Formulary Decision Guide: Asthma & COPD

Luforbec®
beclometasone/formoterol
100/6 & 200/6
Extrafine formulation

KEY POINTS

- **Luforbec is a branded generic alternative to Fostair.[1-4]**
- **Luforbec is an inhaled combination therapy containing an extrafine formulation of beclometasone and formoterol in a pressurised metered dose inhaler (pMDI).[1,2]**
- **Luforbec is available in two strengths 100/6 and 200/6.[1,2] Luforbec 100/6 is indicated for adult asthma and COPD (FEV_1 <50% predicted normal).[1] Luforbec 200/6 is indicated for asthma in adults.[2]**
- **Through carbon offsetting Luforbec 100/6 and 200/6 are certified carbon neutral products.[5,6]**
- **Luforbec offers a 52% NHS list price discount vs Fostair pMDIs.[7]**

DRUG NAME

Luforbec (beclometasone dipropionate/formoterol fumarate dihydrate) 100/6 pMDI

Luforbec (beclometasone dipropionate/formoterol fumarate dihydrate) 200/6 pMDI

INDICATION

ASTHMA - Luforbec 100/6 and 200/6 are indicated in the regular treatment of adult asthma (≥18 years) where use of a combination product (inhaled corticosteroid and long acting $beta_2$-agonist) is appropriate:

- patients not adequately controlled with inhaled corticosteroids and 'as needed' inhaled rapid-acting $beta_2$-agonist or
- patients already adequately controlled on both inhaled corticosteroids and long-acting $beta_2$-agonists[1,2]

Luforbec 100/6 can also be used for Maintenance and Reliever Therapy (MART) for adult asthma.[1]

COPD - Luforbec 100/6 is indicated for the symptomatic treatment of patients with severe COPD (FEV_1<50% predicted normal) and a history of repeated exacerbations, who have significant symptoms despite regular therapy with long-acting bronchodilators.[1]

DOSAGE

ASTHMA - Luforbec 100/6 offers two treatment approaches:

A. Maintenance therapy: Take 1 or 2 inhalations twice daily as regular maintenance treatment with a separate as needed rapid-acting bronchodilator.[1] (Maximum daily dose 4 inhalations).

B. Maintenance and reliever therapy: Taken as regular maintenance treatment and as needed in response to asthma symptoms. 1 inhalation twice daily and 1 additional inhalation as needed in response to symptoms. If symptoms persist after a few minutes, an additional inhalation should be taken (maximum 8 inhalations per day).[1]

Luforbec 200/6 can be used as Maintenance therapy only: Take 2 inhalations twice daily as regular maintenance treatment with a separate as needed rapid-acting bronchodilator.[2] (Maximum daily dose 4 inhalations).

COPD - Luforbec 100/6: Take 2 inhalations twice daily.[1] Luforbec 200/6 is not indicated for use in COPD.[2]

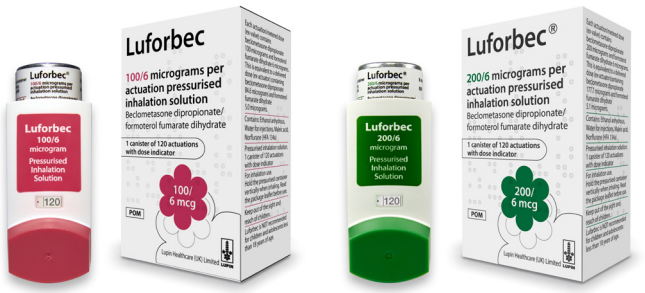
INHALER

Both Luforbec 100/6 and 200/6 inhalers contain 120 metered doses and include a dose indicator on the front of the actuator, which shows how many metered doses remain in the inhaler.[1,2]

Patients who find it difficult to synchronise aerosol actuation with inhalation, may use the AeroChamber Plus® spacer device.[1,2]

Luforbec 100/6: Each metered dose (ex-valve) contains 100 micrograms of beclometasone and 6 micrograms of formoterol. This is equivalent to a delivered dose (ex-actuator) of 84.6 micrograms of beclometasone and 5.0 micrograms of formoterol.[1]

Luforbec 200/6: Each metered dose (ex-valve) contains 200 micrograms of beclometasone and 6 micrograms of formoterol. This is equivalent to a delivered dose (ex-actuator) of 177.7 micrograms of beclometasone and 5.1 micrograms of formoterol.[2]



BUDGETARY IMPLICATIONS

Compared with Fostair 100/6 and 200/6 pMDI list price, **Luforbec pMDIs offer potential cost savings of 52%**.[7]

Cost savings with Luforbec

Current annual cost to NHS for Fostair 100/6 and 200/6 pMDIs.[8]	£235 million

Pack size & strength	Luforbec pMDI NHS list price	Fostair pMDI NHS list price[7]	NHS Saving when Luforbec prescribed
100/6 x 120 metered doses	£13.98	£29.32	£15.34
200/6 x 120 metered doses	£13.98	£29.32	£15.34

BIO-EQUIVALENCE, SAFETY AND TOLERABILITY

Luforbec 100/6 and 200/6 pMDI are therapeutically equivalent to the respective strengths of the originator medicine, Fostair 100/6 and 200/6 pMDI.[9] This has been demonstrated by the following studies:

In-vitro studies: Delivered Dose Uniformity (DDU), Aerodynamic Particle Size Distribution (APSD), Spray Pattern, Plume Geometry, Device Resistance and Force to Actuate.

In-vivo studies: Phase I bioequivalence studies comparing the pharmacokinetic and safety profiles, including use with the AeroChamber Plus spacer.

Prescribing information can be found overleaf

SAFETY

Refer to sections 4.4 and 4.8 of the SPC for all 'Special warnings and precautions for use' and 'Undesirable effects'. Adverse reactions typically associated with: Beclometasone - pneumonia (in COPD patients), oral fungal infections, oral candidiasis, dysphonia, throat irritation.
Formoterol - hypokalaemia, headache, tremor, palpitations, cough, muscle spasms and prolongation of QTc interval.

PRESCRIBING INFORMATION & REFERENCES

Prescribing Information: Luforbec® 100/6 and 200/6 pressurised metered dose inhaler (pMDI) Consult the full Summary of Product Characteristics (SmPC) before prescribing. Presentation: Pressurised inhalation solution. Luforbec 100/6 pMDI: Each dose contains beclometasone dipropionate (BDP) 100 micrograms (mcg) and formoterol fumarate dihydrate 6 mcg. Luforbec 200/6 pMDI: Each dose contains beclometasone dipropionate (BDP) 200 mcg and formoterol fumarate dihydrate 6 mcg. **Indications:** ***Asthma:*** Regular treatment of asthma where use of an inhaled corticosteroid/long-acting $beta_2$-agonist (ICS/LABA) combination is appropriate: patients not adequately controlled on ICS and as needed short-acting $beta_2$-agonist, or patients already adequately controlled on both ICS and LABA. ***COPD*** **(Luforbec 100/6 only):** Symptomatic treatment of patients with severe COPD (FEV_1 <50% predicted normal) and a history of repeated exacerbations, who have significant symptoms despite regular therapy with long-acting bronchodilators. **Dosage and administration:** For inhalation in adult patients (≥18 years); not recommended for children and adolescents under 18 years. ***Asthma:*** **Maintenance therapy:** Luforbec 100/6 pMDI: 1–2 inhalations twice daily. Luforbec 200/6 pMDI: 2 inhalations twice daily. The maximum daily dose is 4 inhalations, ensuring a separate short-acting bronchodilator is available as needed. Patients should receive the lowest dose that effectively controls symptoms. **Maintenance and reliever therapy (Luforbec 100/6 pMDI only):** Luforbec can be taken as a regular maintenance treatment and as needed in response to asthma symptoms: 1 inhalation twice daily (morning and evening) plus 1 additional inhalation as needed in response to symptoms. If symptoms persist after a few minutes, an additional inhalation is recommended. The maximum daily dose is 8 inhalations. Patients should be advised to always have Luforbec available for rescue use. Close monitoring for dose-related adverse effects is needed in patients who frequently take high numbers of Luforbec as-needed inhalations. ***COPD*** **(Luforbec 100/6 pMDI only):** 2 inhalations twice daily. Luforbec pMDI can be used with the AeroChamber Plus® spacer device. BDP in Luforbec is characterised by an extrafine particle size distribution which results in a more potent effect than formulations of BDP with a non-extrafine particle size distribution (100mcg of BDP extrafine in Luforbec are equivalent to 250mcg of BDP in a non-extrafine formulation). When switching patients from previous treatments, it should be considered that the recommended total daily dose of BDP for Luforbec is lower than that for non-extrafine BDP containing products and should be adjusted to the individual patient's needs. **Contraindications:** Hypersensitivity to the active substances or to any of the excipients. **Warnings and precautions:** Not intended for initial management of asthma. Treatment should not be initiated during an exacerbation, or during significant worsening or acutely deteriorating asthma. Treatment should not be stopped abruptly. Medical attention should be sought if treatment is ineffective. Patients should be advised to take Luforbec every day even when asymptomatic. Treatment should be discontinued immediately if the patient experiences a paradoxical bronchospasm. Use with caution (which may include monitoring) in patients with cardiac arrhythmias, especially third degree atrioventricular block and tachyarrhythmias, aortic stenosis, hypertrophic obstructive cardiomyopathy, severe heart disease, particularly acute myocardial infarction, ischaemic heart disease, congestive heart failure, occlusive vascular diseases, arterial hypertension, aneurysm, thyrotoxicosis, diabetes mellitus, phaeochromocytoma and untreated hypokalaemia. Caution should be used when treating patients with known or suspected prolongation of the QTc interval (QTc > 0.44 seconds). Formoterol itself may induce QTc prolongation. Potentially serious hypokalaemia may result from $beta_2$-agonist therapy and may also be potentiated by concomitant treatments (e.g. xanthine derivatives, steroids and diuretics). Particular caution is advised in severe asthma as this effect may be potentiated by hypoxia. Caution is recommended in unstable asthma when a number of rescue bronchodilators may be used. Formoterol may cause a rise in blood glucose levels. Luforbec should not be administered for at least 12 hours before the start of anaesthesia if halogenated anaesthetics are planned due to risk of arrhythmias. Use with caution in patients with pulmonary tuberculosis or fungal/viral airway infections. An increase in pneumonia and pneumonia hospitalisation in COPD patients receiving ICS has been observed. Clinical features of pneumonia may overlap with symptoms of COPD exacerbations. Systemic effects of ICS may occur, particularly at high doses for long periods e.g. Cushing's syndrome, Cushingoid features, adrenal suppression, decrease in bone mineral density, cataract and glaucoma and more rarely, psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression and aggression. Consider referral of patients reporting blurred vision or visual disturbances to an ophthalmologist as causes may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy. Prolonged treatment with high doses of ICS may result in adrenal suppression and acute adrenal crisis. **Interactions:** Possibility of systemic effects with concomitant use of strong CYP3A inhibitors (e.g. ritonavir, cobicistat) cannot be excluded hence caution and appropriate monitoring is advised. Beta-blockers should be avoided in asthma patients. Concomitant administration of other beta-adrenergic drugs and theophylline may have potentially additive effects, therefore exercise caution. Concomitant treatment with quinidine, disopyramide, procainamide, phenothiazines, antihistamines, monoamine oxidase inhibitors (MAOIs) and tricyclic antidepressants can prolong the QTc interval and increase the risk of ventricular arrhythmias. L-dopa, L-thyroxine, oxytocin and alcohol can impair cardiac tolerance towards $beta_2$-sympathomimetics. Concomitant treatment with MAOIs including agents with similar properties (e.g. furazolidone, procarbazine) may precipitate hypertensive reactions. Concomitant treatment with xanthine derivatives, steroids, or diuretics may potentiate a possible hypokalaemic effect of $beta_2$-agonists. Hypokalaemia may increase the likelihood of arrhythmias in patients receiving digitalis glycosides. There is a small amount of ethanol in Luforbec pMDI hence a theoretical potential for interaction in particularly sensitive patients taking disulfiram or metronidazole. **Pregnancy and lactation:** Use only during pregnancy or lactation if the expected benefits outweigh the potential risks. **Effects on driving and operating machinery:** Unlikely to have any effect on the ability to drive and use machines. **Side effects:** *Common:* Pharyngitis, oral candidiasis, headache, dysphonia, pneumonia (in COPD patients). *Uncommon:* Influenza, oral fungal infection, oropharyngeal candidiasis, oesophageal candidiasis, vulvovaginal candidiasis, gastroenteritis, sinusitis, rhinitis, granulocytopenia, allergic dermatitis, hypokalaemia, hyperglycaemia, restlessness, tremor, dizziness, otosalpingitis, palpitations, electrocardiogram prolonged QTc interval, ECG change, tachycardia, tachyarrhythmia, atrial fibrillation (in COPD patients), hyperaemia, flushing, cough, productive cough, throat irritation, asthmatic crisis, diarrhoea, dry mouth, dyspepsia, dysphagia, burning sensation of the lips, nausea, dysgeusia, pruritus, rash, hyperhidrosis, urticaria, muscle spasms, myalgia, C-reactive protein increased, platelet count increased, free fatty acids increased, blood insulin increased, blood ketone body increased, blood cortisol decrease (in COPD patients). *Rare:* Ventricular extrasystoles, angina pectoris, paradoxical bronchospasm, angioedema, nephritis, increased blood pressure, decreased blood pressure. *Very rare:* Thrombocytopenia, hypersensitivity reactions, including erythema, lips, face, eye and pharyngeal oedema, adrenal suppression, glaucoma, cataract, dyspnoea, exacerbation of asthma, peripheral oedema, decreased bone density, growth retardation in children and adolescents. *Unknown frequency*: Psychomotor hyperactivity, sleep disorders, anxiety, depression, aggression, behavioural changes (predominantly in children), blurred vision. Refer to SmPC for full list of side effects. **Legal category:** POM **Price and Pack:** £13.98 1x120 actuations. **Marketing authorisation (MA) No(s):** PL 35507/0204, 35507/0205 **MA holder:** Lupin Healthcare UK Ltd, The Urban Building, Second Floor, 3-9 Albert Street, Slough, Berkshire, SL1 2BE, United Kingdom. **PI Last Revised:** November 2023. AeroChamber Plus® is a registered trademark of Trudell Medical International.

References:

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3. Fostair 100/6 pMDI Summary of Product Characteristics. Chiesi Ltd. https://www.medicines.org.uk/emc/product/6318/smpc. Accessed: November 2023.
4. Fostair 200/6 pMDI Summary of Product Characteristics. Chiesi Ltd. https://www.medicines.org.uk/emc/product/5076/smpc. Accessed: November 2023.
5. Certifications of carbon neutrality for Luforbec 100/6 & 200/6 pMDI.
6. Carbon Footprint Limited, Luforbec Carbon Assessment Report 2022. Data on File.
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8. UK General Practice Prescribing Data May 2022 - April 2023 (http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3). Accessed: November 2023
9. Lupin Healthcare Limited. Data on file. UK-LUF-2207-00011

Adverse events should be reported. Reporting forms and information can be found at https://yellowcard.mhra.gov.uk or search for MHRA Yellow Card in the Google Play or Apple App store. Adverse events should also be reported to Lupin Healthcare UK Limited on +44 (0)1565 751 378 or EU-PV@lupin.com

LUPIN RESPIRATORY
www.lupinhealthcare.co.uk

Delivering quality medicines and value to patients and the NHS

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