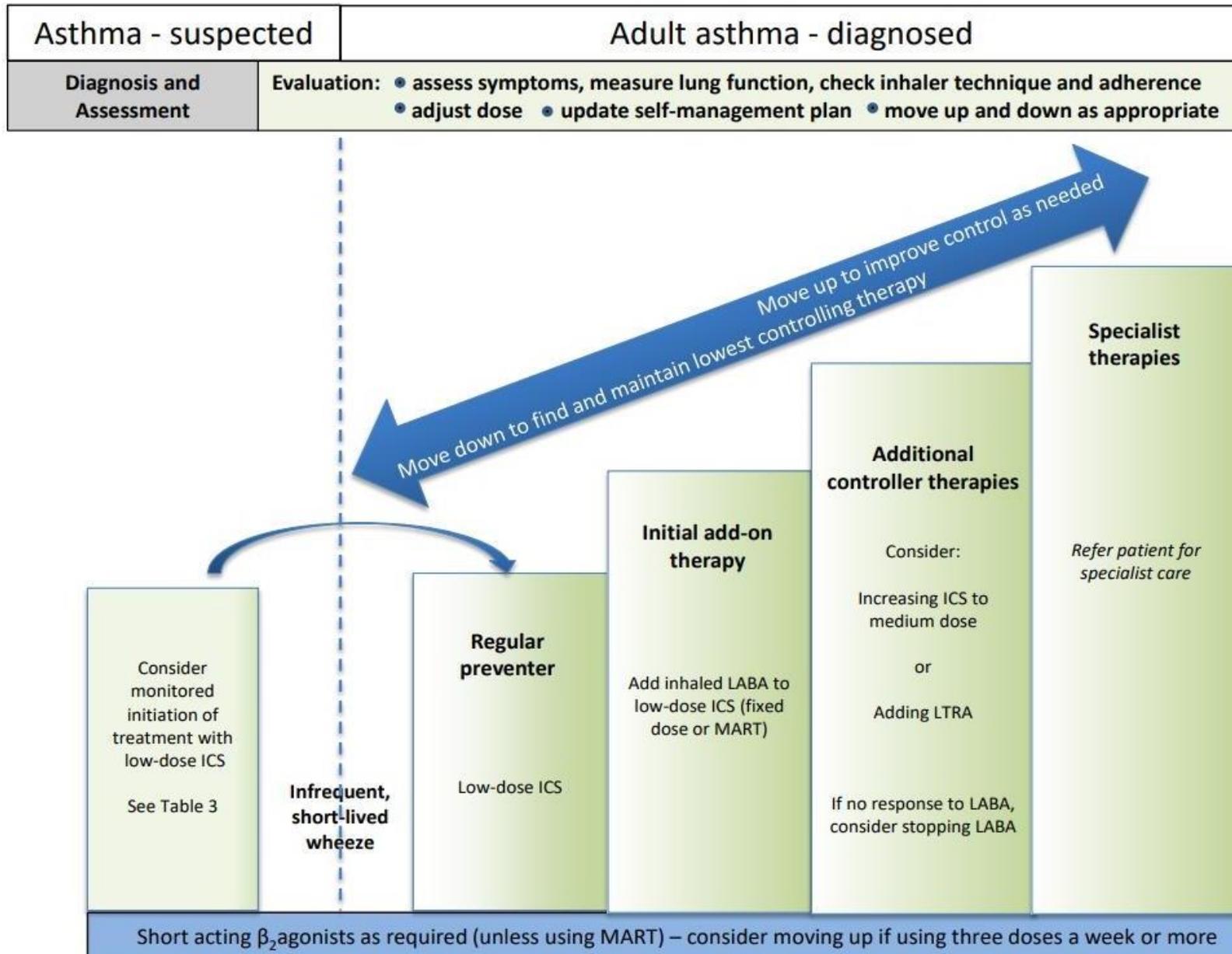


County Durham and Tees Valley Adult Asthma Inhaler Guide (for patients ≥ 18 years)

The Pharmacological Management of Stable Asthma for Adults

Version number	7
Date of County Durham and Tees Valley APC approval:	Jan 2023
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Summary of the pharmacological management of asthma in adults (BTS, 2019)



1. Regular Preventer (Low dose ICS) 400-500 microgram BDP equivalent/ day	2. Initial add-on therapy (LABA/low-dose ICS) 400 – 500 microgram BDP equivalent/ day	3. Additional add-on therapy (LABA/medium-dose ICS) 800 – 1000 microgram BDP equivalent/ day	4-5. High dose therapies REFER TO SECONDARY CARE 1600 – 2000 microgram BDP equivalent/ day
Easyhaler budesonide 200 microgram (DPI) 1 Puff BD  ✓ Low Carbon	Fobumix Easyhaler 160/4.5 microgram 1 Puff BD Fixed or MART®  ✓ Low Carbon	Fobumix Easyhaler 160/4.5 microgram (DPI) 2 Puffs BD Fixed or MART®  ✓ Low Carbon	Fobumix Easyhaler 320/9 microgram (DPI) 2 Puffs BD  ✓ Low Carbon
Pulmicort (DPI) 200 turbohaler 1 puff BD  ✓ Low Carbon	Symbicort Turbohaler 200/6 (DPI) 1 Puff BD Fixed or MART®  ✓ Low Carbon	Symbicort 200/6mcg (DPI) 2 Puffs BD Fixed or MART®  ✓ Low Carbon	Symbicort 400/12 microgram (DPI) 2 Puffs BD  ✓ Low Carbon
QVAR easibreathe (MDI) 50 microgram 2 Puffs BD 100 microgram 1 Puff BD  	Fostair NEXThaler 100/6 (DPI) 1 Puff BD Fixed or MART®  ✓ Low Carbon	DuoResp Spiromax 160/4.5 microgram (DPI) 2 Puffs BD Fixed or MART®  ✓ Low Carbon	DuoResp 320/9 microgram (DPI) 2 Puffs BD  ✓ Low Carbon
Clenil 100 microgram (MDI) 2 Puffs BD  	DuoResp Spiromax 160/4.5 microgram (DPI) 1 Puff BD Fixed or MART®  ✓ Low Carbon	Fostair 100/6mcg (MDI) ^A And Fostair 100/6 microgram NEXThaler (DPI) 2 Puffs BD Fixed or MART® NEXThaler only  ✓ Low Carbon	Relvar Ellipta 184/22 microgram (DPI) 1 Puff OD  ✓ Low Carbon
	Ateectura Breezhaler 125/62.5 1 Puff OD  ✓ Low Carbon		Fostair 200/6mcg (MDI) ^A And Fostair NEXThaler 200/6 microgram (DPI) 2 Puffs BD NEXThaler only  ✓ Low Carbon
	Fostair (MDI) ^A 100/6 1 Puff BD (fixed or MART®)  	Sereflo 25/125 microgram (MDI) ^{V/A} 2 Puffs BD  	Sereflo 25/250 microgram (MDI) ^{V/A} 2 Puffs BD 

		Aectura Breezhaler 125/127.5 1 Puff OD ✓ Low Carbon		Aectura Breezhaler 125/260 1 Puff OD ✓ Low Carbon	
		Trimbow ^A 87/5/9 microgram 2 Puffs BD Please see special instructions		Trimbow ^A 172/5/9 microgram 2 Puffs BD Please see special instructions	
		Relvar Ellipta 92/22 microgram 1 Puff OD ✓ Low Carbon		Energair Breezhaler 114/46/136 1 Puff OD Please see special instructions ✓ Low Carbon	

Inhalers are not in preference order, use right device for patient.

Carbon Footprint. Only low carbon inhalers are annotated. Further information on all inhalers and the importance of returning all inhalers to the pharmacy for disposal in an environmentally safe way is available

on <https://greeninhaler.org/>

Please refer to NICE inhaler decision aid

MDI spacer compatibility: V = Volumatic, A = Aerochamber Plus, Doses from BTS 2019	Add-on therapies: LTRA – Montelukast tablets 10mg in the evening; LAMA – Spiriva Respimat 2.5mcg (BAII) 2p OD
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When required therapy (PRN)				
Salbutamol Easyhaler 100 microgram (DPI) 1-2 Puffs PRN ✓ Low Carbon		Ventolin Accuhaler 200 microgram (DPI) 1-2 Puffs PRN ✓ Low Carbon		Salamol Easi-Breathe 100 microgram (BAII) 1-2p PRN
				Salamol inhaler(MDI) ^{V/A} 1-2p PRN
				
				✓ Low Carbon

Special Instructions

Inhalers should always be prescribed by brand to prevent unintentional substitution and ensure patients receive a device they are familiar with; please note inhaler devices are NOT ranked in order of preference; choose right device for right patient and where possible consider low carbon inhaler choice

Trimbow

87/5/9 - Each delivered dose (the dose leaving the mouthpiece) contains 87 micrograms of beclometasone dipropionate, 5 micrograms of formoterol fumarate dihydrate and 9 micrograms of glycopyrronium (as 11 micrograms glycopyrronium bromide).

Each metered dose (the dose leaving the valve) contains 100 micrograms of beclometasone dipropionate, 6 micrograms of formoterol fumarate dihydrate and 10 micrograms of glycopyrronium (as 12.5 micrograms glycopyrronium bromide).

172/5/9 - Each delivered dose (the dose leaving the mouthpiece) contains 172 micrograms of beclometasone dipropionate, 5 micrograms of formoterol fumarate dihydrate and 9 micrograms of glycopyrronium (as 11 micrograms glycopyrronium bromide).

Each metered dose (the dose leaving the valve) contains 200 micrograms of beclometasone dipropionate, 6 micrograms of formoterol fumarate dihydrate and 10 micrograms of glycopyrronium (as 12.5 micrograms glycopyrronium bromide).

Trimbow is now licenced for maintenance treatment of asthma, in adults not adequately controlled with a maintenance combination of a long-acting beta₂-agonist and medium dose of inhaled corticosteroid, and who experienced one or more asthma exacerbations in the previous year

Trimbow can be **considered** for use in asthma if patient experiences one or more exacerbations; therefore not controlled on current ICS/LABA dose, with or without either LTRA and/or LAMA.

It is important to note that the ICS dose equivalent is 1000mcg; exercise caution as some patients with asthma may need higher doses of ICS than Trimbow can offer therefore when starting Trimbow ensure a review takes place within 4 weeks and re-assess ACT score.

If improvement not adequate, please refer to column 4 in previous table and refer to secondary care

NB. Trimbow must always be used with a spacer

Energair Breezhaler

Each capsule contains 150 mcg of indacaterol (as acetate), 63 mcg of glycopyrronium bromide equivalent to 50 mcg of glycopyrronium and 160 mcg of mometasone furoate.

Each delivered dose (the dose that leaves the mouthpiece of the inhaler) contains 114 mcg of indacaterol (as acetate), 58 mcg of glycopyrronium bromide equivalent to 46 mcg of glycopyrronium and 136 mcg of mometasone furoate.

Energair Breezhaler is indicated as a maintenance treatment of asthma in adult patients not adequately controlled with a maintenance combination of a long-acting beta₂-agonist and a high dose of an inhaled corticosteroid who experienced one or more asthma exacerbations in the previous year.

Please note, Energair is not for routine initiation in primary care without guidance from specialist respiratory physician

NB. The pack may be prescribed with an electronic sensor to be attached to the base of the inhaler.

The sensor and App are not required for administration of the medicinal product to the patient. The sensor and App do not control or interfere with delivery of the medicinal product using the inhaler.

The prescribing physician may discuss with the patient whether the use of the sensor and App is appropriate.

For detailed instructions on how to use the sensor and the App, see the Instructions for Use provided in the sensor pack and the App.

County Durham and Tees Valley Adult Asthma Inhaler Guide (for patients ≥18 years)

1. Diagnosis – refer to BTS 2019 guidelines

2. Assess asthma control

- a. [Asthma Control Test \(ACT\)TM](#): any YES = see below
 1. Has your asthma prevented you from getting as much done at work, school or home?
 2. Have you experienced shortness of breath?
 3. Did your asthma symptoms (wheezing, coughing, chest tightness, shortness of breath) wake you up at night or earlier than usual in the morning?
 4. Have you needed to use your reliever inhaler more than usual?
 5. Would you rate your asthma control worse than usual?
- b. Complete the 3 QOF questions at same time as ACT score
- c. Note number of exacerbations/ admissions. [See Asthma UK website](#).
- d. Treat any rhinitis.
- e. Consider alternative diagnosis for troublesome symptoms, e.g. GORD, heart failure, co-existing COPD, anxiety/ depression, BMI >30 or smoking.

3. Check adherence and concordance with patient:

- Does the patient understand when and why to use their inhalers?
- Is the patient using their inhalers as prescribed?
- Ordering >6 reliever inhalers per year may indicate poor control.
- Consider a telephone review if a face-to-face consultation is not possible, or even a video consultation

Check that the number of preventers issued corresponds with the patient's prescribed regime, taking into account the number of doses in the device.

4. Review current treatment

Observe inhaler technique (placebo inhalers are available). Animated demonstrations for most inhaler devices can be viewed on the [RightBreathe website](#). Consider the patient's age, level of dexterity and lifestyle factors when selecting a suitable inhaler device. See overleaf for inhaler choices for each step.

5. Stepwise management of asthma

Start at the step most appropriate to initial severity; before initiating a new drug or increasing the dose of an inhaler consider whether diagnosis is correct, check adherence to the treatment plan and inhaler technique, and eliminate trigger factors for acute exacerbations. Use inhaler guideline when stepping therapy up or down.

When to consider stepping up/down

Step up if any of the following features:

- Low ACT score, Using SABA three times a week or more, Symptomatic three times a week or more, Waking one night a week, Asthma attack requiring corticosteroids in the last two years

Step down if:

- Excellent control. high ACT score, clinical stability over several months

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.

Self-management and action plans

Please ensure every patient with asthma receives a written, personalised asthma action plan (PAAP).

A patient is four times less likely to require admission to hospital for their asthma if they have a plan.

The [Asthma UK self-management plan](#) is free to download and print. The plan should be agreed with the patient and be based on how to recognize and manage a deterioration in asthma symptoms.

It is not always relevant to use Peak flow calculations, but if the patient's 'BEST' (not predicted) peak flow value is known, then an example of a calculation for writing the Asthma plan is as follows;

- Patient best peak flow = 400 l/min
- Green zone – more than 80% of best = >320 l/min
- Amber zone – less than 75% of best = <300 l/min
- Red zone – less than 50% of best = <200 l/min

It is recommended that patients take a photo of their Asthma plan on their smartphone for ease of access.

Code use of PAAP on the clinical system. Use a code of declined or not appropriate where relevant.

Patients should be advised to always have their inhaler available for reliever use. Patients requiring frequent use of rescue inhalations should be advised to return to the GP practice for reassessment. Practices should monitor the number of prescriptions requested and any dose-related side-effects. Patients using more than one extra relief puff on a regular basis should be reviewed and their maintenance therapy should be reconsidered.

Patients should have a salbutamol inhaler + a large volume spacer device for use in acute exacerbations of asthma. Please discuss with a respiratory specialist if uncertain.

SMART[®] and MART[®] maintenance and reliever therapy regimes

Fostair[®], Symbicort[®], DuoResp Spiromax[®] and Fobumix[®] can be used for both maintenance and relief medication instead of a separate SABA for patients who have seen a benefit with a LABA but are still not controlled at step 3.

SMART[®]/ MART can be considered for patients with:

- Inadequate asthma control and a frequent need for reliever medication
- Asthma exacerbations in the past requiring medical intervention
- A good understanding of asthma and symptoms

Patients must have received education on the use of the inhaler as maintenance and reliever therapy and clinicians must be confident patients understand how to use it appropriately.

Emergency Steroid cards

Emergency Steroid cards are recommended for patients taking doses of inhaled corticosteroids ≥800 micrograms BDP equivalent per day.

All patients taking oral steroids AND inhaled corticosteroids should be provided with a steroid card.

Waste and Recycling - Used pMDI canisters still contain propellants; all used pMDI canisters should be returned to a pharmacy (or dispensing GP practice) to dispose of in an environmentally safe way.

Asthma UK is the only charity dedicated to the health and well-being of the 5.2 million people in the UK with asthma. By taking control of their asthma, most people's day-to-day lives should be free from disruption such as troubled sleep or not being able to exercise.

Asthma
Control
Test™



Why take the Asthma Control Test™?

The Asthma Control Test™ will provide you with a snapshot of how well your asthma has been controlled over the last four weeks, giving you a simple score out of 25. Asthma symptoms can vary from month to month, so it is worth keeping the test handy to see if your score changes. You can also share your results with your doctor or asthma nurse to help explain just how your asthma affects you.

Are you in control of your asthma? Or is your asthma in control of you? Here's how to find out

Step 1: Read each question below carefully, circle your score and write it in the box.

Step 2: Add up each of your five scores to get your total Asthma Control Test™ score.

Step 3: Use the score guide to learn how well you are controlling your asthma.

Q1	During the past 4 weeks , how often did your asthma prevent you from getting as much done at work, school or home?	Score:
	<input type="radio"/> All of the time 1 <input type="radio"/> Most of the time 2 <input type="radio"/> Some of the time 3 <input type="radio"/> A little of the time 4 <input type="radio"/> None of the time 5	
Q2	During the past 4 weeks , how often have you had shortness of breath?	Score:
	<input type="radio"/> More than once a day 1 <input type="radio"/> Once a day 2 <input type="radio"/> 3-6 times a week 3 <input type="radio"/> 1-2 times a week 4 <input type="radio"/> Not at all 5	
Q3	During the past 4 weeks , how often did your asthma symptoms (wheezing, coughing, chest tightness, shortness of breath) wake you up at night or earlier than usual in the morning?	Score:
	<input type="radio"/> 4 or more times a week 1 <input type="radio"/> 2-3 nights a week 2 <input type="radio"/> Once a week 3 <input type="radio"/> Once or twice 4 <input type="radio"/> Not at all 5	
Q4	During the past 4 weeks , how often have you used your reliever inhaler (usually blue)?	Score:
	<input type="radio"/> 3 or more times a day 1 <input type="radio"/> 1-2 times a day 2 <input type="radio"/> 2-3 times a week 3 <input type="radio"/> Once a week or less 4 <input type="radio"/> Not at all 5	
Q5	How would you rate your asthma control during the past 4 weeks ?	Score:
	<input type="radio"/> Not controlled 1 <input type="radio"/> Poorly controlled 2 <input type="radio"/> Somewhat controlled 3 <input type="radio"/> Well controlled 4 <input type="radio"/> Completely controlled 5	

Total Score	
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What does your score mean?

Score: 25 – WELL DONE

- Your asthma appears to have been **UNDER CONTROL** over the last 4 weeks.
- However, if you are experiencing any problems with your asthma, you should see your doctor or nurse.

Score: 20 to 24 – ON TARGET

- Your asthma appears to have been **REASONABLY WELL CONTROLLED** during the past 4 weeks.
- However, if you are experiencing symptoms your doctor or nurse may be able to help you.

Score: less than 20 – OFF TARGET

- Your asthma may **NOT HAVE BEEN CONTROLLED** during the past 4 weeks.
- Your doctor or nurse can recommend an asthma action plan to help improve your asthma control.

What can you do now?

Like many other people in the UK, it is possible that your asthma could have less impact on your everyday life. You can get a free pack full of information about how to take control of your asthma, including an action plan to fill in with your doctor or asthma nurse, from Asthma UK

Management of acute asthma in adults in general practice

Many deaths from asthma are preventable. Delay can be fatal. Factors leading to poor outcome include:

- Clinical staff failing to assess severity by objective measurement
- Patients or relatives failing to appreciate severity
- Under use of corticosteroids

Regard each emergency asthma consultation as for acute severe asthma until shown otherwise.

Assess and record:

- Peak expiratory flow (PEF)
- Symptoms and response to self treatment
- Heart and respiratory rates
- Oxygen saturation (by pulse oximetry)

Caution: Patients with severe or life-threatening attacks may not be distressed and may not have all the abnormalities listed below. The presence of any should alert the doctor.

