. After treatment is stepped down the patient should have their treatment reviewed within 6- 8 weeks. See separate [stepping down in asthma guidelines](#)

Guidelines for the Treatment of Chronic Asthma in Adults and Children over 12 Years










Inhaler pathway for MDI – “Slow and steady” inspiration.

Patients should start treatment at the step most appropriate to the initial severity of their asthma. Check concordance and reconsider diagnosis if response to treatment is unexpectedly poor.

Stepping UP? Think **I.T.T.** Adherence with **I**therapy **T**echnique **T**rigger factors

Aerochamber Plus Flow Vu – antistatic aerochamber which does not require priming

STEP 4

STEP 2 – Initial add on therapy Replace low dose ICS inhaler with LABA/low dose ICS combination		If no response to LABA/low dose ICS, recheck the diagnosis, assess adherence to existing medication and check inhaler technique before increasing therapy	STEP 3 – additional controller therapies		
STEP 1 - regular preventer Add in regular low dose ICS	Consider trial of increasing to LABA/ medium dose ICS		Consider trial of increasing to LABA/ high dose ICS **Higher risk of side effects - Only continue at these high doses if there is clear benefit**		
CLENIL Modulite 50 Beclomethasone 50mcg/dose 2 puffs twice a day 	Fostair 100/6 Beclomethasone 100mcg/dose + Formoterol 6mcg/dose 1 puff twice a day 		Fostair 100/6 Beclomethasone 100mcg/dose + Formoterol 6mcg/dose 2 puffs twice a day 	Fostair 200/6 Beclomethasone 100mcg/dose + Formoterol 6mcg/dose 2 puffs twice a day 	
QVAR 50 Beclomethasone 50mcg/dose 2 puffs twice a day 	Flutiform 50/5 Fluticasone 50mcg/dose + Formoterol 5mcg/dose 2 puffs twice a day 		Flutiform 125/5 Fluticasone 125mcg/dose + Formoterol 5mcg/dose 2 puffs twice a day 	Flutiform 250/5 Fluticasone 250mcg/dose + Formoterol 10mcg/dose 2 puffs twice a day 	
		If control still inadequate consider addition of either: <div style="display: flex; justify-content: space-around;"> <div> SPIRIVA respimat - Tiotropium 2.5mcg 2 puffs ONCE a day  </div> <div> Montelukast tablet 10mg at bedtime </div> </div>			
MART – Over 18 years only Consider for patients who have a history of asthma attacks on medium dose ICS or ICS/LABA with a personal asthma plan and are able to manage their own treatment. Caution – can become expensive and needs closer monitoring of patient/prescriptions. Use FOSTAIR 100/6 – 1 puff twice a day as maintenance, then additional puffs can be used as a rescue medication (maximum total daily dose of 8 puffs), with no salbutamol.					

Refer to respiratory specialist for additional investigation and advice if:

- Diagnosis unclear
- Suspected occupational asthma (symptoms that improve when patient is not at work, adult-onset asthma and workers in high-risk occupations)
- Poor response to asthma treatment
- Severe/life-threatening asthma attack

‘Red flags’ and indicators of other diagnoses

- Prominent systemic features (myalgia, fever, weight loss)
- Unexpected clinical findings (e.g. crackles, clubbing, cyanosis, cardiac disease, monophonic wheeze or stridor)
- Persistent non-variable breathlessness
- Chronic sputum production
- Unexplained restrictive spirometry
- Chest X-ray shadowing

Marked blood eosinophilia

ALVESCO 80 inhaler
 Ciclosonide 80mcg/dose – **YELLOW** Prescribe only on the advice of specialist. 2 puffs ONCE a day, reduced to 1 puff ONCE a day if control maintained

Salbutamol as required at each stage (unless using MART) consider moving up if using three doses a week or more, Ventolin®  Other Salbutamol MDIs 

Stepping DOWN - Maintain at the lowest effective dose of ICS to achieve control. Review treatment every 3 months, once stable, decrease dose by approximately 25-50% each time. After treatment is stepped down the patient should have their treatment reviewed within 6- 8 weeks. See separate [stepping down in asthma guidelines](#)

Abbreviations

MDI = metered dose inhaler

DPI = dry powder inhaler

CO₂e = Carbon dioxide emission

ICS = inhaled corticosteroid

LABA = long acting beta agonist

Mcg = microgram

MART = maintenance and reliever therapy

Guidelines for the Treatment of Chronic Asthma in Adults and Children over 12 Years

Appendix 1. Assessment of poorly controlled asthma

1) Is it asthma?	COPD, obesity, Ca, bronchiectasis, hyperventilation, GORD
2) Is it severe asthma?	Objective measures, PEFr, spirometry Presence of wheeze on examination
3) Is there a coexistent condition affecting severity?	Nasal disease, obesity, sleep apnoea, cardiac disease, systemic illness Objective examination to consider allergic rhinitis, rhinosinusitis, nasal polyps Treat allergies
4) Is the patient on adequate controller medication?	As per stepwise guide BTS guidelines
5) Is the controller medication delivered by an appropriate device?	MDI + spacer, Dry Powder Inhalers (DPI) <i>Inhaled steroids by MDI alone is not acceptable unless using FOSTAIR or QVAR (as fine powder formulations)</i>
6) Is the patient taking his treatment regularly?	Do they attend asthma reviews? Review repeat prescribing requests Medicine Use Reviews by community pharmacists may highlight non-compliance
7) Does the patient understand asthma and is he/she able to self manage appropriately?	Well-informed patients have better outcomes Provide a written asthma action plan. This is a grade A recommendation in the BTS/SIGN guideline, based on a substantial weight of evidence summarised in a Cochrane review. Information on asthma action plans available here and are free to download: https://www.asthma.org.uk/advice/manage-your-asthma/actio https://www.asthma.org.uk/globalassets/health-advice/adult-asthma-action-plan.pdfn-plan/ Definition: acute exacerbation, Use of reliever >1 per day, nocturnal symptoms, interference with normal daytime activity, Re-check inhaler technique at each visit and check inhaler is functioning correctly

8) Is the patient a current smoker?	Smoking increases exacerbations, worsens lung function and drastically reduces effectiveness of inhaled steroids Consider passive smoking Contact the Smoking Cessation Service on Tel: 0800 0852113 Fax:01621 727341 http://www.cecs.org.uk/mobile/smoking-support-service
9) Are there identifiable trigger factors?	Allergens – house dust mite, pets, pollens, moulds Seasonal asthmatics – place on asthma register and conduct a pre-season review Viral infections, especially Autumn/Winter Cold, damp, exercise Stress, Occupational exposures Treat allergies see Allergy UK website
10) Are there adverse psychosocial factors?	Learning difficulty Psychiatric illness Drug/Alcohol problems Family dysfunction Personality disorders etc.

Note that asthma deaths are usually due to a combination of severe disease, adverse psychosocial factors and deficiencies in care

Guidelines for the Treatment of Chronic Asthma in Adults and Children over 12 Years

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Consulted with	Dr Steve Jenkins, Consultant Physician in Respiratory Medicine, Broomfield Hospital
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Mid Essex Locality Guidelines for the Treatment of Chronic Asthma in Adults and Children over 12 Years version 1 July 2013	Document management added Addition of Sirdupla MDI, Accuhaler devices, Nexthaler as device option. Addition of Fostair higher strength 200/6 At step 4 Addition of a fourth drug and order of options changed to: Tiotropium 2.5mg respimat or Montelukast 10mg at bedtime or Theophylline SR Addition of links to Asthma UK patient plans, local smoking cessation services and allergy UK website.
ChronicAsthmaAdultsGUI201604v2.0FINAL	Minor update – Combisal Metered Dose inhaler to replace Seretide Evohaler/ Sirdupla MDI
ChronicAsthmaAdultsGUI201811V2.1FINAL	Change in format Remove stepping down in asthma as separate guidance Addition of the following: Inhaler treatment choices page 1 including environmental factors Separate treatment pathway to follow for MDI and DPI Formulary additions: Alvesco – as yellow specialist recommendation only Relvar Ellipta – DPI option at step 3 Removal of Nexthaler