

Guidance for Healthcare Professionals on Inhaled Corticosteroids in Adults and When to Issue an Inhaled Corticosteroid or Steroid Treatment Card

The Pan Mersey Safety subgroup recommends that all patients using a high dose Inhaled Corticosteroid (ICS) should be made aware of the risks of harm and be given an ICS or Steroid Treatment Card

Side effect profile of an ICS

- High doses of ICS are associated with clinically detectable adrenal suppression^[1], increased risk of non-fatal pneumonia in patients with COPD^[2], type II diabetes^[3], and may increase the risk of fractures^[4] and tuberculosis.^[5] Very rarely, higher doses of ICS may temporarily reduce the body's ability to produce its own corticosteroids when under stress, such as in severe illness or undergoing surgery, or to fight off some infections. (e.g. chickenpox).
- ICS are prescribed in asthma to improve control, reduce exacerbations and risk of death, and, in those with severe to very severe COPD, reduce the frequency of exacerbations. The benefits of ICS outweigh the risks when used in clinically effective doses; however, long-term high doses (≥ 1000 micrograms beclometasone dipropionate [BDP] equivalent/day) may cause systemic side effects.

In patients with Asthma

- Once patient has consistently good control (i.e. 3 months) consider stepping down to the lowest dose of ICS that maintains symptoms control.
- There is limited evidence that increasing ICS above 800 micrograms BDP equivalent/day improves asthma control.^[6] MHRA guidance suggests that a total daily dose of 500-1000 micrograms of fluticasone propionate should only be prescribed for moderate to severe asthma, with doses above this, only prescribed by an asthma specialist, when additional benefit is expected or demonstrated or by the ability to reduce oral corticosteroid use.^[7]

In patients with COPD

- In severe COPD ($FEV_1 < 50\%$) an ICS & Long-acting Beta₂ Agonist (LABA) may reduce frequency of exacerbations. Clinical trials in severe COPD and ≥ 2 exacerbations/year, suggest twice a day inhalation of Symbicort (budesonide/formoterol) 400/12^[8] Fostair (beclometasone HFA/formoterol) 200 micrograms^[9] and Seretide 500 Accuhaler^[10] are equally effective in reducing the frequency of exacerbations.
- Patients taking the licenced dose of Seretide for COPD will need an ICS safety card, whilst those prescribed Symbicort and Fostair may not.

Before increasing ICS the following are recommended:

1. Check adherence to therapy – suboptimal inhaler technique or not using the medications regularly as directed are common. Always ask the patient (in a non-judgemental way) how they take their medicines to determine if their therapy needs amending or if they need advising how to take their current therapy more effectively.
2. Improve delivery to the lungs. Using a metered dose inhaler (MDI) with a spacer device improves lung deposition^[11] which helps to reduce oropharyngeal deposition and local side effects. Improving technique can be more effective than increasing the dose.
3. Encourage people to stop smoking and provide stop smoking services. In COPD early intervention reduces mortality^[12] and improves health status^[13] whilst in asthma may avoid the need for stepping up ICS dose when poorly controlled.^[14]

Guidance for Healthcare Professionals on Inhaled Corticosteroids in Adults and When to Issue an Inhaled Corticosteroid or Steroid Treatment Card

| It is the responsibility of the prescriber to issue a Steroid or ICS Treatment Card | Total Daily Dose of Inhaled Corticosteroid in adults | | |
|---|--|---|-----------------------------------|
| | Low dose ICS card not required | Intermediate dose Consider an ICS card | High dose ICS card recommended |
| Beclomethasone dipropionate | | | |
| MDI - Clenil Modulite [®] | <800 micrograms | 800-1000 micrograms | >1000 micrograms |
| MDI - Qvar [®] (BDP HFA) | <400 micrograms | 400-500 micrograms | >500 micrograms |
| MDI - Fostair [®] (BDP HFA) | <400 micrograms | 400-500 micrograms | >500 micrograms |
| Breath actuated - Qvar Easibreathe [®] , Qvar Autohaler [®] | <400 micrograms | 400-500 micrograms | >500 micrograms |
| Dry powder - Asmabec Clickhaler [®] , Asmabec Easyhaler [®] | <800 micrograms | 800-1000 micrograms | >1000 micrograms |
| Dry powder – Fostair NEXThaler [®] | <400 micrograms | 400 micrograms | |
| Budesonide | | | |
| Easyhaler | <800 micrograms | 800-1000 micrograms | >1000 micrograms |
| Turbohaler - Pulmicort [®] , Symbicort [®] Breath actuated - Duoresp Spiromax [®] | <800 micrograms | 800-1000 micrograms | >1000 micrograms |
| Fluticasone propionate (FP) | | | |
| MDI - Flixotide [®] , Flutiform [®] ▼, Seretide [®] , Sirdupla [®] | <400 micrograms | 400-500 micrograms | >500 micrograms |
| Dry powder - Flixotide Accuhaler [®] , Seretide Accuhaler [®] | <400 micrograms | 400-500 micrograms | >500 micrograms |
| Fluticasone furoate (FF) | | | |
| Dry powder - Relvar Ellipta [®] ▼ | | 92/22 micrograms | 184/22 micrograms |

Note: It is the responsibility of individual organisations to arrange printing of the ICS card over page.

References

1. Department of Clinical Pharmacology and Therapeutics and Respiratory Medicine, Ninewells Hospital and Medical School. Systemic adverse effects of inhaled corticosteroid therapy: A systematic review and meta-analysis, *Arch Intern Med* 1999; 159: 941-55.
2. Department of Medicine, Wake Forest University School of Medicine, One Medical Center Boulevard, Winston-Salem, NC 27157. Long-term use of inhaled corticosteroids and the risk of pneumonia in chronic obstructive pulmonary disease: a meta-analysis. *Arch Intern Med* 2009; 169: +2019-29.
3. Samy Suissa PhD, Abbas Kezouh PhD, Pierre Ernst MD. Inhaled Corticosteroids and the Risks of Diabetes Onset and Progression. *The American Journal of Medicine* 2010; 123(11): 1001 - 1006. Accessed 17/0/15 at: [http://www.amjmed.com/article/S0002-9343\(10\)00648-0/abstract](http://www.amjmed.com/article/S0002-9343(10)00648-0/abstract)
4. Yoon K Loke, Rodrigo Cavallazzi, Sonal Singh. Risk of fractures with inhaled corticosteroids in COPD: systematic review and meta-analysis of randomised controlled trials and observational studies, *Thorax* 2011;66(8):699-708.
5. Dong YH, Chang CH, Wu FL, et al. Use of inhaled corticosteroids in patients with COPD and the risk of TB and influenza: a systematic review and meta-analysis of randomized controlled trials', *Chest* 2014;145(6):1286-1297.
6. Quon BS, Fitzgerald JM, Lemièrè C, et al. Increased versus stable doses of inhaled corticosteroids for exacerbations of chronic asthma in adults and children. *Cochrane Database Syst Rev*, 2010; CD007524.
7. MCA/CSM Current Problems in Pharmacovigilance. August 2001; 27: 10. Accessed 17/07/15 at <http://webarchive.nationalarchives.gov.uk/20141205150130/http://www.mhra.gov.uk/home/groups/pl-p/documents/websitesresources/con007456.pdf>
8. O. Vandenplas, K. Toren and P.D. Blanc(2003) 'Health and socioeconomic impact of work-related asthma', *European Respiratory Journal* 2003; 22(4): 689 - 697.
9. Calverley PM, Kuna P, Monsó E, et al. Beclomethasone/formoterol in the management of COPD: a randomised controlled trial. *Respir Med* 2010; 104(12): 1858 - 1868.
10. Calverley PM, Anderson JA, Bartolome C, et al. Salmeterol and Fluticasone Propionate and Survival in Chronic Obstructive Pulmonary Disease. *N Engl J Med* 2010; 365(12): 775 - 789.
11. Newman SP. Spacer devices for metered dose inhalers. *Clinical Pharmacokinetics* 2004;43(6):349 - 360.
12. Anthonisen NR, Skeans MA, Wise RA, et al. The Effects of a Smoking Cessation Intervention on 14.5-Year Mortality. A Randomized Clinical Trial, *Annals of Internal Medicine* 2004;142(44): 1 - 12.
13. Hoogendoorn M, Feenstra TL, Hoogenvveen RT, Rutten-van Molken MP. Long-term effectiveness and cost-effectiveness of smoking cessation interventions in patients with COPD. *Thorax* 2010; 65(8): 711 - 718
14. Tomlinson JEM, McMahon AD, Chaudhuri R, et al. Efficacy of low and high dose inhaled corticosteroid in smokers versus non-smokers with mild asthma. *Thorax* 2005; 60: 282-287.

Acknowledgements London Respiratory Network

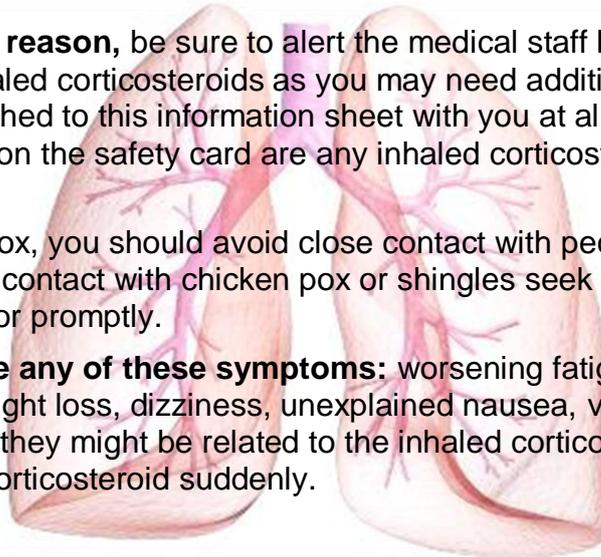
Guidance for Healthcare Professionals on Inhaled Corticosteroids in Adults and When to Issue an Inhaled Corticosteroid or Steroid Treatment Card

Information for patients:

If you become ill for any reason, be sure to alert the medical staff looking after you that you are using higher doses of inhaled corticosteroids as you may need additional corticosteroids. Ideally, carry the safety card attached to this information sheet with you at all times and show this to your medical team. Recorded on the safety card are any inhaled corticosteroids that you should be currently taking.

If you never had chickenpox, you should avoid close contact with people who have chickenpox or shingles. If you come into contact with chicken pox or shingles seek advice from a community pharmacist, nurse or doctor promptly.

If you start to experience any of these symptoms: worsening fatigue, muscle weakness, loss of appetite, unintentional weight loss, dizziness, unexplained nausea, vomiting and diarrhoea, go and see your doctor, because they might be related to the inhaled corticosteroid you are taking. Do not stop taking your inhaled corticosteroid suddenly.



To be completed by healthcare professional and kept by you

High Dose Inhaled Corticosteroid Safety Card

Name: DOB:

I take: Strength:

MDI + Spacer / Accuhaler / Turbohaler /

At a dose of: puffs time(s) a day

I may be at risk of corticosteroid insufficiency when I am ill and supplementation should be considered.

Prescriber: Date:

You have been given this safety card because you are taking a high dose of inhaled corticosteroid.

It is important that you do NOT stop using your inhaled corticosteroid suddenly, particularly if you have been taking this medication for more than 3 weeks.

Be sure to get your repeat prescription of your inhaler before it runs out.

Always carry this card with you and show it to your medical team if you become ill.



Please peel off card