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# Asthma - Management and Prescribing – Adults
# Preferred Approach

## Confirmed Asthma Diagnosis

See Grampian Guidance Asthma Diagnosis and Asthma Pathway (BTS, NICE, SIGN 2024) for more details

## Assess for Treatable Traits

Assess the patient for the following treatable traits:

- Smoking cessation
- Gastro-oesophageal reflux disease (GORD)
- Rhino-sinusitis
- Anxiety
- Obesity

## Inhaled Therapies

See page 2 for prescribing inhaled therapies

## Monitor and Review

Monitor and review response to management:

- Review after 3 months with any treatment changes
- Use objective measures of asthma control to step up **AND** step down inhaler therapies – see page 4
- Offer annual review appointments to all patients with asthma – consider asynchronous consultation review
- Check adherence and inhaler technique at every opportunity

## Referral to Secondary Care

Consider referral to secondary care for the following reasons:

- Diagnostic uncertainty
- Poor or no response to specialist therapies
- Frequent acute exacerbations – see Severe Asthma Pathway, consider if 2 or more exacerbations in the past 12 months
- Occupational Asthma

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## STOP, THINK AND REVIEW

**STOP, THINK and REVIEW** before stepping up or stepping down treatment:

- Assess symptoms
- Check Asthma Control Test (ACT)
- Measure lung function (PEFR)
- Check inhaler technique and adherence
- Update self-management advice and provide Personalised Asthma Action Plan
- Consider stepping up treatment if objective measures confirm uncontrolled asthma.

## DPI OR MDI?

DPIs (dry powder inhalers) are the preferred inhaler type for prescribing in Grampian as long as it is considered clinically appropriate to do so; this includes for prescribing of SABA. Most adults finds DPIs easier to use because it is easier to get the technique right.

Changing from pMDI to a DPI can also be considered and as long as a patient can demonstrate good technique with a DPI, changing of inhaler is not linked to symptoms getting worse or asthma attacks

## SPACER FOR PMDI INHALERS

It is recommended that an anti-static spacer is considered for all patients being prescribed a pMDI inhaler. This can be used for both regular preventer inhalers and reliever inhalers. Spacers can also facilitate multi-dosing in acute exacerbation of airways disease.

The preferred spacer choice is **AeroChamber Flo Vu**


This can be used with or without masks and can help increase lung deposition of inhaler medications.

## SPECIAL PRESCRIBING NOTES

Costs of medicines are for 30 days supply.
Prescribe by brand to ensure correct device.
Shelf-life of devices:

- Trimbow 172/5/9 in-use shelf-life is 3 months
- Fostair NEXThaler after first opening the pouch, the medicinal product should be used within 6 months
- Proxor in-use shelf-life is 3 months
- LAMA - Spiriva Respimat 2.5 microgram, inhalation solution.
  - In-use shelf life of the cartridge: 3 months
  - In-use shelf life of the re-usable inhaler: 1 year [SmPC advises – Do not use the Respimat re-usable inhaler for more than one year, after having inserted the first cartridge]
  - Recommended use: 6 cartridges per inhaler - greener prescribing

## ANTI-INFLAMMATORY RELIEVER
### (INHALED CORTICOSTEROID PLUS LONG-ACTIVE BETA-2 AGONIST)

**Dry Powder Inhaler Choice**

Symbicort Turbohaler
200/6 micrograms
One puff as required for symptoms
(up to 8 puffs in 24 hours)

£7.00 (for 1 puff)
£56 (for 8 puffs)
£84 (for 12 puffs)

low $CO_2$

The formulary recommended licensed product for as required use for newly diagnosed asthma at present is Symbicort 200/6.

If a patient is unable to use this device, then off license prescribing of a formulary recommended alternative ICS/LABA containing formoterol such as Luforbec 100/6 pMDI on an as required basis can be considered. Alternatively, start low dose MART with an appropriate device. Guidance for off license prescribing can be found here SIGN - Using our guidelines

As required ICS-formoterol reduces the risk of exacerbations compared with SABA reliever monotherapy. This can also be a simpler regimen for some patients compared with regular ICS and as required SABA in separate inhalers. A maximum of 8 puffs per day is recommended but can be increased short term to 12 puffs. **The SmPC states - Not more than 6 inhalations should be taken on any single occasion.**

The costs shown are for the daily use of the number of puffs indicated across a full month. The average daily dose used by patients is 0.5 puffs per day (£3.50 per month).

Consider stepping up to regular daily treatment (MART or ICS/LABA + SABA) if having shortness of breath or wheeze most days or waking with asthma more than one per week.

**STOP, THINK and REVIEW**

## CHANGE TO LOW DOSE MAINTENANCE AND RELIEVER THERAPY
### (INHALED CORTICOSTEROID PLUS LONG-ACTING BETA-2 AGONIST)

**Dry Powder Inhaler Choice (Preferred Inhaler Type)**

Symbicort Turbohaler
200/6 micrograms
One puff twice daily and if required up to a maximum of 8 puffs in 24 hours for 30 days
£14.00 (1 puff bd/2 puffs daily)
£56 (8 puffs daily)

low $CO_2$

Fostair NEXThaler
100/6 micrograms
One puff twice daily and if required up to a maximum of 8 puffs in 24 hours
£14.66 (1 puff bd/2 puffs daily)
£58.64 (8 puffs daily)

low $CO_2$

**Metered Dose Inhaler Choice**

Proxor pMDI
100/6 micrograms
One puff twice daily and if required up to a maximum of 8 puffs in 24 hours
£4.96 (1 puff bd/2 puffs daily)
£9.90 (8 puffs daily)

high $CO_2$

**STOP, THINK and REVIEW**

## MAINTENANCE AND RELIEVER THERAPY (MART)

MART is using a single inhaler as both maintenance and reliever therapy. The inhalers used for this contain inhaled corticosteroids (ICS) and a rapid-acting, long-acting beta-2 agonist (formoterol).

The long-acting beta-2 agonist **MUST** be formoterol or the inhaler cannot be used as MART.

The inhaler is used one puff twice daily and one puff as required for symptoms, up to an extra 6 puffs in 24 hours. **The SmPC states - Not more than 6 inhalations should be taken on any single occasion.**

Patients on MART do not need to use a salbutamol inhaler for symptom relief but they must always have their MART inhaler on hand to use if symptoms arise.

A total daily dose of up to 12 inhalations of MART therapy could be used for a limited period. Patients using more than 8 inhalations daily should be strongly recommended to seek medical advice. They should be reassessed and their maintenance therapy should be reconsidered

## CHANGE TO MODERATE DOSE MART
### (INHALED CORTICOSTEROID PLUS LONG-ACTING BETA-2 AGONIST)

**Dry Powder Inhaler Choice (Preferred Inhaler Type)**

Symbicort Turbohaler
200/6 micrograms
Two puffs twice daily and if required up to a maximum of 8 puffs in 24 hours.
£28 (4 puffs daily)

low $CO_2$

Fostair NEXThaler
100/6 micrograms
Two puffs twice daily and if required up to a maximum of 8 puffs in 24 hours
£29.32 ( 4 puffs daily)

low $CO_2$

**Metered Dose Inhaler Choice**

Proxor pMDI
100/6 micrograms
Two puffs twice daily and if required up to a maximum of 8 puffs in 24 hours
£4.96 (4 puffs daily)

high $CO_2$

**STOP, THINK and REVIEW**

## OR ADD SINGLE AGENT LTRA
### (LEUKOTRIENE RECEPTOR ANTAGONIST)

Add single agent LTRA for a 8 to 12 week trial:

Montelukast tablets
10mg
Once daily in the evening
£1.29 for 30 days treatment

**Ensure both moderate dose MART and LTRA trial for 8-12 weeks**

**STOP, THINK and REVIEW**

## STILL UNCONTROLLED – IS THIS SEVERE ASTHMA?

**Severe Asthma**

Severe asthma affects around 5% of patients with asthma and specialist assessment and treatments may be indicated if patient has uncontrolled asthma despite maximum inhaled therapy.

Consider severe asthma if there is poor control **and** ≥ 2 of following features:

- ≥ 2 exacerbations in last 12 months
- Eosinophils > 0.3 x $10^9$/L
- Good concordance
- Good inhaler technique

**Important Considerations**

- Confirm uncontrolled asthma using objective measures:
  - Asthma Control Test (ACT) <20
  - SABA/MART prescribing history (see table for MART over-use guide)
  - Exacerbations of asthma
  - Oral corticosteroid use
- Check concordance and optimise inhaler technique
- Assess for other modifiable factors and treatable traits
  - Gastro-oesophageal reflux
  - Smoking cessation
  - Anxiety
  - Abnormal pattern breathing
  - Rhinosinusitis

**Additional therapies can be initiated.**

**Severe asthma IS suspected**

## SEVERE ASTHMA SUSPECTED

Patients with severe asthma are more likely to benefit from maximising the dose of inhaled corticosteroid earlier in their management.

**Severe asthma IS NOT suspected**

## MAINTAIN MODERATE DOSE MART AND ADD LAMA
### (INHALED CORTICOSTEROID PLUS LONG-ACTING BETA-2 AGONIST PLUS LONG-ACTING MUSCARINIC ANTAGONIST)

Spiriva Respimat
2.5mg SMI
Two puffs once daily
£23 for 2 puffs once daily for 30 days

low $CO_2$

Consider giving as an 8 to 12 week trial.

Stop if no improvement in objective measure of asthma control and consider moving to next step – also consider whether specialist input is required.

**STOP, THINK and REVIEW**

## CHANGE TO HIGH DOSE ICS PLUS LABA PLUS LAMA
### (INHALED CORTICOSTEROID PLUS LONG-ACTING BETA-2 AGONIST PLUS LONG-ACTING MUSCARINIC ANTAGONIST)

**Metered Dose Inhaler Only**

Trimbow pMDI
172/5/9 microgram
Two puffs twice daily
£44.50

high $CO_2$

Trimbow pMDI should be delivered via spacer device.

Consider giving as a 3 month trial.

If no improvement in objective measures of asthma control then consider specialist referral and review certainty of asthma diagnosis

**SABA -** Salbutamol or Terbutaline as required to relieve wheeze or breathlessness. DPI is the preferred inhaler choice.
**PLEASE ENSURE SABA PRESCRIBED IF PREVIOUSLY USING MART**

Realistic Medicine – Shared decision making | **B**enefits of treatment | **R**isks of treatment | **A**lternative treatments | **N**o treatment

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| Strength | MART Inhaler Dosing Instructions | No. of actuations per inhaler | Expected prescriptions per year (regular dose + 3 or less PRN actuations per week) | Suggests uncontrolled / consider review (regular dose + 4- 8 PRN actuations per week) | Suggests high risk / consider urgent review (regular dose + >10 actuations per week) |
|---|---|---|---|---|---|
| Low dose MART | 1 puff twice a day | 120 | 7-8 inhalers | 9-11 inhalers | 12 or more inhalers |
| Moderate dose MART | 2 puffs twice a day | 120 | 13-14 inhalers | 15-16 inhalers | 17 or more inhalers |

Good asthma control is defined as using reliever inhaler 3 times or less per week.

Uncontrolled and high risk doses are calculated using SABA equivalent dosing

One indicator of high risk asthma is defined as using 6 SABA inhalers per year – this equates to 11 as required doses per week.

Uncontrolled asthma can be defined as using between 2 and 5 SABA inhalers per year – this equates to 4 – 8 as required reliever doses per week

**ACUTE ASTHMA IN PATIENTS WITH AIR / MART INHALER REGIMENS**

High doses of beta agonist bronchodilators are a key treatment in acute asthma. If a patient presents to a healthcare setting with acute asthma who is prescribed AIR / MART for reliever then they should use up to 6 puffs of their inhaler to relieve acute bronchospasm. Oral corticosteroid therapy should also be administered as early as possible when an acute exacerbation has been diagnosed. If there is an inadequate response to 6 puffs of AIR/MART reliever therapy then additional bronchodilators such as Salbutamol can be given as needed using pMDI and spacer or via nebuliser if required.

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# Asthma - Management and Prescribing – Adults Preferred Approach

## Asthma Prescribing Guidance Explained

It is important that medications are chosen on an individual patient basis and that the most appropriate inhaler device is chosen for each patient based on their competency in using inhaler devices. A range of inhalers are recommended to offer clinicians and patients flexibility in choosing or changing treatments.

## Objective Measures of Asthma Control

At all stages of treatment an objective assessment of asthma control should be undertaken to determine if inhaled therapies should be adjusted – consider using Asthma Control Test (ACT)

Markers of **good** control:
- ACT > 20
- < 3 SABA used in 12 months
- no exacerbations of asthma in previous 12 months

Markers of **poor** control:
- ACT < 20
- ≥ 3 SABA used in 12 months
- ≥ 1 acute exacerbation(s) of asthma in previous 12 months (including GMED, Emergency Department or admission)

Markers of **high risk or severe** asthma:
- >12 SABA used in 12 months
- Patients on maximal inhaled therapy with
  - ACT < 20
  - ≥ 3 SABA used in 12 months
  - ≥ 2 exacerbations requiring oral steroids

Objective measures of asthma control should allow clinicians to safely step down asthma medications. To support clinicians in managing step down safely and effectively the following points should be considered and discussed with patients.

- Asthma is a variable disease from day to day and month to month and therefore the treatments required can vary too.
- Whenever a patients treatment is stepped up consider phrasing this as a “temporary measure” until good asthma control is achieved and inform patients that you will aim to step treatment down again when it is safe to do so
- Step down should only be undertaken when there is objective evidence of good asthma control
- Loss of asthma control after step down is not an indication that step down was an error or a failure. Approximately 1 out of every 6 patients with well controlled asthma can lose control of their asthma over a 6 month period whether they have treatment changes made or not.

## Greener Respiratory Care

NHS Scotland has committed to achieving net zero by 2045 and greener respiratory care is key to achieving this.

A Greener Respiratory Care Toolkit has been developed to support HCPs to deliver Greener Respiratory Care.