For the use of a Registered Medical Practitioner or a Hospital or a Laboratory only OR for Specialist Use only

Budesonide Inhaler 200 mcg/dose

Budecort 200 inhaler (CFC Free)

Composition
Each actuation delivers:
Budesonide BP……..200mcg
Suspended in Propellant HFA-134a……...q.s.

Dosage Form
Aerosol for Inhalation

Pharmacology
Pharmacodynamics
Budesonide is a glucocorticosteroid that possesses a high local anti-inflammatory action, with a lower incidence and severity of adverse effects than those seen with oral corticosteroids.
Pharmacotherapeutic group: Other drugs for obstructive airway diseases, inhalants, glucocorticoids.
ATC Code: R03B A02.

Topical anti-inflammatory effect
The exact mechanism of action of glucocorticosteroids in the treatment of asthma is not fully understood. Anti-inflammatory actions, such as inhibition of inflammatory mediator release and inhibition of cytokine-mediated immune response are probably important.
A clinical study in asthmatics comparing inhaled and oral budesonide at doses calculated to achieve similar systemic bioavailability demonstrated statistically significant evidence of efficacy with inhaled but not oral budesonide compared with placebo. Thus, the therapeutic effect of conventional doses of inhaled budesonide may be largely explained by its direct action on the respiratory tract.
In a provocation study pre-treatment with budesonide for four weeks has shown decreased bronchial constriction in immediate as well as late asthmatic reactions.

Onset of effect
After a single dose of orally inhaled budesonide,delivered via inhaler, improvement of the lung function is achieved within a few hours. After therapeutic use of orally inhaled budesonide delivered via inhaler, improvement in lung function has been shown to occur within 2 days of initiation of treatment, although maximum benefit may not be achieved for up to 4 weeks.

Airway reactivity
Budesonide has also been shown to decrease airway reactivity to histamine and methacholine in hyper-reactive patients.

Exercise-induced asthma
Therapy with inhaled budesonide has effectively been used for prevention of exercise-induced asthma.

Growth
Limited data from long term studies suggest that most children and adolescents treated with inhaled budesonide ultimately achieve their adult target height. However, an initial small but transient reduction in growth (approximately 1 cm) has been observed. This generally occurs within the first year of treatment (*see section Warnings and Precautions*).

HPA axis function
Studies in healthy volunteers with inhaled budesonide have shown dose-related effects on plasma and urinary cortisol. At recommended doses budesonide causes less effect on adrenal function than prednisolone 10 mg, as shown by ACTH tests.

Pharmacokinetics
After inhalation of budesonide via pressurised metered dose inhaler, approximately 10% to 15% of the metered dose is deposited in the lungs.
The maximal plasma concentration after oral inhalation of a single dose of 800 or 1600 micrograms budesonide was 1.32 and 2.41 nmol/L respectively, and was reached after about 40 minutes.
Budesonide undergoes an extensive degree (approximately 90%) of biotransformation in the liver, to metabolites of low glucocorticosteroid activity.
The glucocorticosteroid activity of the major metabolites, 6β- hydroxyl budesonide and 16 α-hydroxyprednisolone, is less than 1% of that of budesonide. The metabolism of budesonide is primarily mediated by CYP3A4, one of the cytochrome p450 enzymes.
In a study, 100 mg ketoconazole taken twice daily increased plasma levels of concomitantly administered oral budesonide (single dose of 10 mg) on average by 7.8-fold. Information about this interaction is lacking for inhaled budesonide, but marked increases in plasma levels could be expected.

Indications
Budecort-200 Inhaler (CFC Free) is indicated in patients with mild to severe, persistent bronchial asthama. Budecort-200 Inhaler (CFC Free) is not indicated for the relief of acute bronchospasm.

Dosage and Method of Administration
For inhalation use.
Adults, including the elderly: 200 micrograms twice daily, in the morning and in the evening. During periods of severe asthma the daily dosage can be increased up to 1600 micrograms.
The daily dose should not go below 200 micrograms. The dose should be reduced to the minimum needed to maintain good asthma control.
Children 2-12 years: 200 to 800 micrograms daily in divided doses.
A lower strength inhaler is available for use in children with mild/moderately severe asthma.
The dose should be reduced to the minimum needed to maintain good asthma control.

Budecort-200 Inhaler (CFC Free) is not recommended for use in children less than 2 years of age.

Patients maintained on oral glucocorticosteroids
Budecort-200 Inhaler (CFC Free) may permit replacement or significant reduction in the dosage of oral glucocorticosteroids while maintaining asthma control.
For further information on the withdrawal of oral corticosteroids see *Warnings and Precautions.*

Method of administration
Instructions for the correct use of Budecort-200 Inhaler (CFC Free)
Note: It is important to instruct the patient to:
- Carefully read the detailed instructions for use and refer to the accompanying pictograms in the Patient information leaflet that is packed with each inhaler.
- Take his/her time when using the inhaler and not to rush through the individual steps.
- To practice using the inhaler in front of the mirror. Advise the patient that if any mist is seen coming from the top of the inhaler or from the mouthpiece it may mean that he/she has not inhaled the medicine properly.
- Shake the inhaler thoroughly for a few seconds to mix the contents of the inhaler properly.
- Prime the inhaler by actuating it twice into the air when the inhaler is new, if it has been dropped, or when it has not been used for more than 7 days.
- Place the mouthpiece in the mouth. While breathing in slowly and deeply, press the canister firmly to release the medication. Advise the patient that he/she may need to use both hands to operate the inhaler. Continue to breathe in and hold the breath for as long as is comfortable.
- Remove the inhaler from the mouth before breathing out; the patient must be advised that he/she must not breathe out through the inhaler.
- If a second or subsequent actuation is required the patient should be advised to wait for about half a minute and then replace the mouthpiece in the mouth and repeat the instructions at the preceding two bullet points, the sixth and seventh bullet points as listed.
- Rinse the mouth out with water after inhaling the prescribed dose to minimise the risk of oropharygeal thrush.
- Clean the mouthpiece of the inhaler regularly, at least once a week. Remove the dust cap and the aerosol canister. Clean the plastic actuator and dust cap with a dry cloth or tissue. Refer to the detailed instructions for cleaning in the Patient information leaflet, which is packed with each inhaler. Advise the patient that the metal aerosol canister should not be put into water or be cleaned with water.
- Always store Budecort-200 Inhaler (CFC Free) so that it stands upright on its brown plastic base (with the valve downwards).

The use of Budecort-200 Inhaler (CFC Free) with a spacer device is recommended to enable patients with difficulty in co-ordinating inhalation with actuation, such as infants, young children, the poorly cooperative or the elderly, to derive greater therapeutic benefit.

It is important to explain that when a small child is using a spacer device a parent or carer should hold and support the spacer device in the child's mouth to ensure that the child breathes through the spacer device properly. For young children who are unable to breathe through the mouthpiece, a face mask can be used. Compatible face masks are available separately and care should be taken to ensure a good fit is achieved.

Contraindications
History of hypersensitivity to budesonide or any of the excipients Active pulmonary tuberculosis.
Special care is needed in patients with quiescent pulmonary tuberculosis and with fungal and viral infections in the airways.

Warning and Precaution
Patients not dependent on steroids: Treatment with the recommended doses of budesonide usually gives a therapeutic benefit within 7 days. However, certain patients may have an excessive collection of mucus secretion in the bronchi.
In these cases, a short course of oral corticosteroids (usually 1 to 2 weeks) should be given in addition to the aerosol. After the course of the oral drug, the inhaler alone should be sufficient therapy.

Steroid-dependent patients: Transfer of patients on oral steroids to treatment with Budecort-200 Inhaler (CFC Free) demands special care, mainly due to the slow restitution of the disturbed hypothalamic-pituitary adrenocortical axis function, caused by extended treatment with oral corticosteroids. When the Budecort-200 Inhaler (CFC Free) treatment is initiated the patient should be in a relatively stable phase. A high dose of budesonide, in combination with the previously used oral steroid dose, should be given for about 10 days.

The down titration dose should be selected at the discretion of the physician, based on the patient's disease and former steroid intake. For example, a down titration with 5 mg prednisolone per day, on a weekly basis; this reduction will mean that a daily dose of 20 mg per day would be reduced to 15 mg per day in the first week, 10 mg per day in the second week etc. The oral dose is thus reduced to the lowest level that, in combination with budesonide, provides maintained or improved asthma control.
In many cases it may be possible to completely substitute the oral steroid with inhaled budesonide; however some patients may have to be maintained on a low dose of oral steroid together with inhaled budesonide.

During the withdrawal of oral steroids some patients may experience uneasiness and may feel generally unwell in a non-specific way even though respiratory function is maintained or improved. Patients should be encouraged to continue with inhaled budesonide whilst withdrawing the oral steroid unless there are clinical signs to indicate the contrary.

Patients who have previously been dependent on oral steroids may, as a result of prolonged systemic steroid therapy, experience the effects of impaired adrenal function. Recovery may take a considerable amount of time after cessation of oral steroid therapy and hence oral steroid-dependent patients transferred to inhaled budesonide may remain at risk from impaired adrenal function for some considerable time. In such circumstances HPA axisfunction should be monitored regularly. These patients should be instructed to carry a steroid warning card indicating their needs.

Prolonged treatment with high doses of inhaled corticosteroids, particularly higher than recommended doses, may also result in clinically significant adrenal suppression. Therefore additional systemic corticosteroid cover should be considered during periods of stress such as severe infections or elective surgery. Such patients should be instructed to carry a steroid warning card indicating their needs (*see section Undesirable effects*). Rapid reduction in the dose of steroids can induce acute adrenal crisis. Symptoms and signs which might be seen in acute adrenal crisis may be somewhat vague but may include anorexia, abdominal pain, weight loss, tiredness, headache, nausea, vomiting, decreased level of consciousness, seizures, hypotension and hypoglycemia.

Treatment with supplementary systemic steroids or inhaled budesonide should not be stopped abruptly.

During transfer from oral therapy to Budecort-200 Inhaler (CFC Free), a generally lower systemic steroid action will be experienced which may result in the appearance of allergic or arthritic symptoms such as rhinitis, eczema and muscle and joint pain. Specific treatment should be initiated for these conditions. A general insufficient glucocorticosteroid effect should be suspected if, in rare cases, symptoms such as tiredness, headache, nausea and vomiting should occur. In these cases a temporary increase in the dose of oral glucocorticosteroids is sometimes necessary.

Exacerbations of asthma caused by bacterial infections are usually controlled by appropriate antibiotic treatment and possibly increasing the budesonide dosage or, if necessary, by giving systemic steroids.

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 rapid-acting inhaled bronchodilator and should be treated straightaway.Budecort-200 Inhaler (CFC Free) should be discontinued immediately, the patient should be assessed and an alternative therapy instituted if necessary.

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 Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma. It is important, therefore, that the patient is reviewed regularly and the dose of inhaled corticosteroid 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 be 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.

Budecort-200 Inhaler (CFC Free) is not intended for rapid relief of acute episodes of asthma or symptoms of asthma. In these situations an inhaled short-acting bronchodilator is required. Patients should be advised to have such 'rescue' medication with them at all times.

If patients find short-acting bronchodilator treatment ineffective, or they need more inhalations than usual and respiratory symptoms persist, medical attention must be sought. In this situation consideration should be given to the need for or an increase in their regular therapy e.g. higher doses of inhaled budesonide, the addition of a long-acting beta agonist or a course of oral glucocorticosteroids.

Patients should be reminded of the importance of taking prophylactic therapy regularly, even when they are asymptomatic. Patients should also be reminded of the risk of oropharyngeal Candida infection, due to drug deposition in the oropharynx. Advising the patient to rinse the mouth out with water after each dose will minimise the risk. Oropharyngeal Candida infection usually responds to topical anti-fungal treatment without the need to discontinue the inhaled corticosteroid.

Patients should be instructed in the proper use of their inhaler and their technique should be checked to ensure that the patient can synchronise aerosol actuation with inspiration of breath to obtain optimum delivery of the inhaled drug to the lungs.

Reduced liver function may affect the elimination of glucocorticosteroids. The plasma clearance following an intravenous dose of budesonide however was similar in cirrhotic patients and in healthy subjects. After oral ingestion systemic availability of budesonide was increased by compromised liver function due to decreased first pass metabolism. The clinical relevance of this to treatment with Budecort-200 Inhaler (CFC Free) is unknown as no data exist for inhaled budesonide, but increases in plasma levels and hence an increased risk of systemic adverse effects could be expected.

In vivo studies have shown that oral administration of ketoconazole and itraconazole (known inhibitors of CYP3A4 activity in the liver and in the intestinal mucosa) causes an increase in the systemic exposure to budesonide. Concomitant treatment with ketoconazole and itraconazole or other potent CYP3A4 inhibitors should be avoided (*see section Drug Interactions*). If this is not possible the time interval between administrations of the interacting drugs should be as longas possible. A reduction in the dose of budesonide should also be considered.

Drug Interaction
The metabolism of budesonide is primarily mediated by CYP3A4, one of the cytochrome p450 enzymes. Inhibitors of this enzyme, e.g. ketoconazole and itraconazole, can therefore increase systemic exposure to budesonide, (*see section Warnings and Precautions and Pharmacodynamics*) other potent inhibitors ofCYP3A4 are also likely to markedly increase plasma levels of budesonide

Pregnancy and Lactation
There is no experience with or evidence of safety of propellant HFA 134a in human pregnancy or lactation. However studies of the effect of HFA 134a on reproductive function and embryofetal development in animals have revealed no clinically relevant adverse effects.

Pregnancy
Results from a large prospective epidemiological study and from worldwide post marketing experience indicate no adverse effects of inhaled budesonide during pregnancy on the health of the fetus / newborn child. Animal studies have shown reproductive toxicity.

The potential risk for humans is unknown.

There are no relevant clinical data on the use of Budecort-200 Inhaler (CFC Free) in human pregnancy.
Administration of Budecort-200 Inhaler (CFC Free) during pregnancy requires that the benefits for the mother be weighed against the risks for the fetus. Budecort-200 Inhaler (CFC Free) should only be used during pregnancy if the expected benefits outweigh the potential risks.

Lactation
There is no information regarding the passage of budesonide into breast milk. There are no relevant clinical data on the use of Budecort-200 Inhaler (CFC Free)during lactation in humans. Administration of Budecort-200 Inhaler (CFC Free) to women who are breast-feeding requires careful consideration. As it is not known whether budesonide has any harmful effects on the neonate the use of budesonide formulated with propellant HFA 134a (as Budecort-200 Inhaler CFC Free) should only be considered in situations where it is felt that the expected benefits to the mother will outweigh any potential risks to the neonate.

Undesirable Effect
Clinical trials, literature reports and post-marketing experience of orally inhaled budesonide suggest that the following adverse drug reactions may occur:

Common (> 1/100, <1/10)	• Mild irritation in the throat • Candida infection in the oropharynx • Hoarseness • Coughing
Rare (>1/ 10 000, <1/1 000)	• Nervousness, restlessness, depression, behavioural disturbances • Immediate and delayed hypersensitivity • reactions including rash, contact dermatitis, urticaria, angioedema and bronchospasm • Skin bruising

Candida infection in the oropharynx is due to drug deposition. Advising the patient to rinse the mouth out with water after each dose will minimise the risk. The incidence should be less with the use of aspacer device since this reduces oral deposition.

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 rapid-acting inhaled bronchodilator and should be treated straightaway.Budecort-200 Inhaler (CFC Free) should be discontinued immediately, the patient should be assessed and an alternative therapy instituted if necessary.

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 Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma. Increased susceptibility to infections and impairment of the ability to adapt to stress may also occur. Effects are probably dependent on dose, exposure time, concomitant and previous steroid exposure and individual sensitivity.

Prolonged treatment with high doses of inhaled corticosteroids, particularly higher than recommended doses, may also result in clinically significant adrenal suppression. Therefore additional systemic corticosteroid cover should be considered during periods of stress, such as severe infections or elective surgery. Such patients should be instructed to carry a steroid warning card indicating their needs (*see section Warnings and Precautions*).

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

Overdose
The only harmful effect that follows inhalation of large amounts of the drug over a short period is suppression of HPA axis function. No special emergency action needs to be taken. Treatment with Budecort-200 Inhaler (CFC Free) should be continued at the recommended dose to control the asthma.

Incompatibility
Not applicable.

Shelf Life
36 months

Storage and Handling instructions
Store below 30°C. Protect from frost.

Packaging information
Budecort-200 Inhaler (CFC FREE) is available in canister containing 200 metered dose.

Last Updated: May 2015

Cipla

21048080

Cipla

Budesonide Inhaler 200 mcg/dose

Budecort

inhaler

with

dose indicator

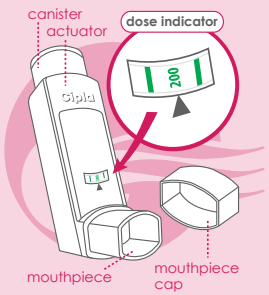
patient information leaflet

please read this leaflet completely before use

CFC-FREE

ABOUT YOUR BUDECORT INHALER

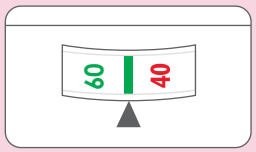
PARTS OF THE INHALER



Your **BUDECORT** inhaler now comes with a dose indicator. It shows the number of puffs in the inhaler. As you use the inhaler, the dose indicator will countdown and indicate the number of puffs remaining.

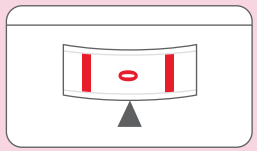
HOW TO KNOW THAT YOUR BUDECORT INHALER IS GETTING OVER

When there are 40 puffs remaining, the colour of the numbers will change from green to red.



This indicates that fewer doses are remaining in the inhaler. You should now consider getting a new inhaler or ask your doctor if you need another one.

When the dose indicator displays '0', this means that there is no more medicine left in the inhaler & you need to discard the inhaler. Your inhaler may not feel empty & it may continue to operate, but you will not get the right amount of medicine, if you keep using it beyond '0'.



BEFORE USING YOUR BUDECORT INHALER

A. Remove the cap from the mouthpiece & make sure that the mouthpiece is clean.

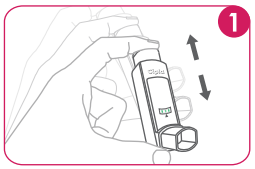
B. Hold the inhaler away from your face. Shake it well & release two puffs into the air.

C. Your **BUDECORT** inhaler is now ready for use.

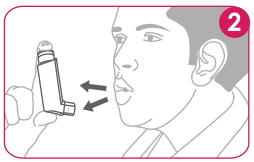
IF you have not used your inhaler for a week or more, shake well and release one puff into the air.

USING YOUR BUDECORT INHALER

1. Sit or stand upright. Remove the mouthpiece cap & shake the inhaler well. Hold it upright as shown, with your thumb at the base below the mouthpiece. Place either one or two fingers on top of the canister.



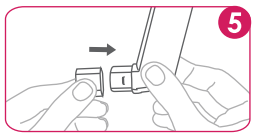
2. **Breathe out fully**, through your mouth.



3. Place the mouthpiece of the inhaler in your mouth between your teeth & close your lips around it (do not bite it). **Start breathing in slowly through your mouth. Press down the canister firmly & fully to release one spray while continuing to breathe in slowly & deeply.**

4. Remove the inhaler from your mouth & hold your breath for 10 seconds, or for as long as is comfortable. Breathe out normally.

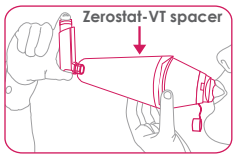
5. If another puff is required, wait for at least 1 minute. Shake inhaler well & repeat steps 2 to 4. After use, replace the mouthpiece cap firmly & snap it into position.



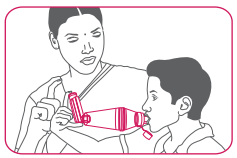
6. After taking each dose, rinse your mouth with water & spit it out.

IMPORTANT:
Do not rush steps 2, 3 & 4.
It is important that you start to breathe in slowly before releasing a puff.
To ensure correct use of the inhaler, use it in front of a mirror for the first few times.
If you see 'mist' coming out from the top of the inhaler or the sides of your mouth, start again from step 1. This escaping mist indicates incorrect technique.

In case of difficulty in using the inhaler correctly, you may use it along with a Zerostat-VT spacer.



FOR CHILDREN:
Parents must assist those children who need help in using the **BUDECORT** inhaler correctly with/without a spacer.



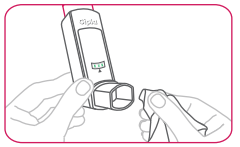
Young children may also require the addition of Babymask/ Infantmask along with the spacer.

CLEANING YOUR BUDECORT INHALER

It is important to keep your inhaler clean. Clean your inhaler atleast once a week.

1. Take the mouthpiece cap off. **DO NOT take the metal canister out of the actuator.**

2. Wipe the inside & the outside of the mouthpiece with a clean, dry cloth.



3. Replace the mouthpiece cap.

4. DO NOT wash or soak any part of the inhaler in water.

STORING YOUR BUDECORT INHALER

Store below 30°C.

Protect from frost.

Keep the inhaler in an upright position, with the mouthpiece down.

DO NOT

- × *Spray the inhaler in your eyes.*
- × *Exceed the recommended dose.*
- × *Change/tamper with the numbers on the dose indicator.*
- × *Puncture or burn the inhaler even when empty as it is pressurized.*

Keep the inhaler out of the reach of children.

21048080