

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Seretide Evohaler 25 microgram/50 microgram per metered dose pressurised inhalation, suspension.

Seretide Evohaler 25 microgram/125 microgram per metered dose pressurised inhalation, suspension.

Seretide Evohaler 25 microgram/250 microgram per metered dose pressurised inhalation, suspension.

[To be completed nationally]

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each metered dose (ex valve) contains:

25 micrograms of salmeterol (as salmeterol xinafoate) and 50, 125 or 250 micrograms of fluticasone propionate. This is equivalent to a delivered dose (ex actuator) of 21 micrograms of salmeterol and 44, 110 or 220 micrograms of fluticasone propionate.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Pressurised inhalation, suspension.

The canister contains a white to off white suspension.

The canisters are fitted into purple plastic actuators incorporating an atomising orifice and fitted with dustcaps.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Seretide is indicated in the regular treatment of asthma where use of a combination product (long-acting β_2 agonist and inhaled corticosteroid) is appropriate:

- patients not adequately controlled with inhaled corticosteroids and ‘as needed’ inhaled short-acting β_2 agonist.
- or
- patients already adequately controlled on both inhaled corticosteroid and long-acting β_2 agonist.

4.2 Posology and method of administration

Posology

Route of administration: Inhalation use.

Patients should be made aware that Seretide Evohaler must be used daily for optimum benefit, even when asymptomatic.

Patients should be regularly reassessed by a doctor, so that the strength of Seretide they are receiving remains optimal and is only changed on medical advice. **The dose should be titrated to the lowest dose at which effective control of symptoms is maintained. Where the control of symptoms is**

maintained with the lowest strength of the combination given twice daily then the next step could include a test of inhaled corticosteroid alone. As an alternative, patients requiring a long-acting β_2 agonist could be titrated to Seretide given once daily if, in the opinion of the prescriber, it would be adequate to maintain disease control. In the event of once daily dosing when the patient has a history of nocturnal symptoms the dose should be given at night and when the patient has a history of mainly daytime symptoms the dose should be given in the morning.

Patients should be given the strength of Seretide containing the appropriate fluticasone propionate dosage for the severity of their disease. Note: Seretide 25 microgram/50 microgram strength is not appropriate for adults and children with severe asthma. If an individual patient should require dosages outside the recommended regimen, appropriate doses of β_2 agonist and/or corticosteroid should be prescribed.

Recommended Doses:

Adults and adolescents 12 years and older:

Two inhalations of 25 micrograms salmeterol and 50 micrograms fluticasone propionate twice daily.

or

Two inhalations of 25 micrograms salmeterol and 125 micrograms fluticasone propionate twice daily.

or

Two inhalations of 25 micrograms salmeterol and 250 micrograms fluticasone propionate twice daily.

A short-term trial of Seretide may be considered as initial maintenance therapy in adults or adolescents with moderate persistent asthma (defined as patients with daily symptoms, daily rescue use and moderate to severe airflow limitation) for whom rapid control of asthma is essential. In these cases, the recommended initial dose is two inhalations of 25 micrograms salmeterol and 50 micrograms fluticasone propionate twice daily. Once control of asthma is attained treatment should be reviewed and consideration given as to whether patients should be stepped down to an inhaled corticosteroid alone. Regular review of patients as treatment is stepped down is important.

A clear benefit has not been shown as compared to inhaled fluticasone propionate alone used as initial maintenance therapy when one or two of the criteria of severity are missing. In general inhaled corticosteroids remain the first line treatment for most patients. Seretide is not intended for the initial management of mild asthma. Seretide 25 micrograms/50 micrograms strength is not appropriate in adults and children with severe asthma; it is recommended to establish the appropriate dosage of inhaled corticosteroid before any fixed-combination can be used in patients with severe asthma.

Paediatric population

Children 4 years and older:

Two inhalations of 25 micrograms salmeterol and 50 micrograms fluticasone propionate twice daily.

The maximum licensed dose of fluticasone propionate delivered by Seretide inhaler in children is 100 microgram twice daily.

There are no data available for use of Seretide inhaler in children aged under 4 years.

Children <12 years old may have difficulties synchronising aerosol actuation with inspiration of breath. Use of a spacer device with Seretide inhaler is recommended in patients who have, or are likely to have difficulties to coordinate actuation with inspiration. A recent clinical study has shown

that paediatric patients using a spacer achieved exposure similar to adults not using spacer and paediatric patients using Diskus, confirming that spacers compensate for poor inhaler technique (see section 5.2).

Either the Volumatic or AeroChamber Plus spacer device can be used (depending on National Guidance). Limited data are available that demonstrate an increase in systemic exposure when the AeroChamber Plus spacer device is used compared with the Volumatic spacer device (see section 4.4).

Patients should be instructed in the proper use and care of their inhaler and spacer and their technique checked to ensure optimum delivery of the inhaled drug to the lungs. **Patients should continue to use the same make of spacer device as switching between spacer devices can result in changes in the dose delivered to the lungs (see section 4.4).**

Re-titration to the lowest effective dose should always follow the introduction or change of a spacer device.

Special patient groups:

There is no need to adjust the dose in elderly patients or in those with renal impairment. There are no data available for use of Seretide in patients with hepatic impairment.

Instructions for Use:

Patients should be instructed in the proper use of their inhaler (see patient information leaflet) During inhalation, the patient should preferably sit or stand. The inhaler has been designed for use in a vertical position.

Testing the inhaler:

Before using for the first time patients should remove the mouthpiece cover by gently squeezing the sides of the cover, shake the inhaler well, hold the inhaler between the fingers and thumb with their thumb on the base, below the mouthpiece and release puffs into the air until the counter reads 120 to make sure that it works. The inhaler should be shaken immediately before releasing each puff. If the inhaler has not been used for a week or more the mouthpiece cover should be removed, the patient should shake the inhaler well and should release two puffs into the air. Each time the inhaler is activated the number on the counter will count down by one.

Use of the inhaler:

1. Patients should remove the mouthpiece cover by gently squeezing the sides of the cover.
2. Patients should check inside and outside of the inhaler including the mouthpiece for the presence of loose objects
3. Patients should shake the inhaler well to ensure that any loose objects are removed and that the contents of the inhaler are evenly mixed.
4. Patients should hold the inhaler upright between fingers and thumb with their thumb on the base, below the mouthpiece.
5. Patients should breathe out as far as is comfortable and then place the mouthpiece in their mouth between their teeth and close their lips around it. Patients should be instructed not to bite the mouth piece.
6. Just after starting to breathe in through their mouth, patients should press firmly down on the top of the inhaler to release Seretide, while still breathing in steadily and deeply.
7. While holding their breath, patients should take the inhaler from their mouth and take their finger from the top of the inhaler. Patients should continue holding their breath for as long as is comfortable.

8. To take a second inhalation, patients should keep the inhaler upright and wait about half a minute before repeating steps 3 to 7.
9. Patients should immediately replace the mouthpiece cover in the correct orientation by firmly pushing and snapping the cap into position. This does not require excessive force, the cover should click into position.

IMPORTANT

Patients should not rush stages 5, 6 and 7. It is important that patients start to breathe in as slowly as possible just before operating their inhaler. Patients should practise in front of a mirror for the first few times. If they see "mist" coming from the top of their inhaler or the sides of their mouth they should start again from stage 3.

Patients should rinse their mouth out with water and spit out, and/or brush their teeth after each dose of medicine, in order to minimise the risk of oropharyngeal candidiasis and hoarseness

Patients should consider getting a replacement when the counter shows the number 020. The counter will stop at 000 when all the recommended puffs have been used. Replace the inhaler when the counter reads 000.

Patients should never try to alter the numbers on the counter or detach the counter from the metal canister. The counter cannot be reset and is permanently attached to the canister.

Cleaning (also detailed in patient information leaflet):

Your inhaler should be cleaned at least once a week.

1. Remove the mouth piece cover.
2. Do not remove the canister from the plastic casing.
3. Wipe the inside and outside of the mouthpiece and the plastic casing with a dry cloth or tissue.
4. Replace the mouthpiece cover in the correct orientation. This does not require excessive force, the cover should click into position.

DO NOT PUT THE METAL CANISTER IN WATER

4.3 Contraindications

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

4.4 Special warnings and precautions for use

Seretide Evohaler should not be used to treat acute asthma symptoms for which a fast and short-acting bronchodilator is required. Patients should be advised to have their inhaler to be used for relief in an acute asthma attack available at all times.

Patients should not be initiated on Seretide during an exacerbation, or if they have significantly worsening or acutely deteriorating asthma.

Serious asthma-related adverse events and exacerbations may occur during treatment with Seretide. Patients should be asked to continue treatment but to seek medical advice if asthma symptoms remain uncontrolled or worsen after initiation on Seretide.

Increased requirements for use of reliever medication (short-acting bronchodilators), or decreased response to reliever medication indicate deterioration of asthma control and patients should be reviewed by a physician.

Sudden and progressive deterioration in control of asthma is potentially life-threatening and the patient should undergo urgent medical assessment. Consideration should be given to increasing corticosteroid therapy.

Once asthma symptoms are controlled, consideration may be given to gradually reducing the dose of Seretide. Regular review of patients as treatment is stepped down is important. The lowest effective dose of Seretide should be used (see section 4.2).

Treatment with Seretide should not be stopped abruptly due to risk of exacerbation. Therapy should be down-titrated under physician supervision.

As with all inhaled medication containing corticosteroids, Seretide should be administered with caution in patients with active or quiescent pulmonary tuberculosis and fungal, viral or other infections of the airway. Appropriate treatment should be promptly instituted, if indicated.

Rarely, Seretide may cause cardiac arrhythmias e.g. supraventricular tachycardia, extrasystoles and atrial fibrillation, and a mild transient reduction in serum potassium at high therapeutic doses. Seretide should be used with caution in patients with severe cardiovascular disorders or heart rhythm abnormalities and in patients with diabetes mellitus, thyrotoxicosis, uncorrected hypokalaemia or patients predisposed to low levels of serum potassium.

There have been very rare reports of increases in blood glucose levels (see section 4.8) and this should be considered when prescribing to patients with a history of diabetes mellitus.

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 bronchodilator and should be treated straightaway. Seretide Evohaler should be discontinued immediately, the patient assessed and alternative therapy instituted if necessary.

The pharmacological side effects of β_2 agonist treatment, such as tremor, palpitations and headache, have been reported, but tend to be transient and reduce with regular therapy.

Systemic effects may occur with any inhaled corticosteroid, particularly at high doses prescribed for long periods. These effects are much less likely to occur than with oral corticosteroids. Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, decrease in bone mineral density, cataract and glaucoma and more rarely, a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children) (see Paediatric population sub-heading below for information on the systemic effects of inhaled corticosteroids in children and adolescents). **It is important, therefore, that the patient is reviewed regularly and the dose of inhaled corticosteroid is reduced to the lowest dose at which effective control of asthma is maintained.**

Prolonged treatment of patients with high doses of inhaled corticosteroids may result in adrenal suppression and acute adrenal crisis. Very rare cases of adrenal suppression and acute adrenal crisis have also been described with doses of fluticasone propionate between 500 and less than 1000 micrograms. Situations, which could potentially trigger acute adrenal crisis, include trauma, surgery, infection or any rapid reduction in dosage. Presenting symptoms are typically vague and may include anorexia, abdominal pain, weight loss, tiredness, headache, nausea, vomiting, hypotension, decreased level of consciousness, hypoglycaemia, and seizures. Additional systemic corticosteroid cover should be considered during periods of stress or elective surgery.

Systemic absorption of salmeterol and fluticasone propionate is largely through the lungs. As the use of a spacer device with a metered dose inhaler may increase drug delivery to the lungs it should be noted that this could potentially lead to an increase in the risk of systemic adverse effects. Single dose pharmacokinetic data have demonstrated that the systemic exposure to salmeterol and

fluticasone propionate may be increased as much as two-fold when the AeroChamber Plus spacer device is used with Seretide inhaler as compared with the Volumatic spacer device.

The benefits of inhaled fluticasone propionate therapy should minimise the need for oral steroids, but patients transferring from oral steroids may remain at risk of impaired adrenal reserve for a considerable time. Therefore these patients should be treated with special care and adrenocortical function regularly monitored. Patients who have required high dose emergency corticosteroid therapy in the past may also be at risk. This possibility of residual impairment should always be borne in mind in emergency and elective situations likely to produce stress, and appropriate corticosteroid treatment must be considered. The extent of the adrenal impairment may require specialist advice before elective procedures.

Ritonavir can greatly increase the concentration of fluticasone propionate in plasma. Therefore, concomitant use should be avoided, unless the potential benefit to the patient outweighs the risk of systemic corticosteroid side effects. There is also an increased risk of systemic side effects when combining fluticasone propionate with other potent CYP3A inhibitors (see section 4.5).

There was an increased reporting of lower respiratory tract infections (particularly pneumonia and bronchitis) in a 3-year study in patients with Chronic Obstructive Pulmonary Disease (COPD) receiving salmeterol and fluticasone propionate as a fixed-dose combination administered via the Diskus/Accuhaler compared with placebo (see section 4.8). In a 3-year COPD study, older patients, patients with a lower body mass index ($<25\text{kg/m}^2$) and patients with very severe disease ($\text{FEV}_1 < 30\%$ predicted) were at greatest risk of developing pneumonia regardless of treatment. Physicians should remain vigilant for the possible development of pneumonia and other lower respiratory tract infections in patients with COPD as the clinical features of such infections and exacerbation frequently overlap. If a patient with severe COPD has experienced pneumonia the treatment with Seretide should be re-evaluated. The safety and efficacy of Seretide Evohaler has not been established in patients with COPD and therefore Seretide Evohaler is not indicated for use in the treatment of patients with COPD.

Data from a large clinical trial (the Salmeterol Multi-Center Asthma Research Trial, SMART) suggested African-American patients were at increased risk of serious respiratory-related events or deaths when using salmeterol compared with placebo (see section 5.1). It is not known if this was due to pharmacogenetic or other factors. Patients of black African or Afro-Caribbean ancestry should therefore be asked to continue treatment but to seek medical advice if asthma symptoms remain uncontrolled or worsen whilst using Seretide.

Concomitant use of systemic ketoconazole significantly increases systemic exposure to salmeterol. This may lead to an increase in the incidence of systemic effects (e.g. prolongation in the QTc interval and palpitations). Concomitant treatment with ketoconazole or other potent CYP3A4 inhibitors should therefore be avoided unless the benefits outweigh the potentially increased risk of systemic side effects of salmeterol treatment (see section 4.5).

Paediatric Population

Children and adolescents <16 years taking high doses of fluticasone propionate (typically ≥ 1000 micrograms/day) may be at particular risk. Systemic effects may occur, particularly at high doses prescribed for long periods. Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, acute adrenal crisis and growth retardation in children and adolescents and more rarely, a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression. Consideration should be given to referring the child or adolescent to a paediatric respiratory specialist.

It is recommended that the height of children receiving prolonged treatment with inhaled corticosteroid is regularly monitored. **The dose of inhaled corticosteroid should be reduced to the lowest dose at which effective control of asthma is maintained.**

4.5 Interaction with other medicinal products and other forms of interaction

β adrenergic blockers may weaken or antagonise the effect of salmeterol. Both non-selective and selective β blockers should be avoided in patients with asthma, unless there are compelling reasons for their use. Potentially serious hypokalaemia may result from β_2 agonist therapy. Particular caution is advised in acute severe asthma as this effect may be potentiated by concomitant treatment with xanthine derivatives, steroids and diuretics.

Concomitant use of other β adrenergic containing drugs can have a potentially additive effect.

Fluticasone Propionate

Under normal circumstances, low plasma concentrations of fluticasone propionate are achieved after inhaled dosing, due to extensive first pass metabolism and high systemic clearance mediated by cytochrome P450 3A4 in the gut and liver. Hence, clinically significant drug interactions mediated by fluticasone propionate are unlikely.

In an interaction study in healthy subjects with intranasal fluticasone propionate, ritonavir (a highly potent cytochrome P450 3A4 inhibitor) 100 mg b.i.d. increased the fluticasone propionate plasma concentrations several hundred fold, resulting in markedly reduced serum cortisol concentrations. Information about this interaction is lacking for inhaled fluticasone propionate, but a marked increase in fluticasone propionate plasma levels is expected. Cases of Cushing's syndrome and adrenal suppression have been reported. The combination should be avoided unless the benefit outweighs the increased risk of systemic glucocorticoid side effects.

In a small study in healthy volunteers, the slightly less potent CYP3A inhibitor ketoconazole increased the exposure of fluticasone propionate after a single inhalation by 150%. This resulted in a greater reduction of plasma cortisol as compared with fluticasone propionate alone. Co-treatment with other potent CYP3A inhibitors, such as itraconazole, and moderate CYP3A inhibitors, such as erythromycin, is also expected to increase the systemic fluticasone propionate exposure and the risk of systemic side effects. Caution is recommended and long-term treatment with such drugs should if possible be avoided.

Salmeterol

Potent CYP3A4 inhibitors

Co-administration of ketoconazole (400 mg orally once daily) and salmeterol (50 micrograms inhaled twice daily) in 15 healthy subjects for 7 days resulted in a significant increase in plasma salmeterol exposure (1.4-fold C_{max} and 15-fold AUC). This may lead to an increase in the incidence of other systemic effects of salmeterol treatment (e.g. prolongation of QTc interval and palpitations) compared with salmeterol or ketoconazole treatment alone (see section 4.4).

Clinically significant effects were not seen on blood pressure, heart rate, blood glucose and blood potassium levels. Co-administration with ketoconazole did not increase the elimination half-life of salmeterol or increase salmeterol accumulation with repeat dosing.

The concomitant administration of ketoconazole should be avoided, unless the benefits outweigh the potentially increased risk of systemic side effects of salmeterol treatment. There is likely to be a similar risk of interaction with other potent CYP3A4 inhibitors (e.g. itraconazole, telithromycin, ritonavir).

Moderate CYP 3A4 inhibitors

Co-administration of erythromycin (500 mg orally three times a day) and salmeterol (50 micrograms inhaled twice daily) in 15 healthy subjects for 6 days resulted in a small but non-statistically

significant increase in salmeterol exposure (1.4-fold C_{max} and 1.2-fold AUC). Co-administration with erythromycin was not associated with any serious adverse effects.

4.6 Fertility, pregnancy and lactation

Fertility

There are no data in humans. However, animal studies showed no effects of salmeterol or fluticasone propionate on fertility.

Pregnancy

A moderate amount of data on pregnant women (between 300 to 1000 pregnancy outcomes) indicates no malformative or feto/neonatal toxicity of salmeterol and fluticasone propionate. Animal studies have shown reproductive toxicity after administration of β_2 adrenoreceptor agonists and glucocorticosteroids (see section 5.3).

Administration of Seretide to pregnant women should only be considered if the expected benefit to the mother is greater than any possible risk to the fetus.

The lowest effective dose of fluticasone propionate needed to maintain adequate asthma control should be used in the treatment of pregnant women.

Breastfeeding

It is unknown whether salmeterol and fluticasone propionate/metabolites are excreted in human milk.

Studies have shown that salmeterol and fluticasone propionate, and their metabolites, are excreted into the milk of lactating rats.

A risk to breastfed newborns/infants cannot be excluded. A decision must be made whether to discontinue breastfeeding or to discontinue Seretide therapy taking into account the benefit of breastfeeding for the child and the benefit of therapy for the woman.

4.7 Effects on ability to drive and use machines

Seretide Evohaler has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

As Seretide contains salmeterol and fluticasone propionate, the type and severity of adverse reactions associated with each of the compounds may be expected. There is no incidence of additional adverse events following concurrent administration of the two compounds.

Adverse events which have been associated with salmeterol/fluticasone propionate are given below, listed by system organ class and frequency. Frequencies are defined as: very common ($\geq 1/10$), common ($\geq 1/100$ to $< 1/10$), uncommon ($\geq 1/1000$ to $< 1/100$), rare ($\geq 1/10,000$ to $< 1/1000$) and not known (cannot be estimated from the available data). Frequencies were derived from clinical trial data. The incidence in placebo was not taken into account.

System Organ Class	Adverse Event	Frequency
Infections & Infestations	Candidiasis of the mouth and throat	Common
	Pneumonia	Common ^{1,3}
	Bronchitis	Common ^{1,3}

System Organ Class	Adverse Event	Frequency
	Oesophageal candidiasis	Rare
Immune System Disorders	Hypersensitivity reactions with the following manifestations: Cutaneous hypersensitivity reactions	Uncommon
	Angioedema (mainly facial and oropharyngeal oedema)	Rare
	Respiratory symptoms (dyspnoea)	Uncommon
	Respiratory symptoms (bronchospasm)	Rare
	Anaphylactic reactions including anaphylactic shock	Rare
Endocrine Disorders	Cushing's syndrome, Cushingoid features, Adrenal suppression, Growth retardation in children and adolescents, Decreased bone mineral density	Rare ⁴
Metabolism & Nutrition Disorders	Hypokalaemia	Common ³
	Hyperglycaemia	Uncommon ⁴
Psychiatric Disorders	Anxiety	Uncommon
	Sleep disorders	Uncommon
	Behavioural changes, including psychomotor hyperactivity and irritability (predominantly in children)	Rare
	Depression, aggression (predominantly in children)	Not known
Nervous System Disorders	Headache	Very Common ¹
	Tremor	Uncommon
Eye Disorders	Cataract	Uncommon
	Glaucoma	Rare ⁴
Cardiac Disorders	Palpitations	Uncommon
	Tachycardia	Uncommon
	Cardiac arrhythmias (including supraventricular tachycardia and extrasystoles).	Rare
	Atrial fibrillation	Uncommon
	Angina pectoris	Uncommon
Respiratory, Thoracic	Nasopharyngitis	Very Common ^{2,3}

System Organ Class	Adverse Event	Frequency
& Mediastinal Disorders	Throat irritation	Common
	Hoarseness/dysphonia	Common
	Sinusitis	Common ^{1,3}
	Paradoxical bronchospasm	Rare ⁴
Skin and subcutaneous tissue disorders	Contusions	Common ^{1,3}
Musculoskeletal & Connective Tissue Disorders	Muscle cramps	Common
	Traumatic fractures	Common ^{1,3}
	Arthralgia	Common
	Myalgia	Common

1. Reported commonly in placebo
2. Reported very commonly in placebo
3. Reported over 3 years in a COPD study
4. See section 4.4

Description of selected adverse reactions

The pharmacological side effects of β_2 agonist treatment, such as tremor, palpitations and headache, have been reported, but tend to be transient and reduce with regular therapy.

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 bronchodilator and should be treated straightaway. Seretide Evohaler should be discontinued immediately, the patient assessed and alternative therapy instituted if necessary.

Due to the fluticasone propionate component, hoarseness and candidiasis (thrush) of the mouth and throat and, rarely, of the oesophagus can occur in some patients. Both hoarseness and incidence of mouth and throat candidiasis may be relieved by rinsing the mouth with water and/or brushing the teeth after using the product. Symptomatic mouth and throat candidiasis can be treated with topical anti-fungal therapy whilst still continuing with the Seretide Evohaler.

Paediatric population

Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression and growth retardation in children and adolescents (see section 4.4). Children may also experience anxiety, sleep disorders and behavioural changes, including hyperactivity and irritability.

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 national reporting system listed in Appendix V

4.9 Overdose

There are no data available from clinical trials on overdose with Seretide, however data on overdose with both drugs are given below:

The signs and symptoms of salmeterol overdose are dizziness, increases in systolic blood pressure, tremor, headache and tachycardia. If Seretide therapy has to be withdrawn due to overdose of the β agonist component of the drug, provision of appropriate replacement steroid therapy should be considered. Additionally, hypokalaemia can occur and therefore serum potassium levels should be monitored. Potassium replacement should be considered.

Acute: Acute inhalation of fluticasone propionate doses in excess of those recommended may lead to temporary suppression of adrenal function. This does not need emergency action as adrenal function is recovered in a few days, as verified by plasma cortisol measurements.

Chronic overdose of inhaled fluticasone propionate: Adrenal reserve should be monitored and treatment with a systemic corticosteroid may be necessary. When stabilised, treatment should be continued with an inhaled corticosteroid at the recommended dose. Refer to section 4.4: risk of adrenal suppression.

In cases of both acute and chronic fluticasone propionate overdose Seretide therapy should be continued at a suitable dosage for symptom control.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic Group: Adrenergics in combination with corticosteroids or other drugs, excl. anticholinergics.

ATC Code: R03AK06

Mechanism of action and pharmacodynamic effects:

Seretide contains salmeterol and fluticasone propionate which have differing modes of action.

The respective mechanisms of action of both drugs are discussed below.

Salmeterol:

Salmeterol is a selective long-acting (12 hour) β_2 adrenoceptor agonist with a long side chain which binds to the exo-site of the receptor.

Salmeterol produces a longer duration of bronchodilation, lasting for at least 12 hours, than recommended doses of conventional short-acting β_2 agonists.

Fluticasone propionate:

Fluticasone propionate given by inhalation at recommended doses has a glucocorticoid anti-inflammatory action within the lungs, resulting in reduced symptoms and exacerbations of asthma, with less adverse effects than when corticosteroids are administered systemically.

Clinical efficacy and safety

Seretide Asthma clinical trials

A twelve month study (Gaining Optimal Asthma Control, GOAL), in 3416 adult and adolescent patients with persistent asthma, compared the safety and efficacy of Seretide versus inhaled corticosteroid (Fluticasone Propionate) alone to determine whether the goals of asthma management were achievable. Treatment was stepped up every 12 weeks until ****total control** was achieved or the highest dose of study drug was reached. GOAL showed more patients treated with Seretide achieved asthma control than patients treated with ICS alone and this control was attained at a lower corticosteroid dose.

***Well controlled** asthma was achieved more rapidly with Seretide than with ICS alone. The time on treatment for 50% of subjects to achieve a first individual *well controlled* week was 16 days for Seretide compared to 37 days for the ICS group. In the subset of steroid naive asthmatics the time to an individual *well controlled* week was 16 days in the Seretide treatment compared to 23 days following treatment with ICS.

The overall study results showed:

Percentage of Patients Attaining *Well Controlled (WC) and **Totally Controlled (TC) Asthma over 12 months				
Pre-Study Treatment	Salmeterol/FP		FP	
	WC	TC	WC	TC
No ICS (SABA alone)	78%	50%	70%	40%
Low dose ICS (≤500 microgram BDP or equivalent/day)	75%	44%	60%	28%
Medium dose ICS (>500 to 1000 microgram BDP or equivalent/day)	62%	29%	47%	16%
Pooled results across the 3 treatment levels	71%	41%	59%	28%

***Well controlled** asthma; less than or equal to 2 days with symptom score greater than 1 (symptom score 1 defined as ‘symptoms for one short period during the day’), SABA use on less than or equal to 2 days and less than or equal to 4 occasions/week, greater than or equal to 80% predicted morning peak expiratory flow, no night-time awakenings, no exacerbations and no side effects enforcing a change in therapy

****Total control** of asthma; no symptoms, no SABA use, greater than or equal to 80% predicted morning peak expiratory flow, no night-time awakenings, no exacerbations and no side effects enforcing a change in therapy.

The results of this study suggest that Seretide 50/100 microgram bd may be considered as initial maintenance therapy in patients with moderate persistent asthma for whom rapid control of asthma is deemed essential (see section 4.2).

A double blind, randomised, parallel group study in 318 patients with persistent asthma aged ≥18 years evaluated the safety and tolerability of administering two inhalations twice daily (double dose) of Seretide for two weeks. The study showed that doubling the inhalations of each strength of Seretide for up to 14 days resulted in a small increase in β agonist-related adverse events (tremor; 1 patient [1%] vs 0, palpitations; 6 [3%] vs 1 [$<1\%$], muscle cramps; 6[3%] vs 1 [$<1\%$]) and a similar incidence of inhaled corticosteroid related adverse events (e.g. oral candidiasis; 6 [6%] vs 16 [8%], hoarseness; 2 [2%] vs 4 [2%]) compared to one inhalation twice daily. The small increase in β agonist-related adverse events should be taken into account if doubling the dose of Seretide is considered by the physician in adult patients requiring additional short-term (up to 14 days) inhaled corticosteroid therapy.

The Salmeterol Multi-center Asthma Research Trial (SMART)

SMART was a multi-centre, randomised, double blind, placebo-controlled, parallel group 28-week study in the US which randomised 13,176 patients to salmeterol (50 micrograms twice daily) and 13,179 patients to placebo in addition to the patients' usual asthma therapy. Patients were enrolled if ≥ 12 years of age, with asthma and if currently using asthma medication (but not a LABA). Baseline ICS use at study entry was recorded, but not required in the study. The primary endpoint in SMART was the combined number of respiratory-related deaths and respiratory-related life-threatening experiences.

Key findings from SMART: primary endpoint

Patient group	Number of primary endpoint events /number of patients		Relative Risk (95% confidence intervals)
	salmeterol	placebo	
All patients	50/13,176	36/13,179	1.40 (0.91, 2.14)
Patients using inhaled steroids	23/6,127	19/6,138	1.21 (0.66, 2.23)
Patients not using inhaled steroids	27/7,049	17/7,041	1.60 (0.87, 2.93)
African-American patients	20/2,366	5/2,319	4.10 (1.54, 10.90)

(Risk in bold is statistically significant at the 95% level.)

Key findings from SMART by inhaled steroid use at baseline: secondary endpoints

	Number of secondary endpoint events /number of patients		Relative Risk (95% confidence intervals)
	salmeterol	placebo	
Respiratory -related death			
Patients using inhaled steroids	10/6127	5/6138	2.01 (0.69, 5.86)
Patients not using inhaled steroids	14/7049	6/7041	2.28 (0.88, 5.94)
Combined asthma-related death or life-threatening experience			
Patients using inhaled steroids	16/6127	13/6138	1.24 (0.60, 2.58)
Patients not using inhaled steroids	21/7049	9/7041	2.39 (1.10, 5.22)
Asthma-related death			
Patients using inhaled steroids	4/6127	3/6138	1.35 (0.30, 6.04)
Patients not using inhaled steroids	9/7049	0/7041	*

(* = could not be calculated because of no events in placebo group. Risk in bold figures is statistically significant at the 95% level. The secondary endpoints in the table above reached statistical significance in the whole population.) The secondary endpoints of combined all cause death or life-threatening experience, all cause death, or all cause hospitalisation did not reach statistical significance in the whole population.

Paediatric population:

In trial SAM101667, in 158 children aged 6 to 16 years with symptomatic asthma, the combination of salmeterol/fluticasone propionate is equally efficacious to doubling the dose of fluticasone propionate regarding symptom control and lung function. This study was not designed to investigate the effect on exacerbations.

In a trial which randomized children aged 4 to 11 years [n=428], salmeterol/fluticasone propionate DISKUS (50/100 microgram, one inhalation twice daily) was compared with salmeterol/fluticasone propionate MDI (25/50 microgram, two inhalations twice daily) over a 12-week treatment period. The adjusted mean change from baseline in mean morning peak expiratory flow over Weeks 1-12 was 37.7L/min in the DISKUS group and 38.6L/min in the MDI group. Improvements were also seen in both treatment groups on rescue and symptom free days and nights.

5.2 Pharmacokinetic properties

When salmeterol and fluticasone propionate were administered in combination by the inhaled route, the pharmacokinetics of each component were similar to those observed when the drugs were administered separately. For pharmacokinetic purposes therefore each component can be considered separately.

Salmeterol:

Salmeterol acts locally in the lung therefore plasma levels are not an indication of therapeutic effects. In addition there are only limited data available on the pharmacokinetics of salmeterol because of the technical difficulty of assaying the drug in plasma due to the low plasma concentrations at therapeutic doses (approximately 200 picogram/mL or less) achieved after inhaled dosing.

Fluticasone propionate:

The absolute bioavailability of a single dose of inhaled fluticasone propionate in healthy subjects varies between approximately 5 to 11% of the nominal dose depending on the inhalation device used. In patients with asthma a lesser degree of systemic exposure to inhaled fluticasone propionate has been observed.

Systemic absorption occurs mainly through the lungs and is initially rapid then prolonged. The remainder of the inhaled dose may be swallowed but contributes minimally to systemic exposure due to the low aqueous solubility and presystemic metabolism, resulting in oral availability of less than 1%. There is a linear increase in systemic exposure with increasing inhaled dose.

The disposition of fluticasone propionate is characterised by high plasma clearance (1150 mL/min), a large volume of distribution at steady-state (approximately 300 L) and a terminal half-life of approximately 8 hours.

Plasma protein binding is 91%.

Fluticasone propionate is cleared very rapidly from the systemic circulation. The main pathway is metabolism to an inactive carboxylic acid metabolite, by the cytochrome P450 enzyme CYP3A4. Other unidentified metabolites are also found in the faeces.

The renal clearance of fluticasone propionate is negligible. Less than 5% of the dose is excreted in urine, mainly as metabolites. The main part of the dose is excreted in faeces as metabolites and unchanged drug.

Paediatric population

The effect of 21 days of treatment with Seretide Inhaler 25/50 microgram (2 inhalations twice daily with or without a spacer) or Seretide Diskus 50/100 microgram (1 inhalation twice daily) was evaluated in 31 children aged 4 to 11 years with mild asthma. Systemic exposure to fluticasone propionate was similar for Seretide Inhaler with spacer (107pg hr/mL [95% CI: 45.7, 252.2]) and Seretide Diskus (138pg hr/mL [95% CI: 69.3, 273.2]), but lower for Seretide Inhaler (24pg hr/mL [95% CI: 9.6, 60.2]). Systemic exposure to salmeterol was similar for Seretide Inhaler, Seretide Inhaler with spacer, and Seretide Diskus (126 pg hr/mL [95% CI: 70, 225], 103 pg hr/mL [95% CI: 54, 200], and 110 pg hr/mL [95% CI: 55, 219], respectively).

5.3 Preclinical safety data

The only safety concerns for human use derived from animal studies of salmeterol and fluticasone propionate given separately were effects associated with exaggerated pharmacological actions.

In animal reproduction studies, glucocorticosteroids have been shown to induce malformations (cleft palate, skeletal malformations). However, these animal experimental results do not seem to be

relevant for man given recommended doses. Animal studies with salmeterol have shown embryofetal toxicity only at high exposure levels. Following co-administration, increased incidences of transposed umbilical artery and incomplete ossification of occipital bone were found in rats at doses associated with known glucocorticoid-induced abnormalities.

The non-CFC propellant, norflurane, has been shown to have no toxic effect at very high vapour concentrations, far in excess of those likely to be experienced by patients, in a wide range of animal species exposed daily for periods of two years.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Propellant: norflurane (HFA 134a).

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

2 years

6.4 Special precautions for storage

Do not store above 25°C.

The canister contains a pressurised liquid. Do not expose to temperatures higher than 50°C, protect from direct sunlight. Do not pierce or burn the canister even when empty.

As with most inhaled medicinal products in pressurised canisters, the therapeutic effect of this medicinal product may decrease when the canister is cold.

6.5 Nature and contents of container

The suspension is contained in an internally lacquered, 8 mL aluminium alloy pressurised canister sealed with a metering valve. The canisters are fitted into purple plastic actuators incorporating an atomising mouthpiece and fitted with dustcaps. The canister has a counter attached to it, which shows how many actuations of medicine are left. The number will show through a window in the back of the plastic actuator. One pressurised canister delivers 120 actuations.

The devices are available in cardboard containers, which hold:

1 x 120 actuations Inhaler

or 3 x 120 actuations Inhaler

or 10 x 120 actuations Inhaler - hospital/pharmacy use only (for dispensing purposes)

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

[To be completed nationally]

8. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

[To be completed nationally]

10. DATE OF REVISION OF THE TEXT

[To be completed nationally]

LABELLING AND PACKAGE LEAFLET

LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Seretide Evohaler 25 microgram/50 microgram per metered dose pressurised inhalation, suspension
[To be completed nationally]

salmeterol/fluticasone propionate

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each metered dose (ex valve) contains 25 micrograms of salmeterol (as salmeterol xinafoate) and 50 micrograms of fluticasone propionate. This is equivalent to a delivered dose (ex actuator) of 21 micrograms of salmeterol and 44 micrograms of fluticasone propionate.

3. LIST OF EXCIPIENTS

Propellant: norflurane (HFA 134a)

4. PHARMACEUTICAL FORM AND CONTENTS

Pressurised inhalation, suspension

1 X 120 puffs

3 X 120 puffs

10 X 120 puffs (hospital or pharmacy use only)

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Shake well before use

Read the package leaflet carefully before use

Inhalation use

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

The canister contains a pressurised liquid. Do not expose to temperatures higher than 50°C, protect from direct sunlight.

Do not store above 25°C

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

Pressurised canister. Do not pierce or burn the canister even when empty.

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

[To be completed nationally]

12. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

[To be completed nationally]

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

[Trade name] [strength]

[To be completed nationally]

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS
EVOHALER LABEL

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

Seretide Evohaler 25µg/50µg per metered dose pressurised inhalation
[To be completed nationally]

salmeterol/fluticasone propionate

Inhalation use

2. METHOD OF ADMINISTRATION

Shake well before use

Read the package leaflet carefully before use

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

120 puffs

6. OTHER

Pressurised canister
Do not pierce or burn the canister even when empty
Protect from direct sunlight
Do not store above 25°C

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Seretide Evohaler 25 microgram/125 microgram per metered dose pressurised inhalation, suspension
[To be completed nationally]

salmeterol/fluticasone propionate

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each metered dose (ex valve) contains 25 micrograms of salmeterol (as salmeterol xinafoate) and 125 micrograms of fluticasone propionate. This is equivalent to a delivered dose (ex actuator) of 21 micrograms of salmeterol and 110 micrograms of fluticasone propionate.

3. LIST OF EXCIPIENTS

Propellant: norflurane (HFA 134a)

4. PHARMACEUTICAL FORM AND CONTENTS

Pressurised inhalation, suspension

1 X 120 puffs

3 X 120 puffs

10 X 120 puffs (hospital or pharmacy use only)

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Shake well before use

Read the package leaflet carefully before use

Inhalation use

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

The canister contains a pressurised liquid. Do not expose to temperatures higher than 50°C, protect from direct sunlight.

Do not store above 25°C

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

Pressurised canister. Do not pierce or burn the canister even when empty.

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

[To be completed nationally]

12. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

[To be completed nationally]

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

[Trade name] [strength]

[To be completed nationally]

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS
EVOHALER LABEL

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

Seretide Evohaler 25µg/125µg per metered dose pressurised inhalation
[To be completed nationally]

salmeterol/fluticasone propionate

Inhalation use

2. METHOD OF ADMINISTRATION

Shake well before use

Read the package leaflet carefully before use

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

120 puffs

6. OTHER

Pressurised canister

Do not pierce or burn the canister even when empty

Protect from direct sunlight

Do not store above 25°C

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON

1. NAME OF THE MEDICINAL PRODUCT

Seretide Evohaler 25 microgram/250 microgram per metered dose pressurised inhalation, suspension
[To be completed nationally]

salmeterol/fluticasone propionate

2. STATEMENT OF ACTIVE SUBSTANCE(S)

Each metered dose (ex valve) contains 25 micrograms of salmeterol (as salmeterol xinafoate) and 250 micrograms of fluticasone propionate. This is equivalent to a delivered dose (ex actuator) of 21 micrograms of salmeterol and 220 micrograms of fluticasone propionate

3. LIST OF EXCIPIENTS

Propellant: norflurane (HFA 134a)

4. PHARMACEUTICAL FORM AND CONTENTS

Pressurised inhalation, suspension

1 X 120 puffs

3 X 120 puffs

10 X 120 puffs (hospital or pharmacy use only)

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Shake well before use

Read the package leaflet carefully before use

Inhalation use

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP

9. SPECIAL STORAGE CONDITIONS

The canister contains a pressurised liquid. Do not expose to temperatures higher than 50°C, protect from direct sunlight.

Do not store above 25°C

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

Pressurised canister. Do not pierce or burn the canister even when empty.

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

[To be completed nationally]

12. MARKETING AUTHORISATION NUMBER(S)

[To be completed nationally]

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

[To be completed nationally]

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

[Trade name] [strength]

[To be completed nationally]

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS
EVOHALER LABEL

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

Seretide Evohaler 25µg/250µg per metered dose pressurised inhalation
[To be completed nationally]

salmeterol/fluticasone propionate

Inhalation use

2. METHOD OF ADMINISTRATION

Shake well before use

Read the package leaflet carefully before use

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

120 puffs

6. OTHER

Pressurised canister
Do not pierce or burn the canister even when empty
Protect from direct sunlight
Do not store above 25°C

PACKAGE LEAFLET

Package leaflet: Information for the user

Seretide Evohaler 25 microgram/50 microgram per metered dose pressurised inhalation, suspension
Seretide Evohaler 25 microgram/125 microgram per metered dose pressurised inhalation, suspension
Seretide Evohaler 25 microgram/250 microgram per metered dose pressurised inhalation, suspension
[To be completed nationally]

salmeterol/fluticasone propionate

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their symptoms and signs of illness are the same as yours.
- If you get any side effects talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet:

1. What Seretide is and what it is used for
2. What you need to know before you use Seretide
3. How to use Seretide
4. Possible side effects
5. How to store Seretide
6. Contents of the pack and other information

1. What Seretide is and what it is used for

Seretide contains two medicines, salmeterol and fluticasone propionate:

- Salmeterol is a long-acting bronchodilator. Bronchodilators help the airways in the lungs to stay open. This makes it easier for air to get in and out. The effects last for at least 12 hours.
- Fluticasone propionate is a corticosteroid which reduces swelling and irritation in the lungs. .

The doctor has prescribed this medicine to help prevent breathing problems such as asthma.

You must use Seretide every day as directed by your doctor. This will make sure that it works properly in controlling your asthma.

Seretide helps to stop breathlessness and wheeziness coming on. However Seretide should not be used to relieve a sudden attack of breathlessness or wheezing. If this happens you need to use a fast-acting 'reliever' ('rescue') inhaler, such as salbutamol. You should always have your fast-acting 'rescue' inhaler with you.

2. What you need to know before you use Seretide

Do not take Seretide:

- If you are allergic to salmeterol, fluticasone propionate or to the other ingredient norflurane (HFA 134a).

Warnings and precautions

Talk to your doctor before using Seretide if you have:

- Heart disease, including an irregular or fast heart beat

- Overactive thyroid gland
- High blood pressure
- Diabetes mellitus (Seretide may increase your blood sugar)
- Low potassium in your blood
- Tuberculosis (TB) now, or in the past, or other lung infections

Other medicines and Seretide

Tell your doctor or pharmacist if you are taking, have recently taken, or might take any other medicines. This includes medicines for asthma or any medicines obtained without a prescription. This is because Seretide may not be suitable to be taken with some other medicines.

Tell your doctor if you are taking the following medicines, before starting to use Seretide:

- β blockers (such as atenolol, propranolol and sotalol). β blockers are mostly used for high blood pressure or other heart conditions.
- Medicines to treat infections (such as ritonavir, ketoconazole, itraconazole and erythromycin). Some of these medicines may increase the amount of fluticasone propionate or salmeterol in your body. This can increase your risk of experiencing side effects with Seretide, including irregular heart beats, or may make side effects worse.
- Corticosteroids (by mouth or by injection). If you have had these medicines recently, this might increase the risk of this medicine affecting your adrenal gland.
- Diuretics, also known as ‘water tablets’ used to treat high blood pressure.
- Other bronchodilators (such as salbutamol).
- Xanthine medicines. These are often used to treat asthma.

Pregnancy and breastfeeding

If you are pregnant or breastfeeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine

Driving and using machines

Seretide is not likely to affect your ability to drive or use machines.

3. How to use Seretide

Always use this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure.

- Use your Seretide every day until your doctor advises you to stop. Do not take more than the recommended dose. Check with your doctor or pharmacist if you are not sure.
- Do not stop taking Seretide or reduce the dose of Seretide without talking to your doctor first.
- Seretide should be inhaled through the mouth into the lungs.

Adults and adolescents aged 12 years and over

- Seretide 25/50 Evohaler - 2 puffs twice a day
- Seretide 25/125 Evohaler - 2 puffs twice a day
- Seretide 25/250 Evohaler - 2 puffs twice a day

Children 4 to 12 years of age

- Seretide 25/50 Evohaler - 2 puffs twice a day
- Seretide is not recommended for use in children below 4 years of age.

Your symptoms may become well controlled using Seretide twice a day. If so, your doctor may decide to reduce your dose to once a day. The dose may change to:

- once at night - if you have **night-time** symptoms

- once in the morning - if you have **daytime** symptoms.

It is very important to follow your doctor's instructions on how many puffs to take and how often to take your medicine.

If you are using Seretide for asthma, your doctor will want to regularly check your symptoms. **If your asthma or breathing gets worse tell your doctor straight away.** You may find that you feel more wheezy, your chest feels tight more often or you may need to use more of your fast-acting 'reliever' medicine. If any of these happen, you should continue to take Seretide but do not increase the number of puffs you take. Your chest condition may be getting worse and you could become seriously ill. See your doctor as you may need additional treatment.

Instructions for use

- Your doctor, nurse or pharmacist should show you how to use your inhaler. They should check how you use it from time to time. Not using the Seretide Evohaler properly or as prescribed may mean that it will not help your asthma as it should.
- The medicine is contained in a pressurised canister in a plastic casing with a mouthpiece.
- There is a counter on the back of the Evohaler which tells you how many doses are left. Each time you press the canister, a puff of medicine is released and the counter will count down by one.
- Take care not to drop the inhaler as this may cause the counter to count down.

Testing the inhaler

1. When using your inhaler for the first time, test that it is working. Remove the mouthpiece cover by gently squeezing the sides with your thumb and forefinger and pull apart.



2. To make sure that it works, shake it well, point the mouthpiece away from you and press the canister to release a puff into the air. Repeat these steps, shaking the inhaler before releasing each puff, until the counter reads 120. If you have not used your inhaler for a week or more, release two puffs of medicine into the air.

Use of the inhaler

It is important to start to breathe as slowly as possible just before using your inhaler.

1. Stand or sit upright when using your inhaler.
2. Remove the mouthpiece cover (as shown in first picture). Check inside and outside to make sure that the mouthpiece is clean and free of loose objects.
3. Shake the inhaler 4 or 5 times to ensure that any loose objects are removed and that the contents of the inhaler are evenly mixed.



4. Hold the inhaler upright with your thumb on the base, below the mouthpiece. Breathe out as far as is comfortable.



5. Place the mouthpiece in your mouth between your teeth. Close your lips around it. Do not bite.



6. Breathe in through your mouth slowly and deeply. Just after starting to breathe in, press firmly down on the top of the canister to release a puff of medicine. Do this while still breathing in steadily and deeply.



7. Hold your breath, take the inhaler from your mouth and your finger from the top of the inhaler. Continue holding your breath for a few seconds, or as long as is comfortable.



8. Wait about half a minute between taking each puff of medicine and then repeat steps 3 to 7.
9. Afterwards, rinse your mouth with water and spit it out, and/or brush your teeth. This may help to stop you getting thrush and becoming hoarse.
10. After use always replace the mouthpiece cover straight away to keep out dust. When the mouthpiece cover is fitted correctly it will 'click' into position. If it does not 'click' into place, turn the mouthpiece cover the other way round and try again. Do not use too much force.

Do not rush steps 4, 5, 6 and 7. It is important that you breathe in as slowly as possible just before using your inhaler. You should use your inhaler whilst standing in front of a mirror for the first few times. If you see "mist" coming from the top of your inhaler or the sides of your mouth, you should start again from step 3.

As with all inhalers, caregivers should ensure that children prescribed Seretide Evohaler use correct inhalation technique, as described above.

If you or your child find it difficult to use the Inhaler, either your doctor or nurse or other healthcare provider may recommend using a spacer device such as the Volumatic or AeroChamber Plus with your inhaler. Your doctor, nurse, pharmacist or other healthcare provider should show you how to use the spacer device with your inhaler and how to care for your spacer device and will answer any questions you may have. It is important that if you are using a spacer device with your inhaler that you do not stop using it without talking to your doctor or nurse first. It is also important that you do not change the type of spacer device that you use without talking to your doctor. If you stop using a spacer device or change the type of spacer device that you use your doctor may need to change the dose of medicine required to control your asthma. Always talk to your doctor before making any changes to your asthma treatment.

Older children or people with weak hands may find it easier to hold the inhaler with both hands. Put the two forefingers on top of the inhaler and both thumbs on the bottom below the mouthpiece.

You should get a replacement when the counter shows the number 020. Stop using the inhaler when the counter shows 000 as any puffs left in the device may not be enough to give you a full dose. Never try to alter the numbers on the counter or detach the counter from the metal can.

Cleaning your inhaler

To stop your inhaler blocking, it is important to clean it at least once a week.

To clean your inhaler:

- Remove the mouthpiece cover.
- Do not remove the metal canister from the plastic casing at any time.
- Wipe the inside and outside of the mouthpiece and the plastic casing with a dry cloth or tissue.
- Replace the mouthpiece cover. It will 'click' into place when fitted correctly. If it does not 'click' into place, turn the mouthpiece cover the other way round and try again. Do not use too much force.

Do not put the metal canister in water.

If you use more Seretide than you should

It is important to use the inhaler as instructed. If you accidentally take a larger dose than recommended, talk to your doctor or pharmacist. You may notice your heart beating faster than usual and that you feel shaky. You may also have dizziness, a headache, muscle weakness and aching joints.

If you have used larger doses for a long period of time, you should talk to your doctor or pharmacist for advice. This is because larger doses of Seretide may reduce the amount of steroid hormones produced by the adrenal gland.

If you forget to use Seretide

Do not take a double dose to make up for a forgotten dose. Just take your next dose at the usual time.

If you stop using Seretide

It is very important that you take your Seretide every day as directed. **Keep taking it until your doctor tells you to stop. Do not stop or suddenly reduce your dose of Seretide.** This could make your breathing worse.

In addition, if you suddenly stop taking Seretide or reduce your dose of Seretide this may (very rarely) cause you to have problems with your adrenal gland (adrenal insufficiency) which sometimes causes side effects.

These side effects may include any of the following:

- Stomach pain
- Tiredness and loss of appetite, feeling sick
- Sickness and diarrhoea
- Weight loss
- Headache or drowsiness
- Low levels of sugar in your blood
- Low blood pressure and seizures (fits)

When your body is under stress such as from fever, trauma (such as a car accident), infection, or surgery, adrenal insufficiency can get worse and you may have any of the side effects listed above.

If you get any side effects, talk to your doctor or pharmacist. To prevent these symptoms occurring, your doctor may prescribe extra corticosteroids in tablet form (such as prednisolone).

If you have any further questions on the use of this medicine, ask your doctor, nurse or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them. To reduce the chance of side effects, your doctor will prescribe the lowest dose of Seretide to control your asthma.

Allergic reactions: you may notice your breathing suddenly gets worse immediately after using Seretide. You may be very wheezy and cough or be short of breath. You may also notice itching, a rash (hives) and swelling (usually of the face, lips, tongue or throat), or you may suddenly feel that your heart is beating very fast or you feel faint and light headed (which may lead to collapse or loss of consciousness). **If you get any of these effects or if they happen suddenly after using Seretide, stop using Seretide and tell your doctor straight away.** Allergic reactions to Seretide are uncommon (they affect less than 1 person in 100).

Other side effects are listed below:

Very Common (affects more than 1 person in 10)

- Headache - this usually gets better as treatment continues.
- Increased number of colds have been reported in patients with COPD.

Common (affects less than 1 person in 10)

- Thrush (sore, creamy-yellow, raised patches) in the mouth and throat. Also sore tongue and hoarse voice and throat irritation. Rinsing your mouth out with water and spitting it out immediately and/or brushing your teeth after taking each dose of your medicine may help. Your doctor may prescribe an anti-fungal medication to treat the thrush.
- Aching, swollen joints and muscle pain.
- Muscle cramps

The following side effects have also been reported in patients with Chronic Obstructive Pulmonary Disease (COPD):

- Pneumonia and bronchitis (lung infection). Tell your doctor if you notice any of the following symptoms: increase in sputum production, change in sputum colour, fever, chills, increased cough, increased breathing problems.
- Bruising and fractures
- Inflammation of sinuses (a feeling of tension or fullness in the nose, cheeks and behind the eyes, sometimes with a throbbing ache)
- A reduction in the amount of potassium in the blood (you may get an uneven heart beat, muscle weakness, cramp).

Uncommon (affects less than 1 person in 100)

- Increases in the amount of sugar (glucose) in your blood (hyperglycaemia). If you have diabetes, more frequent blood sugar monitoring and possibly adjustment of your usual diabetic treatment may be required.
- Cataract (cloudy lens in the eye).
- Very fast heart beat (tachycardia).
- Feeling shaky (tremor) and fast or uneven heart beat (palpitations) - these are usually harmless and get less as treatment continues.
- Chest pain
- Feeling worried (this effect mainly occurs in children).
- Disturbed sleep

- Allergic skin rash

Rare (affects less than 1 person in 1000)

- **Breathing difficulties or wheezing that get worse straight after taking Seretide.** If this happens **stop using your Seretide inhaler.** Use your fast-acting ‘reliever’ inhaler to help your breathing and **tell your doctor straight away.**
- Seretide may affect the normal production of steroid hormones in the body, particularly if you have taken high doses for long periods of time. The effects include:
 - Slowing of growth in children and adolescents
 - Thinning of the bones
 - Glaucoma
 - Weight gain
 - Rounded (moon shaped) face (Cushing’s Syndrome).

Your doctor will check you regularly for any of these side effects and make sure you are taking the lowest dose of Seretide to control your asthma.

- Behavioural changes, such as being unusually active and irritable (these effects mainly occur in children).
- Uneven heart beat or heart gives an extra beat (arrhythmias). Tell your doctor, but do not stop taking Seretide unless the doctor tells you to stop.
- A fungal infection in the oesophagus (gullet), which might cause difficulties in swallowing.

Frequency not known, but may also occur:

- Depression or aggression. These effects are more likely to occur in children.

Reporting of side effects

If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet.

You can also report side effects directly via [the national reporting system listed in Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Seretide

- **Keep this medicine out of the sight and reach of children.**
- Do not use this medicine after the expiry date which is stated on the label and carton after EXP. The expiry date refers to the last day of that month.
- Do not store above 25°C.
- The canister contains a pressurised liquid. Do not expose to temperatures higher than 50°C, protect from direct sunlight. Do not pierce or burn the canister even when empty.
- As with most inhaled medicinal products in pressurised canisters, the therapeutic effect of this medicinal product may decrease when the canister is cold.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Seretide contains

- Each metered dose contains 25 micrograms of salmeterol (as salmeterol xinafoate) and 50, 125 or 250 micrograms of fluticasone propionate.
- The other ingredient is propellant: norflurane (HFA 134a).

What Seretide looks like and contents of the pack

- Seretide Evohaler is supplied to you in a metered dose inhaler which delivers your medicine in a pressurised suspension for you to inhale through your mouth into your lungs.
- The pressurised canister contains a white to off white suspension for inhalation.
- The canisters are fitted into a plastic casing incorporating a mouthpiece and fitted with dustcaps.
- The devices are packed in cartons of 1, 3 or 10 Evohalers.

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

Marketing Authorisation Holder:

[To be completed nationally]

Manufacturer:

Glaxo Wellcome Production

Zone Industrielle No.2, 23 Rue Lavoisier, la madeleine, 27000 Evreux, France.

Tel: +33 2 3223 5500; Fax: +33 2 3223 5558

or

Glaxo Wellcome S.A.

Avenida de Extremadura, 3 - 09400, Aranda de Duero, Burgos, Spain

Tel: +34 947 529 700; Fax: +34 947 529 800

or

Aspen Bad Oldesloe GmbH

Industriestrasse 32-36

D-23843, Bad Oldesloe, Germany

This medicinal product is authorised in the Member States of the EEA under the following names:

Austria	Seretide Dosieraerosol
Belgium	Seretide
Denmark	Seretide
Finland	Seretide Evohaler
France	Seretide
Germany	atmadisc
Greece	Seretide Inhaler
Iceland	Seretide
Ireland	Seretide Evohaler
Italy	Seretide
Luxembourg	Seretide
The Netherlands	Seretide
Portugal	Seretaide Inalador
Spain	Seretide
Sweden	Seretide Evohaler
United Kingdom	Seretide Evohaler

This leaflet was last revised in {MM/YYYY}.

[To be completed nationally]

Detailed information on this medicine is available on the web site of {MA/Agency}