

Inhaler Placebo Pack

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Dear Pharmacy/Practice,

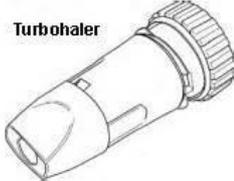
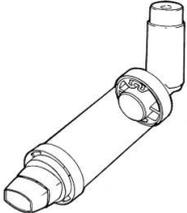
We hope you find these placebo respiratory packs useful. In the future to replenish your supply of placebos or training devices please use the contact details below.

Placebo	Re-order details
EpiPens	meda@professionalinformation.co.uk
Evohaler (MDI), Accuhaler Device & Whistle	https://hcp.gsk.co.uk/RequestADevice.html or 0800 221 441
Turbohaler (Symbicort), Device & Whistle	01582 836 000
Tiotropium Handi-Haler	01344 741 286

Kind regards,

The Islington Medicines Optimisation Team

Inhaler Devices and Technique

DEVICE	VIDEO FOR TECHNIQUE & KEY MESSAGES
<p>MDI/ EVOHALER</p> 	<p>http://www.asthma.org.uk/knowledge-bank-treatment-and-medicines-using-your-inhalers</p> <p>Asthma UK - MDI Inhaler Technique Video</p> <ul style="list-style-type: none"> • Prescribe with a spacer to improve lung deposition by up to 50% • Most inhaled medicines are available in the MDI (except long acting antimuscarinics) • Can be used with a Haleraid (cost approx. £1 and sold by pharmacies) for patients who have difficulty pushing canister down. The haleraid uses the patient's grip to release the medication.
<p>ACCUHALER</p> <p>Accuhaler</p> 	<p>Asthma UK - Accuhaler Inhaler Technique Video</p> <ul style="list-style-type: none"> • Breath actuated device • Available for salbutamol, fluticasone, salmeterol and salmeterol/fluticasone (Seretide) in combination.
<p>EASYBREATHE</p> 	<p>Asthma UK - Easybreathe Inhaler Technique Video</p> <ul style="list-style-type: none"> • Breath actuated device • Available for Beclometasone (Qvar) and Salbutamol (Salamol Easi-breathe) • More expensive than MDI plus spacer
<p>AUTOHALER</p> 	<p>Asthma UK- Autohaler Inhaler Technique Video</p> <ul style="list-style-type: none"> • Breath actuated device • Available for Beclometasone (Qvar) and Salbutamol (AiroMir) • More expensive than MDI plus spacer
<p>HANDIHALER</p> 	<p>Medicines.Org - Handihaler Inhaler Technique Video</p> <ul style="list-style-type: none"> • Breath actuated device • Available for Tiotropium • Can select the handihaler and capsules or capsule refill only • Replace the handihaler every 12 months, issue all other prescriptions as refill pack only as more cost effective
<p>Turbohaler</p> 	<p>Asthma UK - Turbohaler Inhaler Technique Video</p> <ul style="list-style-type: none"> • Breath actuated device • Available for Terbutaline, Budesonide, Formoterol, and Budesonide/Formoterol (Symbicort)
<p>VOLUMATIC SPACER</p> 	<p>Asthma UK Large Volume Spacer Technique Video</p> <ul style="list-style-type: none"> • Spacers improve lung deposition with a MDI by up to 50% • The spacer can be cleaned with warm soapy water, rinsed then left to drip dry (do not use a cloth to dry the interior as this can affect the anti-static properties of the device) • The spacer should be replaced every 12 months • Paediatric Volumatic is available with mask
<p>AEROCHAMBER</p> 	<p>Asthma UK - Small Volume Spacer Technique Video</p> <ul style="list-style-type: none"> • Spacers improve lung deposition with a MDI by up to 50% • The aerochamber is more compact so may be more convenient for the patient to carry with them (although costs £1.72 per device more than a Volumatic) • The patient should breathe in slowly – if a whistle is heard the patient is breathing in too quickly. • The spacer can be cleaned with warm soapy water, rinsed then left to drip dry (do not use a cloth to dry the interior as this can affect the anti-static properties of the device) • The spacer should be replaced every 12 months • Paediatric Aerochamber is available with mask for infant or child

Inhaled Corticosteroids in Adults: Prescribing Guidance for Healthcare Professionals

1. Inhaled corticosteroids (ICS) are generally considered safe when used in low doses. However, when higher doses are used over long periods, there is a risk of systemic side effects. All clinical guidelines stress the importance of ensuring that the lowest effective dose of inhaled corticosteroids is used.
2. The systemic side effects of corticosteroids are well known. High doses of inhaled corticosteroids are associated with clinically detectable adrenal suppression (*Arch Intern Med* 1999;159:941-55), increased risk of non fatal pneumonia in patients with COPD (*Arch Intern Med* 2009;169:219-29), increased risk of type II diabetes (*Am J Med* 2010;123:1001-6), and may increase the risk of fractures (*Thorax* 2011;66:699-708). It is strongly recommended that all patients on higher doses of ICS (>1000 micrograms Beclometasone dipropionate (BDP) equivalent per day, or Step 4 or above of BTS/SIGN Asthma guidelines) should be made aware of the potential risks and given an inhaled corticosteroid safety warning card about adrenal suppression.
3. Patients taking nasal corticosteroids in addition to inhaled corticosteroids should be assessed for their potential total daily dose of corticosteroid. For those patients on doses of inhaled corticosteroids between 800-1000 micrograms of BDP equivalent per day, a corticosteroid safety card is recommended, especially if additional corticosteroids are taken.
4. Clinical trials of combination therapy in COPD show that both Symbicort 400 1 inhalation twice a day (*Eur Respir J* 2003;22:912-19, *Eur Respir J* 2003;21:74-81) and Seretide 500 Accuhaler 1 inhalation twice a day (*N Engl J Med* 2007;356:775-89, *Am J Respir Crit Care Med* 2008;177:19-26) (Seretide 250 evohaler is not licensed for use in COPD) are equally effective in reducing the frequency of exacerbations and statistical improvements in quality of life in those with severe or very severe COPD and who have 2 or more exacerbations a year. However, the recommended BDP equivalent dose of Seretide is more than twice that of Symbicort. This may have an effect on the long term risk of corticosteroid side effects. The choice of which to use should be discussed with your patient.
5. At equipotent doses, there is no difference in the safety profile of different inhaled corticosteroids. Budesonide and ciclesonide are roughly equipotent to BDP. Fluticasone, mometasone and the newer ultrafine particle BDP HFA inhalers (QVAR and Fostair) are roughly twice as potent as standard BDP inhalers – see the BDP dose equivalence chart.

Before increasing the dose of inhaled corticosteroid:

6. Check inhaler technique. Poor inhaler technique, especially with aerosol inhalers is very common, and will contribute to treatment failure. Improving delivery of ICS to the lungs may be more effective than increasing the dose. Thus it is imperative that inhaler technique is checked at all times and appropriate changes made. All ICS MDIs (other than the newer ultrafine Beclometasone-HFA) should be used, and use taught, with a spacer (Volumatic or Aerochamber). The use of a large volume spacer may double drug delivery to the lungs (*Br J Clin Pharmacol* 1998;46:45-8, *Clin Pharmacokinet* 2004;43:349-60). It is important to prescribe a spacer that is compatible with the MDI device.
7. Although it is recommended in clinical asthma guidelines, there is limited evidence that increasing the dose of inhaled corticosteroid over 800 micrograms BDP equivalent/day is effective in improving asthma control. Even in acute exacerbations, there is little evidence that doubling the dose of inhaled corticosteroid is effective as self management (*Cochrane Review* CD007524). In asthma, add on therapy with long acting beta agonists should be tried before increasing the dose of inhaled corticosteroid above 800 micrograms BDP equivalent/day (step 3 of BTS/SIGN Asthma Guidelines).
8. MHRA guidance on the prescribing of fluticasone states that because of the risk of systemic side effects, doses between 250-500 micrograms twice daily should only be prescribed for moderate to severe asthma. Doses above this level should only be prescribed by a specialist in asthma (consultant or GP) where additional benefit is expected or demonstrated, or by the ability to reduce oral corticosteroid use.
9. Where there is dose equivalence, consider prescribing the lowest cost inhaler that the patient can use effectively and if prescribing an MDI, prescribe with a spacer if appropriate. Overleaf is a list comparing the costs of each inhaler per month at commonly used dosages.
10. Once a patient has achieved good asthma control on higher doses of inhaled corticosteroid for a period of time (e.g 3 months), consider stepping down the dose of inhaled corticosteroid by 25%.

When should you give an inhaled corticosteroid card?

Inhaled corticosteroids ≤ 800 micrograms (BDP Equivalent)/day

Steroid	Proprietary	Dose/inhalation	Daily dose used	Cost/month
Beclometasone (BDP)	Asmabec, Clenil	50	2 twice a day	£
Beclometasone (BDP)	Asmabec, Pulvinal EasyHaler-BDP, Becodisk, Clenil	100	2 twice a day	£ £ £ ££ (refill) £
Beclometasone HFA	Qvar	50	2 twice a day	£
Budesonide	Pulmicort 100, Easyhaler-BD	100	2 twice a day	£ £
Fluticasone	Flixotide 50 Accuhaler, Flixotide 50 Evohaler	50	1-2 twice a day 1-2 twice a day	£-££ £
Fluticasone	Flixotide 100 Accuhaler	100	1 twice a day	£
Fluticasone	Flixotide 125 Evohaler	125	1 twice a day	££
Ciclesonide	Alvesco	80	1-4 a day	£-£££
Mometasone	Asmanex	200	1 once a day	££
Beclometasone HFA/Formoterol	Fostair	100/6	1 twice a day	££
Budesonide/Formoterol	Symbicort 100	100/6	2 twice a day	£££
Budesonide/Formoterol	Symbicort 200	200/6	1 twice a day*	££
Fluticasone/Salmeterol	Seretide 50 Evohaler	50/25	2 twice a day	££
Fluticasone/Salmeterol	Seretide 100 Accuhaler	100/50	1-2 twice a day	££

CORTICOSTEROID SAFETY CARD NOT

Inhaled corticosteroids 800-1000 micrograms (BDP equivalent)/day

Steroid	Proprietary	Dose/inhalation	Daily dose used	Cost/month
Beclometasone (BDP)	Clenil	200	2 twice a day	£
Beclometasone (BDP)	Pulvinal, EasyHaler-BDP, Becodisk	200	1 twice a day	££ ££ £££ (refill)
Beclometasone HFA	Qvar	100	2 twice a day	££
Budesonide	Pulmicort 200, Easyhaler-BD, Budelin	200	2 twice a day	££ ££ ££ (refill)
Budesonide	Pulmicort 400, EasyHaler-BD	400	1 twice a day	££ ££
Fluticasone	Flixotide 100 Accuhaler	100	2 twice a day	££
Fluticasone	Flixotide 125 Evohaler	125	2 twice daily	£££
Fluticasone	Flixotide 250 Accuhaler Flixotide 250 Evohaler	250	1 twice daily	£££
Ciclesonide	Alvesco	160	2-3 once a day	££-£££
Mometasone	Asmanex	200	2 once a day	£££
Mometasone	Asmanex	400	1 once a day	££-£££
Beclometasone HFA/Formoterol	Fostair	100/6	2 twice a day	£££
Budesonide/Formoterol	Symbicort 200	200/6	2 twice a day*	££££
Budesonide/Formoterol	Symbicort 400	400/12	1 twice a day**	££££
Fluticasone/Salmeterol	Seretide 125 Evohaler	125/25	2 twice a day	££££
Fluticasone/Salmeterol	Seretide 250 Accuhaler	250/50	1 twice a day	££££

CORTICOSTEROID SAFETY CARD
RECOMMENDED

Inhaled corticosteroids >1000 micrograms (BDP equivalent)/day

Steroid	Proprietary	Dose/inhalation	Daily dose used	Cost/month
Beclometasone	Asmabec, Clenil	250	2-4 twice a day	££-£££ £-££
Beclometasone	Pulvinal, EasyHaler-BDP, Becodisk	400	2 twice a day	£££ £££ ££££ (refill)
Beclometasone HFA	Qvar	100	3-4 twice a day	££
Budesonide	Pulmicort 200, Easyhaler-BD, Budelin	200	3-4 twice a day	£££ ££ ££-£££ (refill)
Budesonide	Pulmicort 400, EasyHaler-BD	400	2 twice a day	££££ £££
Fluticasone	Flixotide 250 Evohaler	250	2 twice a day	££££
Fluticasone	Flixotide 500 Accuhaler	500	1 twice a day	££££
Ciclesonide	Alvesco	160	2 twice a day	££££
Mometasone	Asmanex	200	2 twice a day	£££££
Mometasone	Asmanex	400	1 twice a day	££££
Budesonide/Formoterol	Symbicort 200***	200/6	3-4 twice a day*	£££££
Budesonide/Formoterol	Symbicort 400***	400/12	2 twice a day**	£££££
Fluticasone/Salmeterol	Seretide 250 Evohaler	250/25	2 twice a day	£££££
Fluticasone/Salmeterol	Seretide 500 Accuhaler***	500/50	1 twice a day	££££

CORTICOSTEROID SAFETY CARD

Approximate costs (April 2012): £ = <£10 ££ = £10-20 £££ = £20-30 ££££ = £30-40 £££££ = £40+

* Symbicort 200 is licensed for use as maintenance and relief therapy (SMART), and as adjustable maintenance dosing. The daily dose may vary between 1 inhalation twice a day, up to a maximum of 8 a day, but in studies, the average daily dose was 3 inhalations a day.

** Maximum recommended dose of Symbicort 400 2 twice a day is for asthma only, for COPD, dose is 1 twice a day.

*** Only Symbicort 200/400 and Seretide 500 Accuhaler are licensed for use in COPD. Any other combination inhaler does not currently have licence for COPD.

Cost comparison of Inhaled Corticosteroids and Long Acting Beta Agonist Combinations

Inhaler	Approximate Cost per Annum		
	High Dose (1600 - 2000 micrograms of BDP or equivalent)	Moderate Dose (800 - 1000 micrograms of BDP or equivalent)	Lower Dose (400 - 500 micrograms of BDP or equivalent)
Seretide 500 Accuhaler	£498 (1p BD)	n/a	n/a
Flutiform 250/10 Inhaler	£554 (2p BD)	£277 (1p BD)	n/a
Flutiform 125/5 Inhaler	n/a	n/a	£178 (1p BD)
*Fostair 100/6 Inhaler	£713 (4p BD)	£356 (2p BD)	£178 (1p BD)
Seretide 250 Evohaler	£724 (2p BD)	£361 (1p BD)	n/a
Seretide 250 Accuhaler	£852 (2p BD)	£426 (1p BD)	n/a
Seretide 125 Evohaler	n/a	n/a	£213 (1p BD)
Seretide 100 Accuhaler	n/a	n/a	£219 (1p BD)
Symbicort 200/6 Turbohaler	£925 (4p BD)	£462 (2p BD)	£231 (1p BD)
Clenil 250 MDI plus Salmeterol 25 Evohaler	£950 (4p BD)	£475 (2p BD)	£237 (1p BD)
*Qvar 100 MDI plus Salmeterol 25 Evohaler	£962 (4p BD)	£481 (2p BD)	£241 (1p BD)

*Assumes: Fluticasone and *fine particle beclomethasone are twice as potent as standard beclomethasone and budesonide and beclomethasone are equipotent. Check BNF for prescribing information and licensed indications.*

Prices taken from Drug Tariff and BNF December 2013

- Patients on high dose ICS (> 1000 micrograms of Beclometasone or equivalent for adults) should be given a steroid card. (Contact the Medicines Management Team for supply)
- All patients using an ICS/LABA metered dose inhaler should be prescribed a spacer to increase lung deposition by up to 50%. (Spacers should be replaced every 12 months.)
- Inhalers should not be selected on cost alone – ensure that the patient is competent using the device prescribed.
- Quit smoking support and pharmacotherapy, flu and pneumococcal vaccination, pulmonary rehab are cost effective interventions and should be offered as appropriate.
- Review adherence and inhaler technique before stepping up therapy.

Camden, Islington and Haringey Responsible Respiratory Prescribing Asthma Key Messages:

Make every contact count

- Quit Smoking is treatment: ask every asthmatic if they smoke and offer referral and support to stop
- Review diagnosis and proactively 'step down' therapy in line with BTS guidelines whenever clinically appropriate- provide an Inhaled Corticosteroid (ICS) safety card for every patient on high dose ICS
- Discuss inhaler concordance before changing therapy –over or under use may be a sign of poor control and inhalers are a leading cause of medicines waste
- Review and optimise inhaler technique – work with patients on choice and technique - no MDI without a spacer.

People with asthma should receive a written personalised action plan. See Asthma UK for an action plan template <http://www.asthma.org.uk/advice-personal-action-plan>