

## Goals of asthma therapy are to achieve complete control of Asthma Symptoms:

- Maximise asthma control
  - no daytime symptoms
  - no night-time awakening due to asthma
  - no need for rescue medication
  - no limitations on activity including exercise
  - normal lung function
  - no exacerbations
  - minimal medication side-effects

## Lifestyle Factors

- Smoking is a major trigger factor for asthma and a significant cause of poor control, reducing exposure to cigarette smoke is essential. Stop smoking advice and avoidance of tobacco smoke is vital
- Manage gastro-oesophageal reflux & rhinitis as clinically appropriate, there is however, a lack of evidence that this will improve asthma control
- Consideration of existing or new exposure to triggers e.g. occupational factors, new pets or animal contact, DIY, dusty environment
- Obesity

## Mental Health and Wellbeing

- Include an assessment of anxiety and depression using GAD-2 and PHQ-2 as screening questionnaires
- Yes to any of the 4 questions must prompt referral to the GP for further assessment and consideration of referral to IAPT/psychology services

## Patient Education

- A personalised asthma self-management plan (personalised asthma action plan - PAAP) is essential
- Each patient should have a clear understanding of how to recognise and deal with deterioration in their asthma control
- Patients should have:
  - satisfactory inhaler technique
  - a basic understanding as to how their medication works
  - Understand the importance of adhering to their medication regimen
- Education should include personalised discussion of issues such as trigger avoidance and achieving a smoke-free environment
- Patients should be educated about the importance of returning used inhalers or those no longer required to their community pharmacy for correct disposal

## Rescue Medication

- Rescue medication should be considered in patients who have experienced severe attacks or who live in geographically isolated areas
- Patients should be individually assessed for appropriateness of issuing rescue medication to keep at home and the decision based on patient understanding and previous history
- When providing PAAP consider the appropriateness of issuing oral steroids as rescue medication
- **If patient is not suitable, ensure a system is in place and clearly understood by practice staff, patient and carers, to allow access to rescue medication promptly following an assessment of symptoms in the event of deterioration**

- Rescue medication may be issued following appropriate education and with access to timely advice (prednisolone plain 5mg tablets – 40mg a day for a minimum of 5 days)
- **Patients should be advised to contact a named healthcare professional on commencing rescue medication and arrange to be reviewed within 2 days**
- Rescue medication should only be reissued following assessment of the patient

### Inhaler Devices

- Prescribing by brand name is recommended to ensure the patient receives a consistent product
- Inhalers should only be prescribed after patients have received training in the use of the device and have demonstrated satisfactory technique
- The preferred inhaler therapies are based on:
  - Ease of use of inhaler device and acceptability to patient
  - Evidence of safety and efficacy from clinical trials
  - Cost
- If the patient cannot use or declines the listed inhaler device, an appropriate alternative should be prescribed
- The choice of using a dry powder inhaler (DPI) or metered dose inhaler (MDI) depends on the patient's ability to use different inhaler devices and patient preference. In general, DPI devices are often easier to use than MDI devices
- A spacer device is recommended when using a MDI, particularly for patients prescribed an inhaled corticosteroid (ICS)
- Aim for device consistency across therapy to enhance patient compliance

### Prescribing tips

- Use lowest effective ICS dose to achieve control
- Assess product for suitability for the individual and select the least costly, within its marketing authorisation
- Carbon footprint is considered as part of the latest prescribing guidance see Inhaler choices adult asthma document
- Combination devices are recommended when ICS and long-acting beta2 agonist (LABA) are required
- Review patients 4-8 weeks after making any treatment change (up or down titrating)
- Step up and step down according to asthma control – using objective measures to aid e.g. Asthma Control Test (ACT)

### Safety Consideration

- Needing to use reliever medication more than three times a week can increase inflammation and risk of exacerbation and death
- Patients should never be prescribed LABA (or LAMA) as monotherapy
- High dose ICS (1600mcg/day beclomethasone dipropionate BDP equivalent or fluticasone 1000mcg/day) is associated with a greater risk of systemic side effects including adrenal suppression, decrease in bone mineral density, cataracts and glaucoma, diabetes mellitus and adverse psychological and behavioural effects
- All patients on high doses of ICS ( $\geq 1000$  micrograms beclomethasone dipropionate BDP equivalent per day) should be made aware of the risks and given an ICS safety warning card. For further information and equivalent steroid potencies click [here](#) see Table 12
- Patients taking nasal corticosteroids in addition to inhaled corticosteroids should be assessed individually. For example, a patient taking a dose of ICS between 800-1000 micrograms of BDP equivalent per day and nasal corticosteroids, a steroid treatment card is recommended.

- Ensure processes are in place to see patients quickly in event of deterioration and when rescue medication is commenced
- When adding a new inhaler device remove existing repeat prescriptions to reduce the risk of duplication.

**Sub optimal (poor) control: any of the below criteria**

- Using reliever more than 3 times weekly
- Symptomatic more than 3 times weekly
- Waking one night a week
- Two or more courses of rescue oral steroids in past 12 months
- 12 or more reliever inhalers (i.e. salbutamol) in past 12 months
- ACT score less than 20.
- RCP Score of 2 or more

**Increasing treatment:**

Before initiating new drug therapy or stepping up check:

- Adherence with existing therapy
- Inhaler technique
- Trigger factors

A rescue course of steroids may indicate the need to increase regular treatment to the next step

**Pharmacological treatment pathway:**

Prescribe a short-acting beta2 agonist (SABA) as reliever therapy to adults with newly diagnosed asthma and issue a peak flow meter.

Offer a low dose of ICS as the first-line maintenance therapy. A limited number of patients with occasional mild symptoms [< twice a month] can be prescribed a SABA on its own with no preventer therapy.

If asthma is uncontrolled on a low dose of ICS as maintenance therapy, consider:

- Option 1 – add a LABA. Prescribe low dose ICS/LABA combination inhaler.
- Option 2 -- trial of a leukotriene receptor antagonist (LTRA) in addition to the low dose ICS and review the response to treatment in 4 to 8 weeks. (do not add to repeat template until response to treatment has been accessed)

If asthma not adequately controlled consider:

- Stop LTRA if not effective
- If no response to LABA – stop LABA and consider medium dose ICS
- If benefit from LABA but control still inadequate – continue LABA and increase ICS to medium dose
- LTRA if not previously tried

Consider Maintenance and Reliever Therapy (MART) regimen where appropriate.

Stop SABA inhaler (Note: patients using MART regimens should have an in-date SABA supply reserved for emergency use and if SABA is used pre-exercise).

Prescribe low dose ICS/LABA as MART regimen initially. Consider medium dose ICS/LABA as MART or as fixed dose if uncontrolled.

If asthma is uncontrolled on a MART regimen with a low maintenance ICS dose, with or without an LTRA, consider increasing the ICS to a moderate maintenance dose (either continuing on a MART regimen or changing to a fixed-dose of an ICS and a LABA, with a SABA as a reliever therapy).

If asthma is uncontrolled in adults (aged 17 and over) on a moderate maintenance ICS dose with a LABA (either as MART or a fixed-dose regimen), with or without an LTRA, consider:

- increasing the ICS to a high maintenance dose (this should only be offered as part of a fixed-dose regimen, with a SABA used as a reliever therapy) or
- a trial of an additional drug (for example, a long-acting muscarinic receptor antagonist or theophylline) or
- seeking advice from a healthcare professional with expertise in asthma

**Note:** there are 5 inhalers licensed for the MART regimen (refer to product literature)

- Symbicort turbobaler
- Fostair MDI and NEXThaler
- DuoResp Spiromax
- Fobumix

**Patients should be reviewed after 4 weeks by respiratory nurse or GP following any medication changes. This review should include an asthma control test (ACT) plus peak flow to establish benefit.**

### **Reducing treatment:**

Step down should be considered:

- After 12 weeks if control is achieved (and after every subsequent 12 week period).
- If control is maintained, therapy should be reduced (dose decreased by 25-50% each time) to the lowest step that maintains control.
- When on combination ICS & LABA, the preferred option is to reduce does of ICS by 50% while continuing LABA. If control is maintained further reductions in ICS should be made until on a low dose, when the LABA may be stopped.
- After stepping down review in 12 weeks and step up again if symptomatic.

Following telephone review or persistent DNA's consider referral to a Community Pharmacist for inhaler technique review as part of a targeted Medicines Use Review or New Medicine Service review.

### **Additional Information**

Information on inhalers and spacers is available at:

<https://www.asthma.org.uk/advice/inhalers-medicines-treatments/inhalers-and-spacers>

Video link:

<https://www.swyapc.org/inhaler-videos/>

### **References**

British Thoracic Society/ Sign Guidance:

<https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/>

NICE Asthma: diagnosis, monitoring and chronic asthma management

<https://www.nice.org.uk/guidance/ng80>

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## Pharmacological Management of Asthma in Adults

