High-dose inhaled corticosteroids in asthma

Inhaled corticosteroids (ICS) are the first-choice regular preventer therapy for adults and children with asthma for achieving overall treatment goals. To minimise side effects from ICS in people with asthma, the [BTS/SIGN guideline on the management of asthma](https://www.sign.ac.uk/guidelines.jsp) recommends that the dose of ICS should be titrated to the lowest dose at which effective control of asthma is maintained. Doubling the dose of ICS at the time of an exacerbation is of unproven value and is no longer recommended.

The Medicines and Healthcare products Regulatory Agency (MHRA) advises that the prolonged use of high doses of ICS (as with the use of oral corticosteroids) carries a risk of [systemic side effects](https://www.mhra.gov.uk) (for example, adrenal suppression or crisis, growth retardation in children and young people, decrease in bone mineral density, cataracts and glaucoma) and a range of [psychological or behavioural effects](https://www.mhra.gov.uk) (for example, psychomotor hyperactivity, sleep disorders, anxiety, depression and aggression). ICS have also been associated with a dose-related increased risk of both diabetes onset and progression, although this evidence is from an observational study with inherent limitations (see [MeReC Rapid Review No. 2485](https://www.mreccentre.org.uk) for details). The [Committee on Safety of Medicines](https://www.gov.uk/government/organisations/commission-on-safety-of-medicines) has issued warnings about the use of high-dose ICS, particularly in children and in relation to fluticasone. Children prescribed ICS should have their growth monitored annually (although isolated growth failure is not a reliable indicator of adrenal suppression).

The [BTS/SIGN guideline on the management of asthma](https://www.sign.ac.uk/guidelines.jsp) recommends that reductions in ICS dose should be considered every 3 months, decreasing the dose by approximately 25–50% each time. Data suggest that this is realistic and possible without compromising patient care (see [Hawkins et al. 2003](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2752926/)). For some children with milder asthma and a clear seasonal pattern to their symptoms, a more rapid dose reduction during their 'good' season is feasible. The guideline states that stepping down therapy once asthma is controlled is recommended, but often not implemented, leaving some people over-treated.

The CCG has recognised that this potential over-treatment puts an additional burden on the prescribing budget, and this presents an excellent and valuable opportunity for community pharmacy to contribute to the Prescribing Improvement Plan (PIP) 2013, through delivery of targeted MURs. Patients eligible for a ‘Step down’ review should be referred to their Nurse/GP.
### HIGH-DOSE INHALED CORTICOSTEROIDS

**KEY REVIEW QUESTIONS TO ASSIST WITH MUR**

<table>
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<tr>
<th><strong>WHY ARE YOU TAKING THEM:</strong></th>
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<td>The inhaled corticosteroids are commonly used in chronic asthma and, less commonly, in chronic obstructive pulmonary disease (COPD) to reduce the inflammation in the airways/breathing tubes caused by the condition, and which reduces your ability to breathe normally. So this inhaled therapy helps to reduce and prevent your asthma from interfering with normal activity.</td>
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**Ask these Qs – if YES, refer back to GP/ Nurse for a review:**

- Q: Have you had regular daytime asthma symptoms (cough, breathlessness, wheeze, tight chest)?
- Q: Asthma: Are you having to use your reliever more than 3 days a week?
- Q: Have you had difficulty sleeping or are you woken up by your asthma symptoms?
- Q: Are your symptoms interfering with your usual activities (shopping, sports, work, stairs)?

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<tr>
<th><strong>HIGH DOSE STEROID REVIEW: if NO, refer to GP/ Nurse for a review:</strong></th>
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<tr>
<td>Q: Have you had an asthma review in the last 12 months?</td>
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<td>Q: Do you have a personal Asthma Care Plan?</td>
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<tr>
<td>Q: Have you discussed ‘stepping down’ with your nurse or GP? In the last 3 months/6 months?</td>
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<th><strong>MIXED DEVICES:</strong></th>
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<td>Q: How do you manage with each different device?</td>
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<tr>
<td>Q: How do you re-order your inhalers? Do you ever run out?</td>
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**Additional notes:**

**HOW DO YOU TAKE THEM:**

- Check inhaler technique for the device (correct device for patient?)
- Using a spacer (if no – recommend where indicated) Replace device 6-12 monthly.
- Rinse out mouth after use
- Take preventer regularly regardless of symptoms
- Peak Flow – once a week or more often as indicated
- Inhaler and Spacer-care – wash out weekly/monthly as recommended, dry naturally (avoid static)
- Care Plan in place for dealing with worsening symptoms (if no – action: refer to asthma nurse).

**Additional notes:** consider allergies/pets – induced asthma – antihistamines required?

**SIDE EFFECTS:**

- Adrenal suppression (steroid card needed?) and glaucoma – eye check?
- Hoarseness/candidiasis – advise to rinse the mouth with water (or brush teeth) after use or use a spacer.
- Dose associated problems? sleep disorders, anxiety, depression and aggression

**Additional notes:** check OTC meds ie NSAIDS and Aspirin for allergy

**HEALTH TIPS:**

Consider triggers – reduce stress/allergens. Flu and Pneumo vaccination recommended (COPD).

Follow healthy diet (extra fruit and veg – increases immunity) and increase calcium intake (helps with bone health). Reduce alcohol to safe limits. Offer stop smoking advice/service/referral. Increase exercise. Drink water – helps reduce mucous viscosity and drowsiness. Pass recorded BP/weight/BMI/life style monitoring info to GP. Refer back to Nurse/GP for asthma review.

**USEFUL PATIENT INFORMATION:** Any leaflets to support?

**Asthma UK:** [www.asthma.org.uk](http://www.asthma.org.uk); **NHS Choices:** [http://www.nhs.uk/Pages/HomePage.aspx](http://www.nhs.uk/Pages/HomePage.aspx); **Eat Well:** [www.eatwell.gov.uk/](http://www.eatwell.gov.uk/); **Stop Smoking:** [http://www.stopsmokingsupportglos.org.uk/](http://www.stopsmokingsupportglos.org.uk/); **Metoffice.gov.uk**