# Tees CCGs Adult Asthma Inhaler Guide (for patients ≥18 years) - The Pharmacological Management of Stable Asthma for Adults

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Developed by CDD Respiratory CAG, and adapted for use in Tees CCGs

| Suspected Asthma | Diagnosed Asthma |
|---|---|
| **Diagnosis and Assessment** | Evaluation: Assess symptoms, measure lung function, check inhaler technique and adherence. Adjust dose, update self-management plan, **move up and down as appropriate** |

move up to control as needed

move down to find and maintain lowest control therapy

**Consider monitored initiation of treatment with low dose ICS**

Infrequent, short-lived wheeze

**1.**

**Regular Preventer**

Low Dose ICS

**2.**

**Initial add-on therapy**

Add inhaled LABA to low dose ICS (normally as a combination inhaler. LABA should not be used without ICS.
Consider SMART/MART regimes – see P3

**3.**

**Additional add-on therapies**

If no response to LABA – **stop LABA** and **consider increased dose of ICS**.

If benefit from LABA but control still inadequate – continue LABA and **increase ICS** to **medium dose**

If benefit from LABA but control still inadequate – continue LABA and ICS and **consider trial of other therapy** – LTRA, SR theophylline, LAMA

**4.**

**High-dose therapies**

Consider trials of:

Increase ICS up to high dose

Addition of fourth drug e.g. LTRA, SR theophylline, SR beta 2 agonist tablet, LAMA

*Refer patient to specialist care if >1 add-on therapy required*

**5.**

**Continuous of frequent use of oral steroids**

Use daily steroid tablet in the lowest dose providing adequate control

Maintain high-dose ICS

Consider other treatments to minimise use of steroid tablets

*Refer patient to specialist care*

Short-acting $\beta_2$ agonists as required – consider moving up if using three or more doses per week – Salbutamol 100mcg MDI 1-2p prn *or* Salbutamol Easyhaler 100mcg DPI 1-2p prn

# The Pharmacological Management of Stable Asthma for Adults

Increasing cost

**Inhalers should always be prescribed by brand to prevent unintentional substitution and ensure patients receive a device they are familiar with**

| 1. Regular Preventer (Low dose ICS) | 2. Initial add-on therapy LABA/low-dose ICS) | 3. Additional add-on therapy (LABA/medium-dose ICS | 4-5. High dose therapies |
|---|---|---|---|
| **400-500mcg BDP equivalent/day** | **400-500mcg BDP equivalent/day** | **800 – 1000mcg BDP equivalent/day** | **1600 - 2000mcg BDP equivalent/day** |
| Clenil (MDI) 100mcg 2p BD [V]  | Symbicort Turbohaler (DPI) 200/6mcg 1p BD  | DuoResp (DPI)160/4.5 2p BD & DuoResp 320/9mcg 1p BD  | Fostair (MDI) 200/6mcg 2p BD [A] & Fostair NEXThaler (DPI) 200/6mcg 2p BD  |
| Qvar Easi-Breathe (MDI)50mcg 2p BD  | Flutiform (MDI) 50/5mcg 2p BD [A]  | Symbicort (DPI)200/6mcg 2p BD & Symbicort 400/12mcg 1p BD  | Relvar Ellipta (DPI) 184/22mcg 1p OD  |
| Budesonide Easyhaler (DPI) 200mcg 1p BD  | Fostair (MDI) 100/6 mcg 1p BD [A] Fostair NEXThaler (DPI) 100/6mcg 1p BD  | Flutiform (MDI) 125/5mcg 2p BD [A]  | Flutiform (MDI) 250/10mcg 2p BD [A]  |
| MDI – Metered dose inhaler<br>DPI – Dry powder inhaler<br>BAAI- Breath-actuated aerosol inhaler<br>BDP –Beclometasone Dipropionate<br>LTRA – Leukotriene receptor antagonist<br>LAMA – Long-acting anti-muscarinic antagonist | Symbicort (DPI) 100/6mcg 2p BD  | Fostair (MDI) 100/6mcg 2p BD [A] & Fostair NEXThaler (DPI) 100/6mcg 2p BD  | DuoResp (DPI) 320/9mcg 2p BD  |
| | DuoResp Spiromax (DPI) 160/4.5mcg 1p BD  | Relvar Ellipta (DPI) 92/22mcg 1p OD  | Symbicort (DPI) 400/12mcg 2p BD  |

**When Required Therapy (PRN)**

| | | | |
|---|---|---|---|
| Ventolin Evohaler (MDI) 100mcg 1-2p PRN [V/A]  | Salbutamol Easyhaler (DPI) 100mcg 1-2p PRN  | Ventolin Accuhaler (DPI) 200cmg 1p PRN  | Salamol Easi-Breathe (BAII) 100mcg 1-2p PRN  |

MDI Spacer compatibility key: V = Volumatic, A = Aerochamber Plus, N = Not recommended
Doses from BTS 2016

Adapted with permission from Guidance originally produced by CDD Respiratory CAG

**Add-on therapies**
LTRA – Montelukast tablets 10mg in the evening
LAMA – Spiriva Respimat 2.5mcg (BAAI) 2p OD
SR Theophylline - Uniphyllin Continus 200mg M/R tablets BD
- Slo-Phyllin 250mg M/R capsules BD

# Tees CCGs Adult Asthma Inhaler Guide (for patients ≥18 years)

## 1. Diagnosis – refer to BTS 2016 guidelines

## 2. Assess asthma control

I. Asthma Control Test (ACT)™: **(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?

II. Complete the 3 QOF questions at same time as ACT score
III. Note number of exacerbations/admissions. See Asthma UK website
IV. Treat any rhinitis.
V. Consider alternative diagnosis for troublesome symptoms, e.g. GORD, heart failure, co-existing COPD, anxiety/depression, BMI>30 or smoking.

## 3. Review current treatment regime

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.

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
- 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. 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

## 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 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® MDI & NEXTHaler are licensed for MART use,

Symbicort® , DuoResp Spiromax® 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.

## Steroid cards

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.

# Asthma Control Test™

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.

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:

| All of the time | Most of the time | Some of the time | A little of the time | None of the time |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**Q2** During the **past 4 weeks**, how often have you had shortness of breath?

Score:

| More than once a day | Once a day | 3-6 times a week | 1-2 times a week | Not at all |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 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:

| 4 or more times a week | 2-3 nights a week | Once a week | Once or twice | Not at all |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**Q4** During the **past 4 weeks**, how often have you used your reliever inhaler (usually blue)?

Score:

| 3 or more times a day | 1-2 times a day | 2-3 times a week | Once a week or less | Not at all |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**Q5** How would you rate your **asthma control** during the **past 4 weeks?**

Score:

| Not controlled | Poorly controlled | Somewhat controlled | Well controlled | Completely controlled |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**Total Score**

## 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

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"US English version modified for use in UK". The production of this leaflet has been supported by GlaxoSmithKline

Registered charity number 802364

# Management of acute severe 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.*

| Moderate asthma | Acute severe asthma | Life-threatening asthma |
|---|---|---|
| **INITIAL ASSESSMENT** | | |
| PEF> 50-75% best or predicted | PEF 33-50% best or predicted | FEF<33% best or predicted |
| **FURTHER ASSESSMENT** | | |
| • $SpO_2$ ≥92%<br>• Speech normal<br>• Respiration <25 breaths/min<br>• Pulse <110 beats/min | • $SpO_2$ ≥92%<br>• Can't complete sentences<br>• Respiration ≥25 breaths/min<br>• Pulse ≥110 beats/min | • $SpO_2$ <92%<br>• Silent chest, cyanosis or poor respiratory effort<br>• Arrhythmia or hypotension<br>• Exhaustion, altered consciousness |
| **MANAGEMENT** | | |
| **Treat at home or in surgery and ASSESS RESPONSE TO TREATMENT** | **Consider admission** | **Arrange immediate ADMISSION** |
| **TREATMENT** | | |
| • β2 bronchodilator:<br>– via spacer (give 4 puffs initially and give a further 2 puffs every 2 minutes according to response up to maximum of 10 puffs)<br><br>If PEF >50–75% predicted/best:<br>• Nebuliser (preferably oxygen driven) (salbutamol 5 mg)<br>• Give prednisolone 40–50 mg for 5 days<br>• Continue or increase usual treatment<br><br>If good response to first treatment (symptoms improved, respiration and pulse settling and PEF >50%) continue or increase usual treatment and continue prednisolone | • Oxygen to maintain SpO2 94–98% if available<br>• β2 bronchodilator:<br>– nebuliser (preferably oxygen driven) (salbutamol 5 mg)<br>– or via spacer (give 4 puffs initially and give a further 2 puffs every 2 minutes according to response up to maximum of 10 puffs)<br>• Prednisolone 40–50 mg for 5 days or IV hydrocortisone 100 mg<br><br>• **If no response in acute severe asthma: ADMIT** | • Oxygen to maintain SpO2 94–98% if available<br>• β2 bronchodilator and Ipratropium:<br>– nebuliser (preferably oxygen driven) (salbutamol 5 mg and Ipratropium 0.5mg))<br>– or via spacer (give 4 puffs initially and give a further 2 puffs every 2 minutes according to response up to maximum of 10 puffs)<br><br>• Prednisolone 40–50 mg or IV hydrocortisone 100 mg immediately |
| **Admit to hospital if any:**<br>• Life-threatening features<br>• Features of acute severe asthma present after initial treatment<br>• Previous near-fatal asthma<br><br>Lower threshold for admission if afternoon or evening attack, recent nocturnal symptoms or hospital admission, previous severe attacks, patient unable to assess own condition, or concern over social circumstances | **If admitting the patient to hospital:**<br>• Stay with patient until ambulance arrives<br>• Send written assessment and referral details to hospital<br>• β2 bronchodilator via oxygen-driven **nebuliser in ambulance** | **Follow up after treatment or discharge from hospital:**<br>• GP review within 2 working days<br>• Monitor symptoms and PEF<br>• Check inhaler technique<br>• **Written asthma action plan**<br>• Modify treatment according to guidelines for chronic persistent asthma<br>• Address potentially preventable contributors to admission |

*Diagram adapted from: SIGN 153 - British Guideline on the management of Asthma. September 2016*