

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Respocort 100 micrograms/actuation pressurised inhalation solution
Autohaler™

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each actuation of Respocort Autohaler delivers Beclomethasone Dipropionate 100 micrograms ex-valve into the mouthpiece of the actuator.
(The dose delivered from the mouthpiece is on average 75 micrograms)

Excipient with known effect:

Each actuation contains 4.74 mg alcohol (ethanol).

For the full list of excipients see 6.1

3 PHARMACEUTICAL FORM

Pressurised inhalation solution for use through a breath actuated actuator.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Respocort is indicated in children aged 5 and over, adolescents and adults for the prophylactic management of mild, moderate or severe asthma.

4.2 Posology and method of administration

NOTE: The recommended total daily dose of Respocort is lower than that for current beclometasone dipropionate containing products and should be adjusted to the needs of the individual patient.

ADULTS ANND ADOLESCENTS OVER 12 YEARS STARTING AND MAINTENANCE DOSE:

It is important to gain control of asthma symptoms and optimise pulmonary function as soon as possible. When patients' symptoms remain under satisfactory control, the dose should be titrated to the lowest dose at which effective control of asthma is maintained.

To be effective inhaled Respocort must be used on a regular basis even when patients are asymptomatic.

Therapy in new patients should be initiated at the following dosages:

Mild asthma:	100 to 200 micrograms per day in two divided doses
Moderate asthma:	200 to 400 micrograms per day in two divided doses
Severe asthma:	400 to 800 micrograms per day in two divided doses

Patients on budesonide inhalers may be transferred to Respocort as described below:

The general approach to switching patients to Respocort involves two steps as detailed below. Specific guidance on switching well-controlled and poorly controlled (symptomatic) patients is given below the table.

Step 1: Consider the dose of budesonide-containing inhalers appropriate to the patient's current condition.

Step 2: Convert the budesonide dose to the Respocort dose according to the table below.

	Daily Dose of Beclometasone Dipropionate (micrograms)							
Budesonide Inhaler	200-250	300	400-500	600-750	800-1000	1100	1200-1500	1600-2000
Respocort	100	150	200	300	400	500	600	800

Patients with well-controlled asthma using budesonide inhaler products should be switched to Respocort at a dose in accordance with the table above.

For example:

Patients on 2 puffs twice daily of budesonide 200 micrograms would change to 2 puffs twice daily of Respocort 100 micrograms.

Patients with poorly-controlled asthma may be switched from budesonide inhaler products to Respocort at the same microgram for microgram dose up to 800 micrograms daily.

Alternatively the patient's current budesonide inhalee dose can be doubled and this dose can be converted to the Respocort dose according to the table above.

Patients on fluticasone inhalers may be transferred to the same total daily dose of Respocort up to 800 micrograms daily.

Once transferred to Respocort the dose should be adjusted to meet the needs of the individual patient.

The maximum recommended dose is 800 micrograms per day in divided doses.

CHILDREN AGED 5 YEARS AND OVER STARTING AND MAINTENANCE DOSE:

Therapy in new patients should be initiated at the following dosages:

Mild asthma:	100 micrograms per day in two divided doses
Moderate asthma:	100 to 200 micrograms per day in two divided doses
Severe asthma:	200 micrograms per day in two divided doses

The minimum recommended dose is 50 micrograms twice daily and the maximum recommended dose is 100 micrograms twice daily, representing a total daily dose of 100 and 200 micrograms, respectively.

Children with well-controlled asthma on doses of up to 400 micrograms per day of beclometasone dipropionate administered from other currently available beclometasone dipropionate inhalers or equivalent may be titrated to a dose of 100-200 micrograms (in two divided doses) per day of Respocort.

During periods of deterioration in asthma control, the dose of beclometasone dipropionate may be increased to 200 micrograms per day in two divided doses. The dose should then be reduced to the minimum needed to maintain effective control of asthma.

Patients on fluticasone or budesonide inhalers may be switched to Respocort using the approach described earlier for adults and adolescents.

Once transferred to Respocort the dose should be adjusted to meet the needs of the individual patient.

Special patient groups

No special dosage recommendations are made for elderly or patients with hepatic or renal impairment.

Method of administration

Respocort is for inhalation use.

Patients and carers should be instructed in the proper use of the inhaler, including rinsing out the mouth with water after use.

Patients should be advised that Respocort may have a different taste and feel compared to other inhalers.

Respocort Autohaler is a breath-actuated inhaler which automatically releases the metered dose of medication during a patient's inhalation through the mouthpiece and overcomes the need for patients to have good manual coordination.

The parent/guardian/carer as well as the patient should read the instruction leaflet before use.

Before first use of the inhaler, or if the inhaler has not been used for two weeks or more, prime the inhaler by releasing two puffs into the air.

Respocort delivers a consistent dose, at temperatures as low as -10°C , without the need for the patient to wait between individual actuations.

Instructions for use

There is no need to shake the inhaler before use, as it is a solution.

Instruct the patient, parent or guardian/carer to remove the mouthpiece cover and check that the inhaler is clean and free from foreign objects.

The Autohaler device should be held upright. The lever should be pushed to the upward position. As this is an automatic device, the dose will automatically be released when the patient begins breathing with the inhaler. The patient should be advised to breathe out as far as is comfortable before placing the inhaler into their mouth. They should then close their lips tightly around the mouthpiece and breathe in steadily and deeply through the mouth. After starting to breathe in, the patient should not stop breathing when there is a slight click and when they feel the actuation in their mouth as it is important to carry on breathing after the puff is released. Whilst the patient is still breathing in, the inhaler should be removed from their mouth and they should hold their breath for 10 seconds and then breathe out slowly. The patient should not breathe out into the inhaler. After receiving the puff, the lever must be lowered to the downward position. If another dose is required, the patient should repeat the procedure as described above. After use, replace the mouthpiece cover.

Children should be told not to rush the procedure. It is important that the patient breathes in as slowly as possible prior to actuation. The patient should be told that if a mist appears on inhalation, they should not worry but the procedure should be repeated.

Children with weak hands might find it helpful to hold the inhaler in both hands placing both forefingers on the top of the inhaler and both thumbs on the bottom of the inhaler.

After using the inhaler, the patient should thoroughly rinse their mouth, gargle with water or brush their teeth.

It is important for the patient to clean their inhaler at least weekly to prevent any blockage and to carefully follow the cleaning instructions as provided in the Patient Information Leaflet. It is important not to put the inhaler in water.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

Patients should be properly instructed on the use of the inhaler to ensure that the drug reaches the target areas within the lungs. To be effective, Respocort must be used by patients on a regular basis, even when patients do not have asthma symptoms. When symptoms are controlled, maintenance Respocort therapy should be reduced in a stepwise manner to the minimum effective dose. Inhaled steroid treatment should not be stopped abruptly.

Patients with asthma are at risk of acute attacks and should have regular assessments of their asthma control including pulmonary function tests.

Respocort is not indicated for the immediate relief of asthma attacks. Patients therefore need to have relief medication (inhaled short-acting bronchodilator) available for such circumstances.

Respocort is not indicated in the management of status asthmaticus.

Severe asthma exacerbations should be managed in the usual way. Subsequently, it may be necessary to increase the dose of Respocort up to the maximum daily dose. Systemic steroid treatment may be needed and/or an antibiotic, if there is an infection, together with β -agonist therapy, as needed.

Severe asthma requires regular medical assessment, including lung-function testing, as there is a risk of severe attacks and even death. Patients should be advised to seek medical attention as soon as possible for review of Respocort therapy if their peak flow falls, symptoms worsen or if their short-acting bronchodilator becomes less effective or increased inhalations than usual are required. This may indicate deterioration of asthma control. If this occurs, patients should be assessed and the need for increased anti-inflammatory therapy considered (eg. higher doses of inhaled corticosteroid or a course of oral corticosteroid).

Patients who have received systemic steroids for long periods of time or at high doses, or both, need special care and subsequent management when being transferred to inhaled steroid therapy. Patients should have stable asthma before being given inhaled steroids in addition to the usual maintenance dose of systemic steroid. Withdrawal of systemic steroids should be gradual, starting about seven days after the introduction of Respocort therapy. For daily oral doses of prednisolone of 10mg or less, dose reduction in 1mg steps, at intervals of not less than one week is recommended. For patients on daily maintenance doses of oral prednisolone greater than 10mg, larger weekly reductions in the dose might be acceptable. The dose reduction scheme should be chosen to correlate with the magnitude of the maintenance systemic steroid dose.

Most patients can be successfully transferred to inhaled steroids with maintenance of good respiratory function, but special care is necessary for the first few months after the transfer, until the hypothalamic-pituitary-adrenal (HPA) system has sufficiently recovered to enable the patient to cope with stressful emergencies such as trauma, surgery or serious infections. Patients should, therefore, carry a steroid warning card to indicate the possible need to re-instate systemic steroid therapy rapidly during periods of stress or where airways obstruction or mucus significantly compromises the inhaled route of administration. In addition, it may be advisable to provide such patients with a supply of corticosteroid tablets to use in these circumstances. The dose of inhaled steroids should be increased at this time and then gradually reduced to the maintenance level after the systemic steroid has been discontinued. As recovery from impaired adrenocortical function, caused by prolonged systemic steroid therapy is slow, adrenocortical function should be monitored regularly.

Patients should be advised that they may feel unwell in a non-specific way during systemic steroid withdrawal despite maintenance of, or even improved respiratory function. Patients should be advised to persevere with their inhaled product and to continue withdrawal of systemic steroids, even if feeling unwell, unless there is evidence of HPA axis suppression.

Discontinuation of systemic steroids may also cause exacerbation of allergic diseases such as atopic eczema and rhinitis. These should be treated as required with topical therapy, including corticosteroids and/or antihistamines.

Beclometasone dipropionate, like other inhaled steroids, is absorbed into the systemic circulation from the lungs. Beclometasone dipropionate and its metabolites may exert detectable suppression of adrenal function. Within the dose range 100-800 micrograms daily, clinical studies with Respocort have demonstrated mean values for adrenal function and responsiveness within the normal range. However, systemic effects of inhaled corticosteroids may occur, particularly at high doses prescribed for prolonged periods. These effects are much less likely to occur than with oral corticosteroids. Possible systemic effects include adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract, glaucoma, blurred vision and more rarely, a range of psychological or behavioural effects

including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children). Therefore, it is important that the dose of inhaled corticosteroid is reviewed regularly and is titrated to the lowest dose at which effective control of asthma is maintained.

It is recommended that the height of children receiving prolonged treatment with inhaled corticosteroids is regularly monitored. If growth is slowed, therapy should be reviewed with the aim of reducing the dose of inhaled corticosteroid, if possible, to the lowest dose at which effective control of asthma is maintained. In addition, consideration should be given to referring the patient to a paediatric respiratory specialist.

Visual disturbance may be reported with systemic and topical corticosteroid use. If a patient presents with symptoms such as blurred vision or other visual disturbances, the patient should be considered for referral to an ophthalmologist for evaluation of possible causes which may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy (CSCR) which have been reported after use of systemic and topical corticosteroids.

Prolonged treatment with high doses of inhaled corticosteroids, particularly higher than the recommended doses, may result in clinically significant adrenal suppression and acute adrenal crisis. Situations that could potentially trigger acute adrenal crisis include trauma, surgery, infection or any rapid reduction in dose. Presenting symptoms are typically vague and may include anorexia, abdominal pain, weight loss, tiredness, headache, nausea, vomiting, decreased level of consciousness, hypotension, hypoglycaemia and seizures. Additional systemic corticosteroid cover should be considered during periods of stress or elective surgery. Those patients should be instructed to carry a steroid warning card indicating their needs at all times.

Like other corticosteroids, caution is necessary in patients with active or latent pulmonary tuberculosis.

As with other inhalation therapy, paradoxical bronchospasm may occur with an immediate increase in wheezing and shortness of breath after dosing. Paradoxical bronchospasm responds to a fast-acting bronchodilator and should be treated straightaway. Beclometasone dipropionate should be discontinued immediately, the patient should be assessed and alternative therapy instituted if necessary.

Excipient(s)

Ethanol

The small amount of alcohol in this medicine will not have any noticeable effects.

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed.

Beclomethasone is less dependent on CYP3A metabolism than some other corticosteroids, and in general interactions are unlikely; however the possibility of systemic effects with concomitant use of strong CYP3A inhibitors (e.g. ritonavir, cobicistat) cannot be excluded, and therefore caution and appropriate monitoring is advised with the use of such agents.

4.6 Fertility, Pregnancy and lactation

Pregnancy

There are no adequate data from the use of Respocort in pregnant women.

An inhalation reproductive study with Respocort in rats did not exhibit any teratogenic effects.

Studies of propellant HFA-134a administered to pregnant and lactating rats and rabbits have not revealed any special hazard.

In animals, systemic administration of relatively high doses of beclomethasone dipropionate can cause abnormalities of foetal development including growth retardation and cleft palate. There may therefore be a very small risk of such effects in the human foetus. However, inhalation of beclomethasone dipropionate into the lungs avoids the high level of exposure that occurs with administration by systemic routes.

The potential risk for humans is unknown. However, the drug has been in widespread use for many years without apparent ill consequence.

Respocort should not be used during pregnancy unless clearly necessary (the expected benefits to the mother must be thought to outweigh any potential risk to the fetus or neonate).

Breast-feeding

It is probable that beclomethasone dipropionate is excreted in milk. However, given the relatively low doses used by the inhalation route, the levels are likely to be low. Respocort should not be used during lactation unless clearly necessary (the therapeutic benefits of the drug should be weighed against the potential hazards to mother and baby).

4.7 Effects on ability to drive and use machines

Not relevant.

4.8 Undesirable effects

A serious hypersensitivity reactions including oedema of the eyes, face, lips and throat (angioedema) has been reported rarely.

As with other inhalation therapy, paradoxical bronchospasm may occur after dosing. Immediate treatment with a short-acting bronchodilator should be initiated. Respicort should be discontinued immediately and alternative prophylactic therapy introduced.

Systemic effects of inhaled corticosteroids may occur, particularly at high doses prescribed for prolonged periods. These may include adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma (see section 4.4).

Commonly, when taking Respicort hoarseness and candidiasis of the mouth and throat may occur. To reduce the risk of hoarseness and candida infection, patients are advised to rinse their mouth after using their inhaler.

Based on the MedDRA system organ class and frequencies, adverse events are listed in the table below according to the following frequency estimate: very common ($\geq 1/10$); common ($\geq 1/100$ to $< 1/10$); Uncommon ($\geq 1/1,000$ to $< 1/100$); rare ($\geq 1/10,000$ to $< 1/1,000$); very rare ($< 1/10,000$), not known (cannot be estimated from the available data).

MedDRA – system organ class	Frequency and Symptom
Infections and infestations	<i>Common:</i> Candidiasis in mouth and throat
Immune system disorders	<i>Rare:</i> Allergic reactions, angioedema in eyes, throat, lips and face
Endocrine disorders	<i>Very rare:</i> Adrenal suppression*, growth retardation* (in children and adolescents), bone density decreased*
Psychiatric disorders	<i>Not known:</i> Psychomotor hyperactivity, sleep disorders, anxiety, depression, aggression, behavioural changes (predominantly in children)
Nervous system disorders	<i>Uncommon:</i> Headache, vertigo, tremor
Eye disorders	<i>Uncommon:</i> Vision, blurred (see also section 4.4)

	<p><i>Very rare:</i> Cataract*, glaucoma*</p> <p><i>Not known:</i> Central serous retinopathy</p>
Respiratory, thoracic and mediastinal disorders	<p><i>Common:</i> Hoarseness, pharyngitis</p> <p><i>Uncommon:</i> Cough, increased asthma symptoms</p> <p><i>Rare:</i> Paradoxical bronchospasm</p>
Gastrointestinal disorders	<p><i>Common:</i> Taste disturbances</p> <p><i>Uncommon:</i> Nausea</p>
Skin and subcutaneous tissue disorders	<p><i>Uncommon:</i> Urticaria, rash, pruritus, erythema, purpura</p>
Musculoskeletal and connective tissue disorders	<p><i>Very rare:</i> Decrease bone mineral density</p>

*Systemic reactions are a possible response to inhaled corticosteroids, especially when a high dose is prescribed for a prolonged time (see section 4.4 Special warnings and precautions for use).

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard.

4.9 Overdose

Acute overdosage is unlikely to cause problems. The only harmful effect that follows inhalation of large amounts of the drug over a short time period is suppression of HPA function. Specific emergency action need not be taken. Treatment with Respocort should be continued at the recommended dose to control the asthma; HPA function recovers in a day or two.

If excessive doses of beclometasone dipropionate were taken over a prolonged period a degree of atrophy of the adrenal cortex could occur in addition to HPA suppression. In this event the patient should be treated as steroid dependent and transferred to a suitable maintenance dose of a systemic steroid such as prednisolone. Once the condition is stabilised, the patient should be returned to Respocort by the method described above in Section 4.4.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotheapeutic group: Glucocorticoid for inhalation/antiasthmatic agent, ATC-Code: R03BA01

Beclometasone dipropionate is a pro-drug with weak glucocorticoid receptor binding affinity. It is extensively hydrolysed via esterase enzymes to the active metabolite beclometasone 17-monohydrate, which is a potent topical anti-inflammatory agent.

Respocort contains beclometasone dipropionate in solution in propellant HFA134a resulting in an extrafine aerosol. The aerosol droplets are on average much smaller than the beclometasone dipropionate particles delivered by CFC-suspension formulations or dry powder formulations of beclometasone dipropionate. The extrafine particle fraction will be 60% ± 20% of the drug particles < 3.3 microns per shot, ex-actuator.

Radio-labelled deposition studies in patients with mild asthma have demonstrated that the majority of drug (>55% ex-actuator) is deposited in the lung and a small amount (< 35% ex-actuator) is deposited in the oropharynx. These studies were performed with Qvar Aerosol. Qvar Aerosol is a 'press and breathe' inhaler, whereas Qvar Autohaler is a breath-activated inhaler.

Inhaled beclometasone dipropionate is now well established in the management of asthma. It is a synthetic glucocorticoid and exerts a topical, anti-inflammatory effect on the lungs, with fewer systemic effects than oral corticosteroids.

Comparative clinical studies have demonstrated that asthma patients achieve equivalent pulmonary function and control of symptoms with Respocort at lower total daily doses than CFC containing beclometasone dipropionate aerosol inhalers.

Pharmacodynamic studies in patients with mild asthma given Respocort for 14 days have shown that there is a linear correlation among urinary free cortisol suppression, dose administered, and serum total-BOH levels obtained. At a daily dose of 800 micrograms Respocort, suppression of urinary free cortisol was comparable with that observed with the same daily dose of CFC containing beclometasone dipropionate, indicating a wider safety margin, as Respocort is administered at lower doses than the CFC product.

5.2 Pharmacokinetic properties

The pharmacokinetic profile of Respocort shows that the peak serum concentration for total- beclometasone (BOH) (total of any beclometasone OH and beclometasone dipropionate or monopropionate hydrolysed to beclometasone OH) after single and multiple doses is achieved after 30 minutes. The value at the peak is approximately 2 nanograms/millilitre after a total daily dose of 800 micrograms and the serum levels after 100, 200 and 400 micrograms are proportional. The principal route of elimination of beclometasone dipropionate and its several metabolites is in the faeces. Between 10% and 15% of an orally administered dose is excreted in the urine, as both conjugated and free metabolites of the drug.

In both single dose and multiple dose pharmacokinetic studies, a dose of 200 micrograms of Respocort achieved comparable total-BOH levels, as a dose of 400 micrograms of CFC containing beclometasone dipropionate aerosol.

Pharmacokinetic studies with Respocort have not been carried out in any special populations.

In a single dose pharmacokinetic study in children, a dose of 200 micrograms of extrafine beclometasone dipropionate delivered without a spacer achieved comparable AUC (beclometasone 17 monopropionate) levels as a dose of 400 micrograms of a CFC-containing beclometasone dipropionate product delivered via a spacer.

5.3 Preclinical safety data

In animal studies, propellant HFA-134a has been shown to have no significant pharmacological effects other than at very high exposure concentrations, then narcosis and a relatively weak cardiac sensitising effect were found. The potency of the cardiac sensitisation was less than that of CFC-11 (trichlorofluoromethane).

In studies to detect toxicity, repeated high dose levels of propellant HFA-134a indicated that safety margins based on systemic exposure would be of the order 2200, 1314 and 381 for mouse, rat and dog with respect to humans.

There are no reasons to consider propellant HFA-134a as a potential mutagen, clastogen or carcinogen judged from *in vitro* and *in vivo* studies including long-term administration by inhalation in rodents.

Studies of propellant HFA-134a administered to pregnant and lactating rats and rabbits have not revealed any special hazard.

In animals, systemic administration of relatively high doses can cause abnormalities of foetal development including growth retardation and cleft palate. There may therefore be a very small risk of such effects in the human foetus. However, inhalation of beclometasone dipropionate into the lungs

avoids the high level of exposure that occurs with administration by systemic routes.

Safety studies with this product in rat and dog showed few, if any, adverse effects other than those normally associated with general steroid exposure including lymphoid tissue alterations such as reduction in thymus, adrenal and spleen weights. An inhalation reproductive study with Qvar Aerosol (an equivalent inhaler) in rats did not exhibit any teratogenic effects.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Propellant HFA-134a (Norflurane)
Ethanol.

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

3 years

6.4 Special precautions for storage

Do not store above 25°C.
Storage in direct sunlight or heat should be avoided.
Protect from frost.

The canister contains a pressurised liquid. Do not expose to temperatures higher than 50°C. Do not pierce the canister.

6.5 Nature and contents of container

Pressurised canister closed with a metering valve containing either 100 or 200 actuations. Each actuation of Respocort Autohaler delivers a nominal 50µl of solution.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

Not applicable.

7 MARKETING AUTHORISATION HOLDER

Kindeva Drug Delivery Limited

Derby Road

Loughborough

Leicestershire

LE11 5SF

United Kingdom

8 MARKETING AUTHORISATION NUMBER(S)

PL 52811/0006

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

3 September 1999/ January 2001

10 DATE OF REVISION OF THE TEXT

09/08/2024