

**HIGHLIGHTS OF PRESCRIBING INFORMATION**

These highlights do not include all the information needed to use FLOVENT DISKUS safely and effectively. See full prescribing information for FLOVENT DISKUS.

**FLOVENT DISKUS 50 mcg (fluticasone propionate inhalation powder, 50 mcg)**  
**FLOVENT DISKUS 100 mcg (fluticasone propionate inhalation powder, 100 mcg)**  
**FLOVENT DISKUS 250 mcg (fluticasone propionate inhalation powder, 250 mcg)**  
**FOR ORAL INHALATION USE**  
**Initial U.S. Approval: 1994**

**INDICATIONS AND USAGE**

FLOVENT DISKUS is an inhaled corticosteroid indicated for:

- Maintenance treatment of asthma as prophylactic therapy in patients aged 4 years and older. (1)
  - Treatment of asthma in patients requiring oral corticosteroid therapy. (1)
- Important limitation:
- Not indicated for the relief of acute bronchospasm. (1)

**DOSAGE AND ADMINISTRATION**

For oral inhalation only. Dosing is based on prior asthma therapy. (2)

Previous Therapy	Recommended Starting Dosage	Highest Recommended Dosage
<b>Patients aged 12 years and older</b>		
Bronchodilators alone	100 mcg twice daily	500 mcg twice daily
Inhaled corticosteroids	100-250 mcg twice daily	500 mcg twice daily
Oral corticosteroids	500-1,000 mcg twice daily	1,000 mcg twice daily
<b>Patients aged 4-11 years</b>	50 mcg twice daily	100 mcg twice daily

**DOSAGE FORMS AND STRENGTHS**

Inhalation Powder. Inhaler containing fluticasone propionate (50, 100, or 250 mcg) as a powder formulation for oral inhalation. (3)

**CONTRAINDICATIONS**

- Primary treatment of status asthmaticus or acute episodes of asthma requiring intensive measures. (4)
- Severe hypersensitivity to milk proteins. (4)

**FULL PRESCRIBING INFORMATION: CONTENTS\***

- 1 INDICATIONS AND USAGE
- 2 DOSAGE AND ADMINISTRATION
- 3 DOSAGE FORMS AND STRENGTHS
- 4 CONTRAINDICATIONS
- 5 WARNINGS AND PRECAUTIONS
  - 5.1 Local Effects of Inhaled Corticosteroids
  - 5.2 Acute Asthma Episodes
  - 5.3 Immunosuppression
  - 5.4 Transferring Patients From Systemic Corticosteroid Therapy
  - 5.5 Hypercorticism and Adrenal Suppression
  - 5.6 Immediate Hypersensitivity Reactions
  - 5.7 Reduction in Bone Mineral Density
  - 5.8 Effect on Growth
  - 5.9 Glaucoma and Cataracts
  - 5.10 Paradoxical Bronchospasm
  - 5.11 Drug Interactions With Strong Cytochrome P450 3A4 Inhibitors
  - 5.12 Eosinophilic Conditions and Churg-Strauss Syndrome
- 6 ADVERSE REACTIONS
  - 6.1 Clinical Trials Experience
  - 6.2 Postmarketing Experience

**WARNINGS and PRECAUTIONS**

- *Candida albicans* infection of the mouth and pharynx may occur. Monitor patients periodically. Advise the patient to rinse his/her mouth with water without swallowing after inhalation to help reduce the risk. (5.1)
- Potential worsening of infections (e.g., existing tuberculosis; fungal, bacterial, viral, or parasitic infection; ocular herpes simplex). Use with caution in patients with these infections. More serious or even fatal course of chickenpox or measles can occur in susceptible patients. (5.3)
- Risk of impaired adrenal function when transferring from systemic corticosteroids. Taper patients slowly from systemic corticosteroids if transferring to FLOVENT DISKUS. (5.4)
- Hypercorticism and adrenal suppression may occur with very high dosages or at the regular dosage in susceptible individuals. If such changes occur, discontinue FLOVENT DISKUS slowly. (5.5)
- Assess for decrease in bone mineral density initially and periodically thereafter. (5.7)
- Monitor growth of pediatric patients. (5.8)
- Close monitoring for glaucoma and cataracts is warranted. (5.9)

**ADVERSE REACTIONS**

Most common adverse reactions (incidence >3%) include upper respiratory tract infection or inflammation, throat irritation, sinusitis, rhinitis, oral candidiasis, nausea and vomiting, gastrointestinal discomfort, fever, cough, bronchitis, and headache. (6.1)

**To report SUSPECTED ADVERSE REACTIONS, contact GlaxoSmithKline at 1-888-825-5249 or FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch).**

**DRUG INTERACTIONS**

Strong cytochrome P450 3A4 inhibitors (e.g., ritonavir, ketoconazole): Use not recommended. May increase risk of systemic corticosteroid effects. (7.1)

**USE IN SPECIFIC POPULATIONS**

Hepatic impairment: Monitor patients for signs of increased drug exposure. (8.6)

**See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling.**

**Revised: 04/2014**

**7 DRUG INTERACTIONS**

7.1 Inhibitors of Cytochrome P450 3A4

**8 USE IN SPECIFIC POPULATIONS**

- 8.1 Pregnancy
- 8.3 Nursing Mothers
- 8.4 Pediatric Use
- 8.5 Geriatric Use
- 8.6 Hepatic Impairment
- 8.7 Renal Impairment

**10 OVERDOSAGE**

**11 DESCRIPTION**

**12 CLINICAL PHARMACOLOGY**

- 12.1 Mechanism of Action
- 12.2 Pharmacodynamics
- 12.3 Pharmacokinetics

**13 NONCLINICAL TOXICOLOGY**

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

**14 CLINICAL STUDIES**

- 14.1 Adult and Adolescent Subjects Aged 12 Years and Older
- 14.2 Pediatric Subjects Aged 4 to 11 Years

**16 HOW SUPPLIED/STORAGE AND HANDLING**

**17 PATIENT COUNSELING INFORMATION**

\*Sections or subsections omitted from the full prescribing information are not listed.

1 **FULL PRESCRIBING INFORMATION**

2 **1 INDICATIONS AND USAGE**

3 FLOVENT<sup>®</sup> DISKUS<sup>®</sup> is indicated for the maintenance treatment of asthma as  
4 prophylactic therapy in patients aged 4 years and older. It is also indicated for patients requiring  
5 oral corticosteroid therapy for asthma. Many of these patients may be able to reduce or eliminate  
6 their requirement for oral corticosteroids over time.

7 Important Limitation of Use: FLOVENT DISKUS is NOT indicated for the relief of  
8 acute bronchospasm.

9 **2 DOSAGE AND ADMINISTRATION**

10 FLOVENT DISKUS should be administered by the orally inhaled route only in patients  
11 aged 4 years and older. After inhalation, the patient should rinse his/her mouth with water  
12 without swallowing to help reduce the risk of oropharyngeal candidiasis.

13 Individual patients will experience a variable time to onset and degree of symptom relief.  
14 Maximum benefit may not be achieved for 1 to 2 weeks or longer after starting treatment.

15 After asthma stability has been achieved, it is always desirable to titrate to the lowest  
16 effective dosage to reduce the possibility of side effects. For patients who do not respond  
17 adequately to the starting dosage after 2 weeks of therapy, higher dosages may provide  
18 additional asthma control. The safety and efficacy of FLOVENT DISKUS when administered in  
19 excess of recommended dosages have not been established.

20 The recommended starting dosage and the highest recommended dosage of FLOVENT  
21 DISKUS, based on prior asthma therapy, are listed in Table 1.

22

23 **Table 1. Recommended Dosages of FLOVENT DISKUS**

**NOTE: In all patients, it is desirable to titrate to the lowest effective dosage once asthma stability is achieved.**

<b>Previous Therapy</b>	<b>Recommended Starting Dosage</b>	<b>Highest Recommended Dosage</b>
<b>Adult and adolescent patients (aged 12 years and older)</b>		
Bronchodilators alone	100 mcg twice daily	500 mcg twice daily
Inhaled corticosteroids	100-250 mcg twice daily <sup>a</sup>	500 mcg twice daily
Oral corticosteroids <sup>b</sup>	500-1,000 mcg twice daily <sup>c</sup>	1,000 mcg twice daily
<b>Pediatric patients (aged 4-11 years)<sup>d</sup></b>	50 mcg twice daily <sup>a</sup>	100 mcg twice daily

24 <sup>a</sup> Starting dosages above 100 mcg twice daily for adult and adolescent patients and 50 mcg  
25 twice daily for pediatric patients aged 4 to 11 years may be considered for patients with  
26 poorer asthma control or those who have previously required doses of inhaled corticosteroids

27 that are in the higher range for the specific agent.

28 <sup>b</sup> For patients currently receiving chronic oral corticosteroid therapy, prednisone should be  
29 reduced no faster than 2.5 to 5 mg/day on a weekly basis beginning after at least 1 week of  
30 therapy with FLOVENT DISKUS. Patients should be carefully monitored for signs of asthma  
31 instability, including serial objective measures of airflow, and for signs of adrenal  
32 insufficiency [see *Warnings and Precautions (5.4)*]. Once prednisone reduction is complete,  
33 the dosage of FLOVENT DISKUS should be reduced to the lowest effective dosage.

34 <sup>c</sup> The choice of starting dosage should be made on the basis of individual patient assessment. A  
35 controlled clinical trial of 111 oral corticosteroid-dependent subjects with asthma showed few  
36 significant differences between the 2 doses of FLOVENT DISKUS on safety and efficacy  
37 endpoints. However, inability to decrease the dose of oral corticosteroids further during  
38 corticosteroid reduction may be indicative of the need to increase the dose of fluticasone  
39 propionate up to the maximum of 1,000 mcg twice daily.

40 <sup>d</sup> Because individual responses may vary, pediatric patients previously maintained on other  
41 inhaled corticosteroids may require dosage adjustments upon transfer to FLOVENT DISKUS.

### 42 **3 DOSAGE FORMS AND STRENGTHS**

43 Inhalation Powder. Inhaler containing a foil blister strip of powder formulation for oral  
44 inhalation. The strip contains fluticasone propionate 50, 100, or 250 mcg per blister.

### 45 **4 CONTRAINDICATIONS**

46 The use of FLOVENT DISKUS is contraindicated in the following conditions:

- 47 • Primary treatment of status asthmaticus or other acute episodes of asthma where intensive  
48 measures are required [see *Warnings and Precautions (5.2)*]
- 49 • Severe hypersensitivity to milk proteins [see *Warnings and Precautions (5.6), Adverse*  
50 *Reactions (6.2), Description (11)*]

### 51 **5 WARNINGS AND PRECAUTIONS**

#### 52 **5.1 Local Effects of Inhaled Corticosteroids**

53 In clinical trials, the development of localized infections of the mouth and pharynx with  
54 *Candida albicans* has occurred in subjects treated with FLOVENT DISKUS. When such an  
55 infection develops, it should be treated with appropriate local or systemic (i.e., oral) antifungal  
56 therapy while treatment with FLOVENT DISKUS continues, but at times therapy with  
57 FLOVENT DISKUS may need to be interrupted. Advise the patient to rinse his/her mouth with  
58 water without swallowing following inhalation to help reduce the risk of oropharyngeal  
59 candidiasis.

#### 60 **5.2 Acute Asthma Episodes**

61 FLOVENT DISKUS is not to be regarded as a bronchodilator and is not indicated for  
62 rapid relief of bronchospasm. Patients should be instructed to contact their physicians  
63 immediately when episodes of asthma that are not responsive to bronchodilators occur during the

64 course of treatment with FLOVENT DISKUS. During such episodes, patients may require  
65 therapy with oral corticosteroids.

### 66 **5.3 Immunosuppression**

67 Persons who are using drugs that suppress the immune system are more susceptible to  
68 infections than healthy individuals. Chickenpox and measles, for example, can have a more  
69 serious or even fatal course in susceptible children or adults using corticosteroids. In such  
70 children or adults who have not had these diseases or been properly immunized, particular care  
71 should be taken to avoid exposure. How the dose, route, and duration of corticosteroid  
72 administration affect the risk of developing a disseminated infection is not known. The  
73 contribution of the underlying disease and/or prior corticosteroid treatment to the risk is also not  
74 known. If a patient is exposed to chickenpox, prophylaxis with varicella zoster immune globulin  
75 (VZIG) may be indicated. If a patient is exposed to measles, prophylaxis with pooled  
76 intramuscular immunoglobulin (IG) may be indicated. (See the respective package inserts for  
77 complete VZIG and IG prescribing information.) If chickenpox develops, treatment with  
78 antiviral agents may be considered.

79 Inhaled corticosteroids should be used with caution, if at all, in patients with active or  
80 quiescent tuberculosis infections of the respiratory tract; systemic fungal, bacterial, viral, or  
81 parasitic infections; or ocular herpes simplex.

### 82 **5.4 Transferring Patients From Systemic Corticosteroid Therapy**

83 Particular care is needed for patients who have been transferred from systemically active  
84 corticosteroids to inhaled corticosteroids because deaths due to adrenal insufficiency have  
85 occurred in patients with asthma during and after transfer from systemic corticosteroids to less  
86 systemically available inhaled corticosteroids. After withdrawal from systemic corticosteroids, a  
87 number of months are required for recovery of hypothalamic-pituitary-adrenal (HPA) function.

88 Patients who have been previously maintained on 20 mg or more of prednisone (or its  
89 equivalent) may be most susceptible, particularly when their systemic corticosteroids have been  
90 almost completely withdrawn. During this period of HPA suppression, patients may exhibit signs  
91 and symptoms of adrenal insufficiency when exposed to trauma, surgery, or infection  
92 (particularly gastroenteritis) or other conditions associated with severe electrolyte loss. Although  
93 FLOVENT DISKUS may control asthma symptoms during these episodes, in recommended  
94 doses it supplies less than normal physiological amounts of glucocorticoid systemically and does  
95 NOT provide the mineralocorticoid activity that is necessary for coping with these emergencies.

96 During periods of stress or a severe asthma attack, patients who have been withdrawn  
97 from systemic corticosteroids should be instructed to resume oral corticosteroids (in large doses)  
98 immediately and to contact their physicians for further instruction. These patients should also be  
99 instructed to carry a warning card indicating that they may need supplementary systemic  
100 corticosteroids during periods of stress or a severe asthma attack.

101 Patients requiring oral corticosteroids should be weaned slowly from systemic  
102 corticosteroid use after transferring to FLOVENT DISKUS. Prednisone reduction can be  
103 accomplished by reducing the daily prednisone dose by 2.5 mg on a weekly basis during therapy

104 with FLOVENT DISKUS. Lung function (mean forced expiratory volume in 1 second [FEV<sub>1</sub>] or  
105 morning peak expiratory flow [AM PEF]), beta-agonist use, and asthma symptoms should be  
106 carefully monitored during withdrawal of oral corticosteroids. In addition, patients should be  
107 observed for signs and symptoms of adrenal insufficiency, such as fatigue, lassitude, weakness,  
108 nausea and vomiting, and hypotension.

109       Transfer of patients from systemic corticosteroid therapy to FLOVENT DISKUS may  
110 unmask allergic conditions previously suppressed by the systemic corticosteroid therapy (e.g.,  
111 rhinitis, conjunctivitis, eczema, arthritis, eosinophilic conditions).

112       During withdrawal from oral corticosteroids, some patients may experience symptoms of  
113 systemically active corticosteroid withdrawal (e.g., joint and/or muscular pain, lassitude,  
114 depression) despite maintenance or even improvement of respiratory function.

### 115 **5.5 Hypercorticism and Adrenal Suppression**

116       Fluticasone propionate will often help control asthma symptoms with less suppression of  
117 HPA function than therapeutically equivalent oral doses of prednisone. Since fluticasone  
118 propionate is absorbed into the circulation and can be systemically active at higher doses, the  
119 beneficial effects of FLOVENT DISKUS in minimizing HPA dysfunction may be expected only  
120 when recommended dosages are not exceeded and individual patients are titrated to the lowest  
121 effective dose. A relationship between plasma levels of fluticasone propionate and inhibitory  
122 effects on stimulated cortisol production has been shown after 4 weeks of treatment with  
123 fluticasone propionate inhalation aerosol. Since individual sensitivity to effects on cortisol  
124 production exists, physicians should consider this information when prescribing FLOVENT  
125 DISKUS.

126       Because of the possibility of significant systemic absorption of inhaled corticosteroids in  
127 sensitive patients, patients treated with FLOVENT DISKUS should be observed carefully for  
128 any evidence of systemic corticosteroid effects. Particular care should be taken in observing  
129 patients postoperatively or during periods of stress for evidence of inadequate adrenal response.

130       It is possible that systemic corticosteroid effects such as hypercorticism and adrenal  
131 suppression (including adrenal crisis) may appear in a small number of patients who are sensitive  
132 to these effects. If such effects occur, FLOVENT DISKUS should be reduced slowly, consistent  
133 with accepted procedures for reducing systemic corticosteroids, and other treatments for  
134 management of asthma symptoms should be considered.

### 135 **5.6 Immediate Hypersensitivity Reactions**

136       Immediate hypersensitivity reactions (e.g., urticaria, angioedema, rash, bronchospasm,  
137 hypotension), including anaphylaxis, may occur after administration of FLOVENT DISKUS.  
138 There have been reports of anaphylactic reactions in patients with severe milk protein allergy  
139 after inhalation of powder products containing lactose; therefore, patients with severe milk  
140 protein allergy should not use FLOVENT DISKUS [*see Contraindications (4)*].

### 141 **5.7 Reduction in Bone Mineral Density**

142       Decreases in bone mineral density (BMD) have been observed with long-term  
143 administration of products containing inhaled corticosteroids. The clinical significance of small

144 changes in BMD with regard to long-term consequences such as fracture is unknown. Patients  
145 with major risk factors for decreased bone mineral content, such as prolonged immobilization,  
146 family history of osteoporosis, postmenopausal status, tobacco use, advanced age, poor nutrition,  
147 or chronic use of drugs that can reduce bone mass (e.g., anticonvulsants, oral corticosteroids)  
148 should be monitored and treated with established standards of care.

149 A 2-year trial in 160 subjects (females aged 18 to 40 years, males 18 to 50) with asthma  
150 receiving CFC-propelled fluticasone propionate inhalation aerosol 88 or 440 mcg twice daily  
151 demonstrated no statistically significant changes in BMD at any time point (24, 52, 76, and  
152 104 weeks of double-blind treatment) as assessed by dual-energy x-ray absorptiometry at lumbar  
153 regions L1 through L4.

### 154 **5.8 Effect on Growth**

155 Orally inhaled corticosteroids may cause a reduction in growth velocity when  
156 administered to pediatric patients. Monitor the growth of pediatric patients receiving FLOVENT  
157 DISKUS routinely (e.g., via stadiometry). To minimize the systemic effects of orally inhaled  
158 corticosteroids, including FLOVENT DISKUS, titrate each patient's dosage to the lowest dosage  
159 that effectively controls his/her symptoms [*see Dosage and Administration (2), Use in Specific*  
160 *Populations (8.4)*].

### 161 **5.9 Glaucoma and Cataracts**

162 Glaucoma, increased intraocular pressure, and cataracts have been reported in patients  
163 following the long-term administration of inhaled corticosteroids, including fluticasone  
164 propionate. Therefore, close monitoring is warranted in patients with a change in vision or with a  
165 history of increased intraocular pressure, glaucoma, and/or cataracts.

### 166 **5.10 Paradoxical Bronchospasm**

167 As with other inhaled medicines, bronchospasm may occur with an immediate increase in  
168 wheezing after dosing. If bronchospasm occurs following dosing with FLOVENT DISKUS, it  
169 should be treated immediately with an inhaled, short-acting bronchodilator; FLOVENT DISKUS  
170 should be discontinued immediately; and alternative therapy should be instituted.

### 171 **5.11 Drug Interactions With Strong Cytochrome P450 3A4 Inhibitors**

172 The use of strong cytochrome P450 3A4 (CYP3A4) inhibitors (e.g., ritonavir, atazanavir,  
173 clarithromycin, indinavir, itraconazole, nefazodone, nelfinavir, saquinavir, ketoconazole,  
174 telithromycin) with FLOVENT DISKUS is not recommended because increased systemic  
175 corticosteroid adverse effects may occur [*see Drug Interactions (7.1), Clinical Pharmacology*  
176 *(12.3)*].

### 177 **5.12 Eosinophilic Conditions and Churg-Strauss Syndrome**

178 In rare cases, patients on inhaled fluticasone propionate may present with systemic  
179 eosinophilic conditions. Some of these patients have clinical features of vasculitis consistent with  
180 Churg-Strauss syndrome, a condition that is often treated with systemic corticosteroid therapy.  
181 These events usually, but not always, have been associated with the reduction and/or withdrawal  
182 of oral corticosteroid therapy following the introduction of fluticasone propionate. Cases of  
183 serious eosinophilic conditions have also been reported with other inhaled corticosteroids in this

184 clinical setting. Physicians should be alert to eosinophilia, vasculitic rash, worsening pulmonary  
185 symptoms, cardiac complications, and/or neuropathy presenting in their patients. A causal  
186 relationship between fluticasone propionate and these underlying conditions has not been  
187 established.

## 188 **6 ADVERSE REACTIONS**

189 Systemic and local corticosteroid use may result in the following:

- 190 • *Candida albicans* infection [see Warnings and Precautions (5.1)]
- 191 • Immunosuppression [see Warnings and Precautions (5.3)]
- 192 • Hypercorticism and adrenal suppression [see Warnings and Precautions (5.5)]
- 193 • Reduction in bone mineral density [see Warnings and Precautions (5.7)]
- 194 • Growth effects [see Warnings and Precautions (5.8)]
- 195 • Glaucoma and cataracts [see Warnings and Precautions (5.9)]

### 196 **6.1 Clinical Trials Experience**

197 Because clinical trials are conducted under widely varying conditions, adverse reaction  
198 rates observed in the clinical trials of a drug cannot be directly compared with rates in the  
199 clinical trials of another drug and may not reflect the rates observed in practice.

200 The incidence of common adverse reactions in Table 2 is based upon 7 placebo-  
201 controlled US clinical trials in which 1,176 pediatric, adolescent, and adult subjects (466 females  
202 and 710 males) previously treated with as-needed bronchodilators and/or inhaled corticosteroids  
203 were treated twice daily for up to 12 weeks with FLOVENT DISKUS (doses of 50 to 500 mcg)  
204 or placebo.

205

206 **Table 2. Adverse Reactions With FLOVENT DISKUS With >3% Incidence and More**  
207 **Common Than Placebo in Subjects With Asthma**

Adverse Event	FLOVENT DISKUS 50 mcg Twice Daily (n = 178) %	FLOVENT DISKUS 100 mcg Twice Daily (n = 305) %	FLOVENT DISKUS 250 mcg Twice Daily (n = 86) %	FLOVENT DISKUS 500 mcg Twice Daily (n = 64) %	Placebo (n = 543) %
Ear, nose, and throat					
Upper respiratory tract infection	20	18	21	14	16
Throat irritation	13	13	3	22	8
Sinusitis/sinus infection	9	10	6	6	6
Upper respiratory inflammation	5	5	0	5	3
Rhinitis	4	3	1	2	2
Oral candidiasis	<1	9	6	5	7
Gastrointestinal					
Nausea and vomiting	8	4	1	2	4
Gastrointestinal discomfort and pain	4	3	2	2	3
Viral gastrointestinal infection	4	3	3	5	1
Non-site specific					
Fever	7	7	1	2	4
Viral infection	2	2	0	5	2
Lower respiratory					
Viral respiratory infection	4	5	1	2	4
Cough	3	5	1	5	4
Bronchitis	2	3	0	8	1
Neurological					
Headache	12	12	2	14	7
Musculoskeletal and trauma					
Muscle injury	2	0	1	5	1
Musculoskeletal pain	4	3	2	5	2
Injury	2	<1	0	5	<1

208  
209           Table 2 includes all events (whether considered drug-related or nondrug-related by the  
210 investigator) that occurred at a rate of over 3% in any of the groups treated with FLOVENT

211 DISKUS and were more common than in the placebo group. Less than 2% of subjects  
212 discontinued from the trials because of adverse reactions. The average duration of exposure was  
213 73 to 79 days in the active treatment groups compared with 56 days in the placebo group.

214 **Additional Adverse Reactions:** Other adverse reactions not previously listed, whether  
215 considered drug-related or not by the investigators, that were reported more frequently by  
216 subjects with asthma treated with FLOVENT DISKUS compared with subjects treated with  
217 placebo include the following: palpitations; soft tissue injuries; contusions and hematomas;  
218 wounds and lacerations; burns; poisoning and toxicity; pressure-induced disorders;  
219 hoarseness/dysphonia; epistaxis; ear, nose, throat, and tonsil signs and symptoms; ear, nose, and  
220 throat polyps; allergic ear, nose, and throat disorders; throat constriction; fluid disturbances;  
221 weight gain; appetite disturbances; keratitis and conjunctivitis; blepharoconjunctivitis;  
222 gastrointestinal signs and symptoms; oral ulcerations; dental discomfort and pain; oral erythema  
223 and rashes; mouth and tongue disorders; oral discomfort and pain; tooth decay; cholecystitis;  
224 arthralgia and articular rheumatism; muscle cramps and spasms; musculoskeletal inflammation;  
225 dizziness; sleep disorders; migraines; paralysis of cranial nerves; edema and swelling; bacterial  
226 infections; fungal infections; mobility disorders; mood disorders; bacterial reproductive  
227 infections; photodermatitis; dermatitis and dermatosis; viral skin infections; eczema; pruritus;  
228 acne and folliculitis; urinary infections.

229 Three (3) of the 7 placebo-controlled US clinical trials were pediatric trials. A total of  
230 592 subjects aged 4 to 11 years were treated with FLOVENT DISKUS (dosages of 50 or 100  
231 mcg twice daily) or placebo; an additional 174 subjects aged 4 to 11 years received FLOVENT<sup>®</sup>  
232 ROTADISK<sup>®</sup> (fluticasone propionate inhalation powder) at the same doses. There were no  
233 clinically relevant differences in the pattern or severity of adverse events in children compared  
234 with those reported in adults.

235 In the first 16 weeks of a 52-week clinical trial in adult subjects with asthma who  
236 previously required oral corticosteroids (daily doses of 5 to 40 mg oral prednisone), the effects  
237 of FLOVENT DISKUS 500 mcg twice daily (n = 41) and 1,000 mcg twice daily (n = 36) were  
238 compared with placebo (n = 34) for the frequency of reported adverse events. The average  
239 duration of exposure for subjects taking FLOVENT DISKUS was 105 days compared with 75  
240 days for placebo. Adverse events, whether or not considered drug related by the investigators,  
241 reported in more than 5 subjects in the group taking FLOVENT DISKUS and that occurred  
242 more frequently with FLOVENT DISKUS than with placebo are shown below (percent  
243 FLOVENT DISKUS and percent placebo).

244 **Ear, Nose, and Throat:** Hoarseness/dysphonia (9% and 0%), nasal  
245 congestion/blockage (16% and 0%), oral candidiasis (31% and 21%), rhinitis (13% and 9%),  
246 sinusitis/sinus infection (33% and 12%), throat irritation (10% and 9%), and upper respiratory  
247 tract infection (31% and 24%).

248 **Gastrointestinal:** Nausea and vomiting (9% and 0%).

249 **Lower Respiratory:** Cough (9% and 3%) and viral respiratory infections (9% and 6%).

250 Musculoskeletal: Arthralgia and articular rheumatism (17% and 3%) and muscle pain  
251 (12% and 0%).

252 Non-Site Specific: Malaise and fatigue (16% and 9%) and pain (10% and 3%).

253 Skin: Pruritus (6% and 0%) and skin rashes (8% and 3%).

## 254 **6.2 Postmarketing Experience**

255 In addition to adverse reactions reported from clinical trials, the following adverse  
256 reactions have been identified during postapproval use of fluticasone propionate. Because these  
257 reactions are reported voluntarily from a population of uncertain size, it is not always possible to  
258 reliably estimate their frequency or establish a causal relationship to drug exposure. These events  
259 have been chosen for inclusion due to either their seriousness, frequency of reporting, or causal  
260 connection to fluticasone propionate or a combination of these factors.

261 Ear, Nose, and Throat: Aphonia, facial and oropharyngeal edema, and throat soreness.

262 Endocrine and Metabolic: Cushingoid features, growth velocity reduction in  
263 children/adolescents, hyperglycemia, and osteoporosis.

264 Eye: Cataracts.

265 Immune System Disorders: Immediate and delayed hypersensitivity reactions,  
266 including anaphylaxis, rash, angioedema, and bronchospasm, have been reported. Anaphylactic  
267 reactions in patients with severe milk protein allergy have been reported.

268 Psychiatry: Agitation, aggression, anxiety, depression, and restlessness. Behavioral  
269 changes, including hyperactivity and irritability, have been reported very rarely and primarily in  
270 children.

271 Respiratory: Asthma exacerbation, bronchospasm, chest tightness, dyspnea, immediate  
272 bronchospasm, pneumonia, and wheeze.

273 Skin: Contusions and ecchymoses.

## 274 **7 DRUG INTERACTIONS**

### 275 **7.1 Inhibitors of Cytochrome P450 3A4**

276 Fluticasone propionate is a substrate of CYP3A4. The use of strong CYP3A4 inhibitors  
277 (e.g., ritonavir, atazanavir, clarithromycin, indinavir, itraconazole, nefazodone, nelfinavir,  
278 saquinavir, ketoconazole, telithromycin) with FLOVENT DISKUS is not recommended because  
279 increased systemic corticosteroid adverse effects may occur.

280 Ritonavir: A drug interaction trial with fluticasone propionate aqueous nasal spray in  
281 healthy subjects has shown that ritonavir (a strong CYP3A4 inhibitor) can significantly increase  
282 plasma fluticasone propionate exposure, resulting in significantly reduced serum cortisol  
283 concentrations [see *Clinical Pharmacology (12.3)*]. During postmarketing use, there have been  
284 reports of clinically significant drug interactions in patients receiving fluticasone propionate and  
285 ritonavir, resulting in systemic corticosteroid effects including Cushing's syndrome and adrenal  
286 suppression.

287 Ketoconazole: Coadministration of orally inhaled fluticasone propionate (1,000 mcg)  
288 and ketoconazole (200 mg once daily) resulted in a 1.9-fold increase in plasma fluticasone

289 propionate exposure and a 45% decrease in plasma cortisol area under the curve (AUC), but had  
290 no effect on urinary excretion of cortisol.

## 291 **8 USE IN SPECIFIC POPULATIONS**

### 292 **8.1 Pregnancy**

293 Teratogenic Effects: Pregnancy Category C. There are no adequate and well-controlled  
294 trials with FLOVENT DISKUS in pregnant women. Corticosteroids have been shown to be  
295 teratogenic in laboratory animals when administered systemically at relatively low dosage levels.  
296 Because animal reproduction studies are not always predictive of human response, FLOVENT  
297 DISKUS should be used during pregnancy only if the potential benefit justifies the potential risk  
298 to the fetus. Women should be advised to contact their physicians if they become pregnant while  
299 taking FLOVENT DISKUS.

300 Mice and rats at fluticasone propionate doses approximately 0.1 and 0.4 times,  
301 respectively, the maximum recommended human daily inhalation dose (MRHDID) for adults (on  
302 a  $\text{mg}/\text{m}^2$  basis at maternal subcutaneous doses of 45 and 100  $\text{mcg}/\text{kg}/\text{day}$ , respectively) showed  
303 fetal toxicity characteristic of potent corticosteroid compounds, including embryonic growth  
304 retardation, omphalocele, cleft palate, and retarded cranial ossification. No teratogenicity was  
305 seen in rats at doses up to 0.3 times the MRHDID (on a  $\text{mcg}/\text{m}^2$  basis at maternal inhaled doses  
306 up to 68.7  $\text{mg}/\text{kg}/\text{day}$ ).

307 In rabbits, fetal weight reduction and cleft palate were observed at a fluticasone  
308 propionate dose approximately 0.03 times the MRHDID for adults (on a  $\text{mg}/\text{m}^2$  basis at a  
309 maternal subcutaneous dose of 4  $\text{mcg}/\text{kg}/\text{day}$ ). However, no teratogenic effects were reported at  
310 fluticasone propionate doses up to approximately 2 times the MRHDID for adults (on a  $\text{mg}/\text{m}^2$   
311 basis at a maternal oral dose up to 300  $\text{mcg}/\text{kg}/\text{day}$ ). No fluticasone propionate was detected in  
312 the plasma in this study, consistent with the established low bioavailability following oral  
313 administration [*see Clinical Pharmacology (12.3)*].

314 Fluticasone propionate crossed the placenta following subcutaneous administration to  
315 mice and rats and oral administration to rabbits.

316 Experience with oral corticosteroids since their introduction in pharmacologic, as  
317 opposed to physiologic, doses suggests that rodents are more prone to teratogenic effects from  
318 corticosteroids than humans. In addition, because there is a natural increase in corticosteroid  
319 production during pregnancy, most women will require a lower exogenous corticosteroid dose  
320 and many will not need corticosteroid treatment during pregnancy.

321 Nonteratogenic Effects: Hypoadrenalism may occur in infants born of mothers  
322 receiving corticosteroids during pregnancy. Such infants should be carefully monitored.

### 323 **8.3 Nursing Mothers**

324 It is not known whether fluticasone propionate is excreted in human breast milk.  
325 However, other corticosteroids have been detected in human milk. Subcutaneous administration  
326 to lactating rats of tritiated fluticasone propionate at a dose approximately 0.04 times the  
327 MRHDID for adults on a  $\text{mg}/\text{m}^2$  basis resulted in measurable radioactivity in milk.

328 Since there are no data from controlled trials on the use of FLOVENT DISKUS by  
329 nursing mothers, caution should be exercised when FLOVENT DISKUS is administered to a  
330 nursing woman.

#### 331 **8.4 Pediatric Use**

332 The safety and effectiveness of FLOVENT DISKUS in children aged 4 years and older  
333 have been established [*see Adverse Reactions (6.1), Clinical Pharmacology (12.3), Clinical*  
334 *Studies (14.2)*]. The safety and effectiveness of FLOVENT DISKUS in children younger than  
335 4 years have not been established.

336 Effects on Growth: Orally inhaled corticosteroids may cause a reduction in growth  
337 velocity when administered to pediatric patients. A reduction of growth velocity in children or  
338 teenagers may occur as a result of poorly controlled asthma or from use of corticosteroids,  
339 including inhaled corticosteroids. The effects of long-term treatment of children and adolescents  
340 with inhaled corticosteroids, including fluticasone propionate, on final adult height are not  
341 known.

342 Controlled clinical trials have shown that inhaled corticosteroids may cause a reduction  
343 in growth in pediatric patients. In these trials, the mean reduction in growth velocity was  
344 approximately 1 cm/year (range: 0.3 to 1.8 cm/year) and appeared to depend upon dose and  
345 duration of exposure. This effect was observed in the absence of laboratory evidence of HPA  
346 axis suppression, suggesting that growth velocity is a more sensitive indicator of systemic  
347 corticosteroid exposure in pediatric patients than some commonly used tests of HPA axis  
348 function. The long-term effects of this reduction in growth velocity associated with orally  
349 inhaled corticosteroids, including the impact on final adult height, are unknown. The potential  
350 for “catch-up” growth following discontinuation of treatment with orally inhaled corticosteroids  
351 has not been adequately studied. The effects on growth velocity of treatment with orally inhaled  
352 corticosteroids for over 1 year, including the impact on final adult height, are unknown. The  
353 growth of children and adolescents receiving orally inhaled corticosteroids, including  
354 FLOVENT DISKUS, should be monitored routinely (e.g., via stadiometry). The potential  
355 growth effects of prolonged treatment should be weighed against the clinical benefits obtained  
356 and the risks associated with alternative therapies. To minimize the systemic effects of orally  
357 inhaled corticosteroids, including FLOVENT DISKUS, each patient should be titrated to the  
358 lowest dose that effectively controls his/her symptoms.

359 A 52-week placebo-controlled trial to assess the potential growth effects of fluticasone  
360 propionate inhalation powder (FLOVENT ROTADISK) at 50 and 100 mcg twice daily was  
361 conducted in the US in 325 prepubescent children (244 males and 81 females) aged 4 to  
362 11 years. The mean growth velocities at 52 weeks observed in the intent-to-treat population were  
363 6.32 cm/year in the placebo group (n = 76), 6.07 cm/year in the 50-mcg group (n = 98), and  
364 5.66 cm/year in the 100-mcg group (n = 89). An imbalance in the proportion of children entering  
365 puberty between groups and a higher dropout rate in the placebo group due to poorly controlled  
366 asthma may be confounding factors in interpreting these data. A separate subset analysis of  
367 children who remained prepubertal during the trial revealed growth rates at 52 weeks of

368 6.10 cm/year in the placebo group (n = 57), 5.91 cm/year in the 50-mcg group (n = 74), and  
369 5.67 cm/year in the 100-mcg group (n = 79). In children aged 8.5 years, the mean age of children  
370 in this trial, the range for expected growth velocity is: boys – 3<sup>rd</sup> percentile = 3.8 cm/year, 50<sup>th</sup>  
371 percentile = 5.4 cm/year, and 97<sup>th</sup> percentile = 7.0 cm/year; girls – 3<sup>rd</sup> percentile = 4.2 cm/year,  
372 50<sup>th</sup> percentile = 5.7 cm/year, and 97<sup>th</sup> percentile = 7.3 cm/year. The clinical relevance of these  
373 growth data is not certain.

### 374 **8.5 Geriatric Use**

375 Safety data have been collected on 280 subjects (FLOVENT DISKUS n = 83, FLOVENT  
376 ROTADISK n = 197) aged 65 years and older and 33 subjects (FLOVENT DISKUS n = 14,  
377 FLOVENT ROTADISK n = 19) aged 75 years and older who have been treated with fluticasone  
378 propionate inhalation powder in US and non-US clinical trials. No overall differences in safety  
379 or effectiveness were observed between these subjects and younger subjects, and other reported  
380 clinical experience has not identified differences in responses between the elderly and younger  
381 subjects, but greater sensitivity of some older individuals cannot be ruled out.

### 382 **8.6 Hepatic Impairment**

383 Formal pharmacokinetic studies using FLOVENT DISKUS have not been conducted in  
384 patients with hepatic impairment. Since fluticasone propionate is predominantly cleared by  
385 hepatic metabolism, impairment of liver function may lead to accumulation of fluticasone  
386 propionate in plasma. Therefore, patients with hepatic disease should be closely monitored.

### 387 **8.7 Renal Impairment**

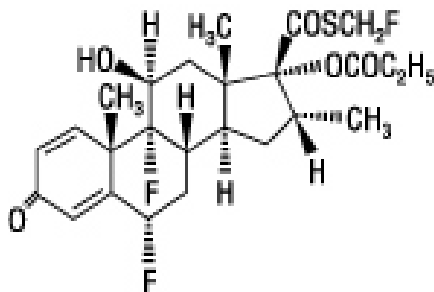
388 Formal pharmacokinetic studies using FLOVENT DISKUS have not been conducted in  
389 patients with renal impairment.

## 390 **10 OVERDOSAGE**

391 Chronic overdosage may result in signs/symptoms of hypercorticism [*see Warnings and*  
392 *Precautions (5.5)*]. Inhalation by healthy volunteers of a single dose of 4,000 mcg of fluticasone  
393 propionate inhalation powder or single doses of 1,760 or 3,520 mcg of fluticasone propionate  
394 CFC inhalation aerosol was well tolerated. Fluticasone propionate given by inhalation aerosol at  
395 dosages of 1,320 mcg twice daily for 7 to 15 days to healthy human volunteers was also well  
396 tolerated. Repeat oral doses up to 80 mg daily for 10 days in healthy volunteers and repeat oral  
397 doses up to 20 mg daily for 42 days in subjects were well tolerated. Adverse reactions were of  
398 mild or moderate severity, and incidences were similar in active and placebo treatment groups.

## 399 **11 DESCRIPTION**

400 The active component of FLOVENT DISKUS 50 mcg, FLOVENT DISKUS 100 mcg,  
401 and FLOVENT DISKUS 250 mcg is fluticasone propionate, a corticosteroid having the  
402 chemical name *S*-(fluoromethyl) 6 $\alpha$ ,9-difluoro-11 $\beta$ ,17-dihydroxy-16 $\alpha$ -methyl-3-oxoandrosta-  
403 1,4-diene-17 $\beta$ -carbothioate, 17-propionate and the following chemical structure:



404

405

Fluticasone propionate is a white powder with a molecular weight of 500.6, and the empirical formula is  $C_{25}H_{31}F_3O_5S$ . It is practically insoluble in water, freely soluble in dimethyl sulfoxide and dimethylformamide, and slightly soluble in methanol and 95% ethanol.

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408

FLOVENT DISKUS is an orange plastic inhaler containing a foil blister strip. Each blister on the strip contains a white powder mix of micronized fluticasone propionate (50, 100, or 250 mcg) in 12.5 mg of formulation containing lactose monohydrate (which contains milk proteins). After the inhaler is activated, the powder is dispersed into the airstream created by the patient inhaling through the mouthpiece.

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Under standardized in vitro test conditions, FLOVENT DISKUS delivers 46, 94, and 229 mcg of fluticasone propionate from FLOVENT DISKUS 50 mcg, FLOVENT DISKUS 100 mcg, and FLOVENT DISKUS 250 mcg, respectively, when tested at a flow rate of 60 L/min for 2 seconds.

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In adult subjects with obstructive lung disease and severely compromised lung function (mean  $FEV_1$  20% to 30% of predicted), mean peak inspiratory flow (PIF) through the DISKUS<sup>®</sup> inhaler was 82.4 L/min (range: 46.1 to 115.3 L/min). In children with asthma aged 4 and 8 years, mean PIF through FLOVENT DISKUS was 70 and 104 L/min, respectively (range: 48 to 123 L/min).

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423

The actual amount of drug delivered to the lung will depend on patient factors, such as inspiratory flow profile.

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## 12 CLINICAL PHARMACOLOGY

425

### 12.1 Mechanism of Action

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Fluticasone propionate is a synthetic trifluorinated corticosteroid with anti-inflammatory activity. Fluticasone propionate has been shown in vitro to exhibit a binding affinity for the human glucocorticoid receptor that is 18 times that of dexamethasone, almost twice that of beclomethasone-17-monopropionate (BMP), the active metabolite of beclomethasone dipropionate, and over 3 times that of budesonide. Data from the McKenzie vasoconstrictor assay in man are consistent with these results. The clinical significance of these findings is unknown.

433

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435

Inflammation is an important component in the pathogenesis of asthma. Corticosteroids have been shown to have a wide range of actions on multiple cell types (e.g., mast cells, eosinophils, neutrophils, macrophages, lymphocytes) and mediators (e.g., histamine, eicosanoids,

436 leukotrienes, cytokines) involved in inflammation. These anti-inflammatory actions of  
437 corticosteroids contribute to their efficacy in asthma.

438 Though effective for the treatment of asthma, corticosteroids do not affect asthma  
439 symptoms immediately. Individual patients will experience a variable time to onset and degree of  
440 symptom relief. Maximum benefit may not be achieved for 1 to 2 weeks or longer after starting  
441 treatment. When corticosteroids are discontinued, asthma stability may persist for several days or  
442 longer.

443 Trials in subjects with asthma have shown a favorable ratio between topical anti-  
444 inflammatory activity and systemic corticosteroid effects with recommended doses of orally  
445 inhaled fluticasone propionate. This is explained by a combination of a relatively high local anti-  
446 inflammatory effect, negligible oral systemic bioavailability (less than 1%), and the minimal  
447 pharmacological activity of the only metabolite detected in man.

## 448 **12.2 Pharmacodynamics**

449 In clinical trials with fluticasone propionate inhalation powder using dosages up to and  
450 including 250 mcg twice daily, occasional abnormal short cosyntropin tests (peak serum cortisol  
451 less than 18 mcg/dL assessed by radioimmunoassay) were noted both in subjects receiving  
452 fluticasone propionate and in subjects receiving placebo. The incidence of abnormal tests at  
453 500 mcg twice daily was greater than placebo. In a 2-year trial carried out with the  
454 DISKHALER<sup>®</sup> inhalation device in 64 subjects with mild, persistent asthma (mean FEV<sub>1</sub> 91%  
455 of predicted) randomized to fluticasone propionate 500 mcg twice daily or placebo, no subject  
456 receiving fluticasone propionate had an abnormal response to 6-hour cosyntropin infusion (peak  
457 serum cortisol <18 mcg/dL). With a peak cortisol threshold of <35 mcg/dL, 1 subject receiving  
458 fluticasone propionate (4%) had an abnormal response at 1 year; repeat testing at 18 months and  
459 2 years was normal. Another subject receiving fluticasone propionate (5%) had an abnormal  
460 response at 2 years. No subject on placebo had an abnormal response at 1 or 2 years.

461 In a placebo-controlled clinical trial conducted in subjects aged 4 to 11 years, a  
462 30-minute cosyntropin stimulation test was performed in 41 subjects after 12 weeks of dosing  
463 with 50 or 100 mcg twice daily of fluticasone propionate via the DISKUS device. One subject  
464 receiving fluticasone propionate via DISKUS had a prestimulation plasma cortisol concentration  
465 <5 mcg/dL, and 2 subjects had a rise in cortisol of <7 mcg/dL. However, all poststimulation  
466 values were >18 mcg/dL.

467 The potential systemic effects of inhaled fluticasone propionate on the HPA axis were  
468 also studied in subjects with asthma. Fluticasone propionate given by inhalation aerosol at  
469 dosages of 220, 440, 660, or 880 mcg twice daily was compared with placebo or oral prednisone  
470 10 mg given once daily for 4 weeks. For most subjects, the ability to increase cortisol production  
471 in response to stress, as assessed by 6-hour cosyntropin stimulation, remained intact with inhaled  
472 fluticasone propionate treatment. No subject had an abnormal response (peak serum cortisol less  
473 than 18 mcg/dL) after dosing with placebo or fluticasone propionate 220 mcg twice daily. For  
474 subjects treated with 440, 660, and 880 mcg twice daily, 10%, 16%, and 12%, respectively, had  
475 an abnormal response as compared with 29% of subjects treated with prednisone.

476 **12.3 Pharmacokinetics**

477 Absorption: Fluticasone propionate acts locally in the lung; therefore, plasma levels do  
478 not predict therapeutic effect. Trials using oral dosing of labeled and unlabeled drug have  
479 demonstrated that the oral systemic bioavailability of fluticasone propionate is negligible (less  
480 than 1%), primarily due to incomplete absorption and presystemic metabolism in the gut and  
481 liver. In contrast, the majority of the fluticasone propionate delivered to the lung is systemically  
482 absorbed. The absolute bioavailability of fluticasone propionate from the DISKUS device in  
483 healthy volunteers averages 7.8%.

484 Peak steady-state fluticasone propionate plasma concentrations in adult subjects with  
485 asthma (N = 11) ranged from undetectable to 266 pg/mL after a 500-mcg twice-daily dosage of  
486 fluticasone propionate inhalation powder using the DISKUS device. The mean fluticasone  
487 propionate plasma concentration was 110 pg/mL.

488 Distribution: Following intravenous administration, the initial disposition phase for  
489 fluticasone propionate was rapid and consistent with its high lipid solubility and tissue binding.  
490 The volume of distribution averaged 4.2 L/kg.

491 The percentage of fluticasone propionate bound to human plasma proteins averages 99%.  
492 Fluticasone propionate is weakly and reversibly bound to erythrocytes and is not significantly  
493 bound to human transcortin.

494 Metabolism: The total clearance of fluticasone propionate is high (average, 1,093  
495 mL/min), with renal clearance accounting for less than 0.02% of the total. The only circulating  
496 metabolite detected in man is the 17 $\beta$ -carboxylic acid derivative of fluticasone propionate,  
497 which is formed through the CYP3A4 pathway. This metabolite had less affinity (approximately  
498 1/2,000) than the parent drug for the glucocorticoid receptor of human lung cytosol in vitro and  
499 negligible pharmacological activity in animal studies. Other metabolites detected in vitro using  
500 cultured human hepatoma cells have not been detected in man.

501 Elimination: Following intravenous dosing, fluticasone propionate showed  
502 polyexponential kinetics and had a terminal elimination half-life of approximately 7.8 hours.  
503 Less than 5% of a radiolabeled oral dose was excreted in the urine as metabolites, with the  
504 remainder excreted in the feces as parent drug and metabolites.

505 Special Populations: *Gender:* Full pharmacokinetic profiles were obtained from 9  
506 female and 16 male subjects given 500 mcg twice daily. No overall differences in fluticasone  
507 propionate pharmacokinetics were observed.

508 *Pediatrics:* In a clinical trial conducted in subjects aged 4 to 11 years with mild to  
509 moderate asthma, fluticasone propionate concentrations were obtained in 61 subjects at 20 and  
510 40 minutes after dosing with 50 and 100 mcg twice daily of fluticasone propionate inhalation  
511 powder using the DISKUS. Plasma concentrations were low and ranged from undetectable  
512 (about 80% of the plasma samples) to 88 pg/mL. Mean peak fluticasone propionate plasma  
513 concentrations at the 50- and 100-mcg dose levels were 5 and 8 pg/mL, respectively.

514 *Hepatic and Renal Impairment:* Formal pharmacokinetic studies using FLOVENT  
515 DISKUS have not been conducted in patients with hepatic or renal impairment. However, since

516 fluticasone propionate is predominantly cleared by hepatic metabolism, impairment of liver  
517 function may lead to accumulation of fluticasone propionate in plasma. Therefore, patients with  
518 hepatic disease should be closely monitored.

519 **Drug Interactions: *Inhibitors of Cytochrome P450 3A4: Ritonavir:*** Fluticasone  
520 propionate is a substrate of CYP3A4. Coadministration of fluticasone propionate and the strong  
521 CYP3A4 inhibitor ritonavir is not recommended based upon a multiple-dose, crossover drug  
522 interaction trial in 18 healthy subjects. Fluticasone propionate aqueous nasal spray (200 mcg  
523 once daily) was coadministered for 7 days with ritonavir (100 mg twice daily). Plasma  
524 fluticasone propionate concentrations following fluticasone propionate aqueous nasal spray alone  
525 were undetectable (less than 10 pg/mL) in most subjects, and when concentrations were  
526 detectable peak levels ( $C_{max}$ ) averaged 11.9 pg/mL (range: 10.8 to 14.1 pg/mL) and  $AUC_{(0-\tau)}$   
527 averaged 8.43 pg•h/mL (range: 4.2 to 18.8 pg•h/mL). Fluticasone propionate  $C_{max}$  and  $AUC_{(0-\tau)}$   
528 increased to 318 pg/mL (range: 110 to 648 pg/mL) and 3,102.6 pg•h/mL (range: 1,207.1 to  
529 5,662.0 pg•h/mL), respectively, after coadministration of ritonavir with fluticasone propionate  
530 aqueous nasal spray. This significant increase in plasma fluticasone propionate exposure resulted  
531 in a significant decrease (86%) in serum cortisol AUC.

532 ***Ketoconazole:*** In a placebo-controlled crossover trial in 8 healthy adult volunteers,  
533 coadministration of a single dose of orally inhaled fluticasone propionate (1,000 mcg) with  
534 multiple doses of ketoconazole (200 mg) to steady state resulted in increased plasma fluticasone  
535 propionate exposure, a reduction in plasma cortisol AUC, and no effect on urinary excretion of  
536 cortisol.

537 Following orally inhaled fluticasone propionate alone,  $AUC_{(2-last)}$  averaged  
538 1.559 ng•h/mL (range: 0.555 to 2.906 ng•h/mL) and  $AUC_{(2-\infty)}$  averaged 2.269 ng•h/mL (range:  
539 0.836 to 3.707 ng•h/mL). Fluticasone propionate  $AUC_{(2-last)}$  and  $AUC_{(2-\infty)}$  increased to 2.781  
540 ng•h/mL (range: 2.489 to 8.486 ng•h/mL) and 4.317 ng•h/mL (range: 3.256 to 9.408 ng•h/mL),  
541 respectively, after coadministration of ketoconazole with orally inhaled fluticasone propionate.  
542 This increase in plasma fluticasone propionate concentration resulted in a decrease (45%) in  
543 serum cortisol AUC.

544 ***Erythromycin:*** In a multiple-dose drug interaction trial, coadministration of orally  
545 inhaled fluticasone propionate (500 mcg twice daily) and erythromycin (333 mg 3 times daily)  
546 did not affect fluticasone propionate pharmacokinetics.

## 547 **13 NONCLINICAL TOXICOLOGY**

### 548 **13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility**

549 Fluticasone propionate demonstrated no tumorigenic potential in mice at oral doses up to  
550 1,000 mcg/kg (approximately 2 and 10 times the MRHDID for adults and children aged 4 to 11  
551 years, respectively, on a  $mg/m^2$  basis) for 78 weeks or in rats at inhalation doses up to 57 mcg/kg  
552 (approximately 0.2 times and approximately equivalent to the MRHDID for adults and children  
553 aged 4 to 11 years, respectively, on a  $mg/m^2$  basis) for 104 weeks.

554 Fluticasone propionate did not induce gene mutation in prokaryotic or eukaryotic cells in  
555 vitro. No significant clastogenic effect was seen in cultured human peripheral lymphocytes in  
556 vitro or in the in vivo mouse micronucleus test.

557 No evidence of impairment of fertility was observed in male and female rats at  
558 subcutaneous doses up to 50 mcg/kg (approximately 0.2 times the MRHDID for adults on a  
559 mg/m<sup>2</sup> basis). Prostate weight was significantly reduced.

## 560 **14 CLINICAL STUDIES**

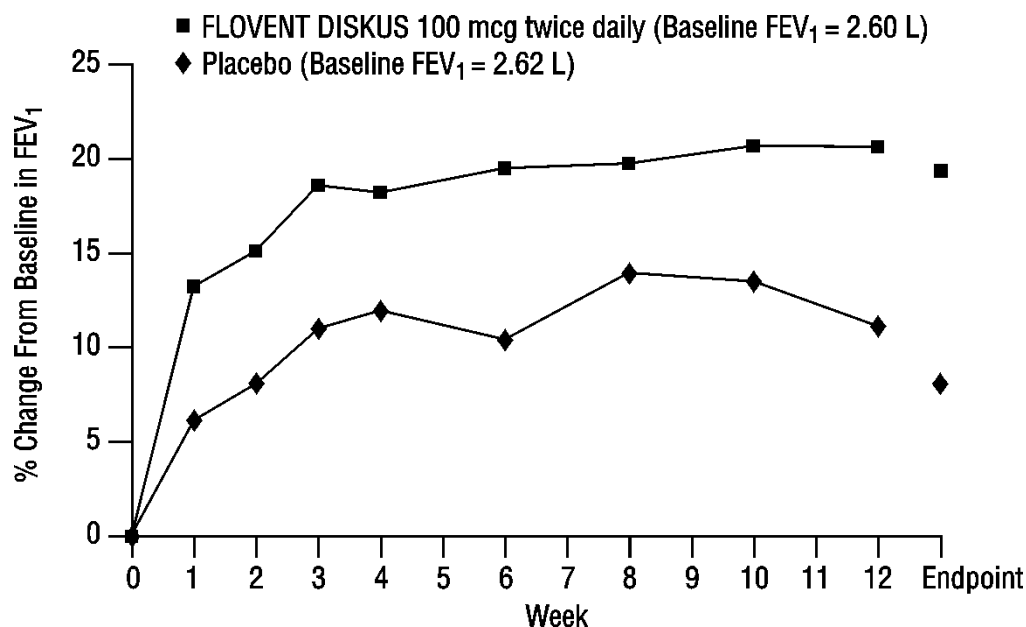
### 561 **14.1 Adult and Adolescent Subjects Aged 12 Years and Older**

562 Four randomized, double-blind, parallel-group, placebo-controlled, US clinical trials  
563 were conducted in 1,036 adult and adolescent subjects (aged 12 years and older) with asthma to  
564 assess the efficacy and safety of FLOVENT DISKUS in the treatment of asthma. Fixed dosages  
565 of 100, 250, and 500 mcg twice daily were compared with placebo to provide information about  
566 appropriate dosing to cover a range of asthma severity. Subjects in these studies included those  
567 inadequately controlled with bronchodilators alone and those already maintained on daily  
568 inhaled corticosteroids. All doses were delivered by inhalation of the contents of 1 or 2 blisters  
569 from FLOVENT DISKUS twice daily.

570 Figures 1 through 4 display results of pulmonary function tests (mean percent change  
571 from baseline in FEV<sub>1</sub> prior to AM dose) for 3 recommended dosages of FLOVENT DISKUS  
572 (100, 250, and 500 mcg twice daily) and placebo from the four 12-week trials in adolescents and  
573 adults. These trials used predetermined criteria for lack of efficacy (indicators of worsening  
574 asthma), resulting in withdrawal of more patients in the placebo group. Therefore, pulmonary  
575 function results at Endpoint (the last evaluable FEV<sub>1</sub> result, including most patients' lung  
576 function data) are also displayed. Pulmonary function, as determined by percent change from  
577 baseline in FEV<sub>1</sub> at recommended dosages of FLOVENT DISKUS improved significantly  
578 compared with placebo by the first week of treatment, and improvement was maintained for up  
579 to 1 year or more.

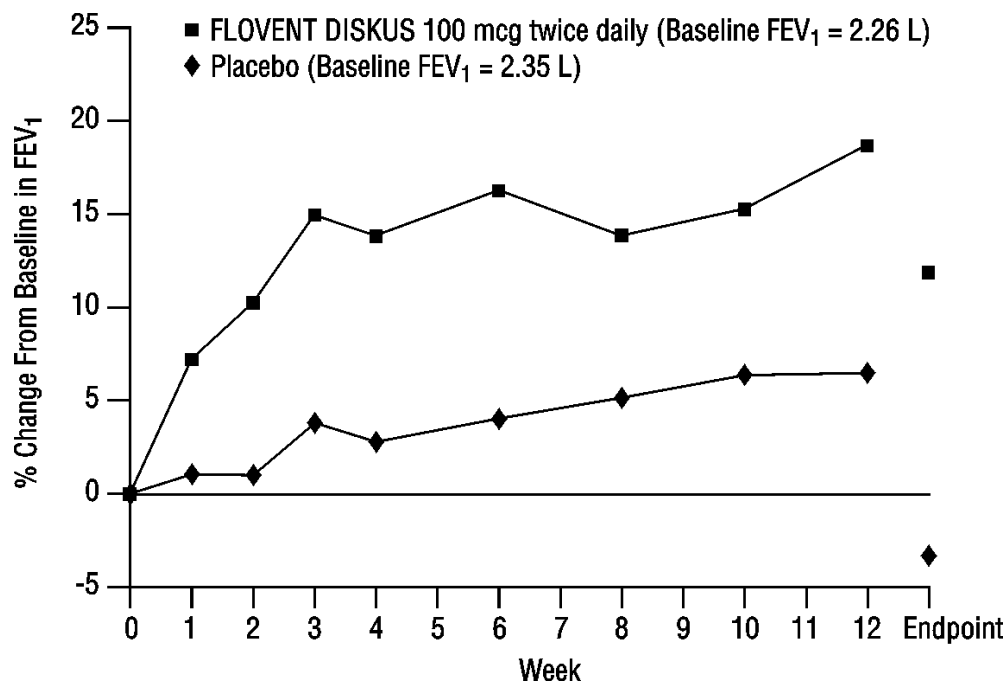
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581 **Figure 1. A 12-Week Clinical Trial Evaluating FLOVENT DISKUS**  
582 **100 mcg Twice Daily in Adolescents and Adults Receiving**  
583 **Bronchodilators Alone**  
584



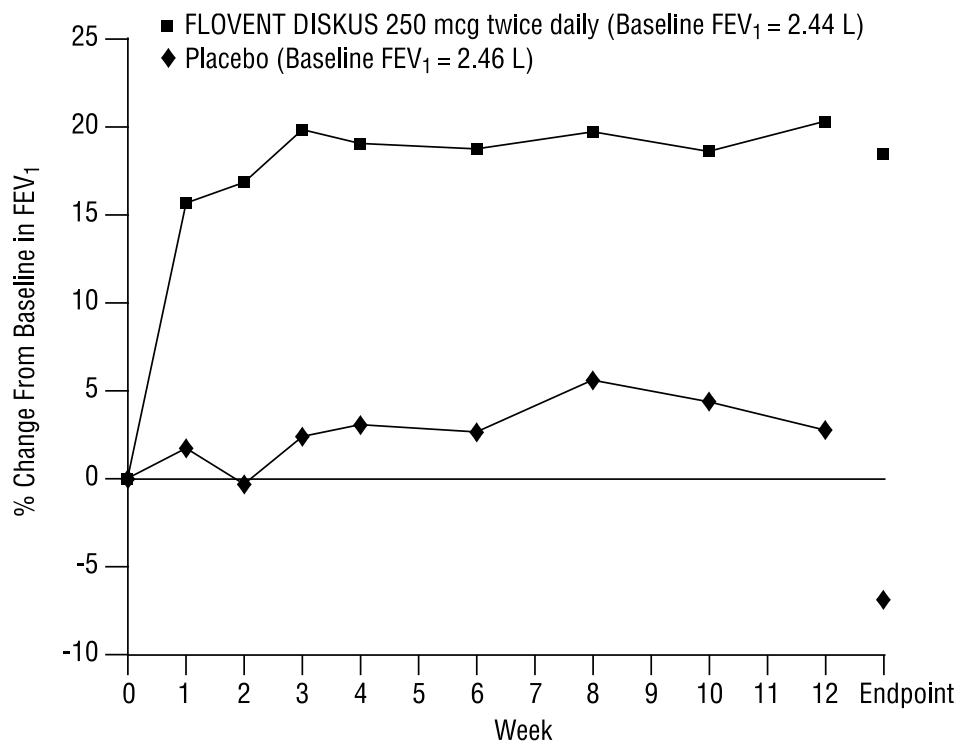
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587 **Figure 2. A 12-Week Clinical Trial Evaluating FLOVENT DISKUS**  
588 **100 mcg Twice Daily in Adolescents and Adults Receiving Inhaled**  
589 **Corticosteroids**  
590



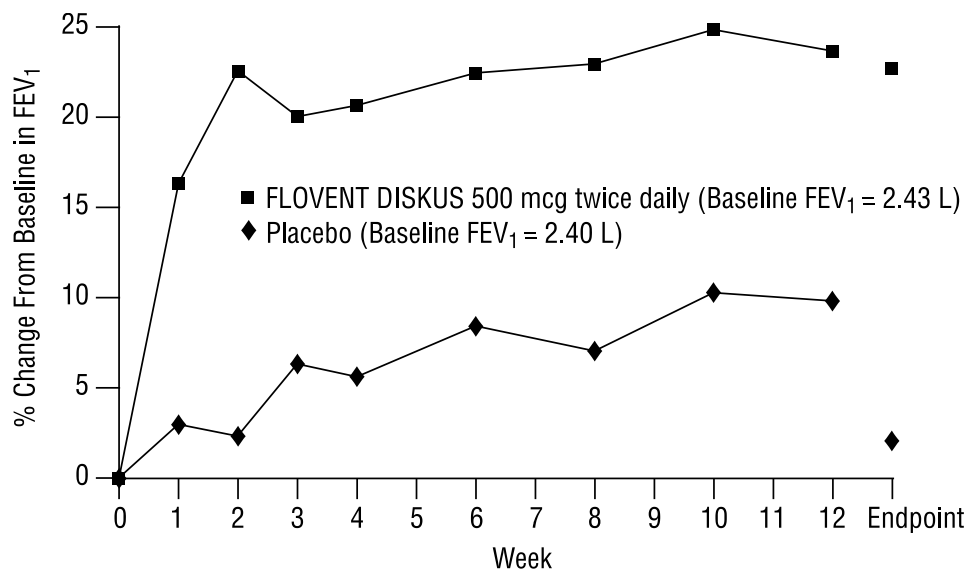
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593 **Figure 3. A 12-Week Clinical Trial Evaluating FLOVENT DISKUS**  
594 **250 mcg Twice Daily in Adolescents and Adults Receiving Inhaled**  
595 **Corticosteroids or Bronchodilators Alone**  
596



597  
598

599 **Figure 4. A 12-Week Clinical Trial Evaluating FLOVENT DISKUS**  
600 **500 mcg Twice Daily in Adolescents and Adults Receiving Inhaled**  
601 **Corticosteroids or Bronchodilators Alone**  
602



603  
604

605 In all 4 efficacy trials, measures of pulmonary function (FEV<sub>1</sub>) were statistically  
606 significantly improved as compared with placebo at all twice-daily doses. Subjects on all  
607 dosages of FLOVENT DISKUS were also less likely to discontinue study participation due to  
608 asthma deterioration (as defined by predetermined criteria for lack of efficacy including lung  
609 function and subject-recorded variables such as AM PEF, albuterol use, and nighttime  
610 awakenings due to asthma) compared with placebo.

611 In a clinical trial of 111 subjects with severe asthma requiring chronic oral prednisone  
612 therapy (average baseline daily prednisone dose was 14 mg), fluticasone propionate given by  
613 inhalation powder at doses of 500 and 1,000 mcg twice daily was evaluated. Both doses enabled  
614 a statistically significantly larger percentage of subjects to wean from oral prednisone as  
615 compared with placebo (75% of the subjects on 500 mcg twice daily and 89% of the subjects on  
616 1,000 mcg twice daily as compared with 9% of subjects on placebo). Accompanying the  
617 reduction in oral corticosteroid use, subjects treated with fluticasone propionate had significantly  
618 improved lung function and fewer asthma symptoms as compared with the placebo group.

#### 619 **14.2 Pediatric Subjects Aged 4 to 11 Years**

620 A 12-week, placebo-controlled clinical trial was conducted in 437 pediatric subjects (177  
621 received FLOVENT DISKUS), approximately half of whom were receiving inhaled  
622 corticosteroids at baseline. In this trial, doses of fluticasone propionate inhalation powder 50 and  
623 100 mcg twice daily significantly improved FEV<sub>1</sub> (15% and 18% change from baseline at  
624 Endpoint, respectively) compared with placebo (7% change). AM PEF was also significantly  
625 improved with doses of fluticasone propionate 50 and 100 mcg twice daily (26% and 27%  
626 change from baseline at Endpoint, respectively) compared with placebo (14% change). In this  
627 trial, subjects on active treatment were significantly less likely to discontinue treatment due to  
628 asthma deterioration (as defined by predetermined criteria for lack of efficacy including lung  
629 function and subject-recorded variables such as AM PEF, albuterol use, and nighttime  
630 awakenings due to asthma).

631 Two other 12-week placebo-controlled clinical trials were conducted in 504 pediatric  
632 subjects with asthma, approximately half of whom were receiving inhaled corticosteroids at  
633 baseline. In these trials, FLOVENT DISKUS was efficacious at doses of 50 and 100 mcg twice  
634 daily when compared with placebo on major endpoints including lung function and symptom  
635 scores. Pulmonary function improved significantly compared with placebo by the first week of  
636 treatment, and subjects treated with FLOVENT DISKUS were also less likely to discontinue trial  
637 participation due to asthma deterioration. One hundred ninety-two (192) subjects received  
638 FLOVENT DISKUS for up to 1 year during an open-label extension. Data from this open-label  
639 extension suggested that lung function improvements could be maintained up to 1 year.

## 640 **16 HOW SUPPLIED/STORAGE AND HANDLING**

641 FLOVENT DISKUS 50 mcg is supplied as a disposable orange plastic inhaler containing  
642 a foil blister strip with 60 blisters. The inhaler is packaged in a plastic-coated, moisture-  
643 protective foil pouch (NDC 0173-0600-02).

644 FLOVENT DISKUS 100 mcg is supplied as a disposable orange plastic inhaler  
645 containing a foil blister strip with 60 blisters. The inhaler is packaged in a plastic-coated,  
646 moisture-protective foil pouch (NDC 0173-0602-02). FLOVENT DISKUS 100 mcg is also  
647 supplied in an institutional pack containing 28 blisters (NDC 0173-0602-00).

648 FLOVENT DISKUS 250 mcg is supplied as a disposable orange plastic inhaler  
649 containing a foil blister strip with 60 blisters. The inhaler is packaged in a plastic-coated,  
650 moisture-protective foil pouch (NDC 0173-0601-02). FLOVENT DISKUS 250 mcg is also  
651 supplied in an institutional pack containing 28 blisters (NDC 0173-0601-00).

652 Store at room temperature between 68°F and 77°F) (20°C and 25°C); excursions  
653 permitted from 59°F to 86°F (15°C to 30°C) [See USP Controlled Room Temperature]. Store in  
654 a dry place away from direct heat or sunlight. Keep out of reach of children.

655 FLOVENT DISKUS should be stored inside the unopened moisture-protective foil pouch  
656 and only removed from the pouch immediately before initial use. Discard FLOVENT DISKUS  
657 6 weeks (50-mcg strength) or 2 months (100- and 250-mcg strengths) after opening the foil  
658 pouch or when the counter reads “0” (after all blisters have been used), whichever comes first.  
659 The inhaler is not reusable. Do not attempt to take the inhaler apart.

## 660 **17 PATIENT COUNSELING INFORMATION**

661 Advise the patient to read the FDA-approved patient labeling (Patient Information and  
662 Instructions for Use).

663 Local Effects: Inform patients that localized infections with *Candida albicans* occurred  
664 in the mouth and pharynx in some patients. If oropharyngeal candidiasis develops, treat it with  
665 appropriate local or systemic (i.e., oral) antifungal therapy while still continuing therapy with  
666 FLOVENT DISKUS, but at times therapy with FLOVENT DISKUS may need to be temporarily  
667 interrupted under close medical supervision. Rinsing the mouth with water without swallowing  
668 after inhalation is advised to help reduce the risk of thrush.

669 Status Asthmaticus and Acute Asthma Symptoms: Inform patients that FLOVENT  
670 DISKUS is not a bronchodilator and is not intended for use as rescue medicine for acute asthma  
671 exacerbations. Advise patients to treat acute asthma symptoms with an inhaled, short-acting  
672 beta<sub>2</sub>-agonist such as albuterol. Instruct patients to contact their physicians immediately if there  
673 is deterioration of their asthma.

674 Immunosuppression: Warn patients who are on immunosuppressant doses of  
675 corticosteroids to avoid exposure to chickenpox or measles and, if exposed, to consult their  
676 physicians without delay. Inform patients of potential worsening of existing tuberculosis; fungal,  
677 bacterial, viral, or parasitic infections; or ocular herpes simplex.

678 Hypercorticism and Adrenal Suppression: Advise patients that FLOVENT DISKUS  
679 may cause systemic corticosteroid effects of hypercorticism and adrenal suppression.  
680 Additionally, inform patients that deaths due to adrenal insufficiency have occurred during and  
681 after transfer from systemic corticosteroids. Patients should taper slowly from systemic  
682 corticosteroids if transferring to FLOVENT DISKUS.

683 Immediate Hypersensitivity Reactions: Advise patients that immediate  
684 hypersensitivity reactions (e.g., urticaria, angioedema, rash, bronchospasm, hypotension),  
685 including anaphylaxis, may occur after administration of FLOVENT DISKUS. Patients should  
686 discontinue FLOVENT DISKUS if such reactions occur. There have been reports of  
687 anaphylactic reactions in patients with severe milk protein allergy after inhalation of powder  
688 products containing lactose; therefore, patients with severe milk protein allergy should not take  
689 FLOVENT DISKUS.

690 Reduction in Bone Mineral Density: Advise patients who are at an increased risk for  
691 decreased BMD that the use of corticosteroids may pose an additional risk.

692 Reduced Growth Velocity: Inform patients that orally inhaled corticosteroids, including  
693 FLOVENT DISKUS, may cause a reduction in growth velocity when administered to pediatric  
694 patients. Physicians should closely follow the growth of children and adolescents taking  
695 corticosteroids by any route.

696 Ocular Effects: Long-term use of inhaled corticosteroids may increase the risk of some  
697 eye problems (cataracts or glaucoma); consider regular eye examinations.

698 Use Daily for Best Effect: Patients should use FLOVENT DISKUS at regular intervals  
699 as directed. Individual patients will experience a variable time to onset and degree of symptom  
700 relief and the full benefit may not be achieved until treatment has been administered for 1 to  
701 2 weeks or longer. Patients should not increase the prescribed dosage but should contact their  
702 physicians if symptoms do not improve or if the condition worsens. Instruct patients not to stop  
703 use of FLOVENT DISKUS abruptly. Patients should contact their physicians immediately if  
704 they discontinue use of FLOVENT DISKUS.

705

706 DISKHALER, DISKUS, FLOVENT, and ROTADISK are registered trademarks of the GSK  
707 group of companies.

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710

711 GlaxoSmithKline

712 Research Triangle Park, NC 27709

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716 FLD:xPI

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**Patient Information**

720

721 **FLOVENT® DISKUS® [flō' vent disk' us] 50 mcg**  
722 **(fluticasone propionate inhalation powder, 50 mcg)**

723 **FLOVENT® DISKUS® 100 mcg**  
724 **(fluticasone propionate inhalation powder, 100 mcg)**

725 **FLOVENT® DISKUS® 250 mcg**  
726 **(fluticasone propionate inhalation powder, 250 mcg)**

727

728 Read the Patient Information that comes with FLOVENT DISKUS before you start  
729 using it and each time you get a refill. There may be new information. This Patient  
730 Information does not take the place of talking to your healthcare provider about  
731 your medical condition or treatment.

732

733 **What is FLOVENT DISKUS?**

734 FLOVENT DISKUS is a prescription inhaled corticosteroid (ICS) medicine for the  
735 long-term treatment of asthma in people aged 4 years and older.

- 736 • ICS medicines such as fluticasone propionate help to decrease inflammation in  
737 the lungs. Inflammation in the lungs can lead to breathing problems.
- 738 • FLOVENT DISKUS is not used to relieve sudden breathing problems.
- 739 • It is not known if FLOVENT DISKUS is safe and effective in children younger than  
740 4 years of age.

741

742 **Who should not use FLOVENT DISKUS?**

743 Do not use FLOVENT DISKUS if you:

- 744 • have a severe allergy to milk proteins. Ask your healthcare provider if you are  
745 not sure.
- 746 • are allergic to fluticasone propionate or any of the ingredients in FLOVENT  
747 DISKUS. See "What are the ingredients in FLOVENT DISKUS?" below for a  
748 complete list of ingredients.

749

750 **What should I tell my healthcare provider before using FLOVENT DISKUS?**

751 **Tell your healthcare provider about all of your health conditions, including**  
752 **if you:**

- 753 • have liver problems.
- 754 • have weak bones (osteoporosis).
- 755 • have an immune system problem.

- 756 • have eye problems such as glaucoma or cataracts.
  - 757 • are allergic to any of the ingredients in FLOVENT DISKUS, any other medicines,  
758 or food products. See “What are the ingredients in FLOVENT DISKUS?” below for  
759 a complete list of ingredients.
  - 760 • have any type of viral, bacterial, or fungal infection.
  - 761 • are exposed to chickenpox or measles.
  - 762 • have any other medical conditions.
  - 763 • are pregnant or planning to become pregnant. It is not known if FLOVENT  
764 DISKUS may harm your unborn baby.
  - 765 • are breastfeeding. It is not known if the medicine in FLOVENT DISKUS passes  
766 into your milk and if it can harm your baby.
- 767 **Tell your healthcare provider about all the medicines you take**, including  
768 prescription and over-the-counter medicines, vitamins, and herbal supplements.  
769 FLOVENT DISKUS and certain other medicines may interact with each other. This  
770 may cause serious side effects. Especially, tell your healthcare provider if you take  
771 antifungal or anti-HIV medicines.
- 772 Know the medicines you take. Keep a list of them to show your healthcare provider  
773 and pharmacist when you get a new medicine.  
774
- 775 **How should I use FLOVENT DISKUS?**
- 776 **Read the step-by-step instructions for using FLOVENT DISKUS at the end of**  
777 **this Patient Information.**
- 778 • **Do not** use FLOVENT DISKUS unless your healthcare provider has taught you  
779 how to use the inhaler and you understand how to use it correctly.
  - 780 • Children should use FLOVENT DISKUS with an adult’s help, as instructed by the  
781 child’s healthcare provider.
  - 782 • FLOVENT DISKUS comes in 3 different strengths. Your healthcare provider  
783 prescribed the strength that is best for you.
  - 784 • Use FLOVENT DISKUS exactly as your healthcare provider tells you to use it. **Do**  
785 **not** use FLOVENT DISKUS more often than prescribed.
  - 786 • It may take 1 to 2 weeks or longer after you start FLOVENT DISKUS for your  
787 asthma symptoms to get better. You must use FLOVENT DISKUS regularly.
  - 788 • **Do not** stop using FLOVENT DISKUS, even if you are feeling better, unless your  
789 healthcare provider tells you to.

- 790 • If you miss a dose of FLOVENT DISKUS, just skip that dose. Take your next dose  
791 at your usual time. Do not take 2 doses at 1 time.
- 792 • **FLOVENT DISKUS does not relieve sudden symptoms.** Always have a rescue  
793 inhaler with you to treat sudden symptoms. If you do not have a rescue inhaler,  
794 call your healthcare provider to have one prescribed for you.
- 795 • Call your healthcare provider or get medical care right away if:  
796 • your breathing problems get worse.  
797 • you need to use your rescue inhaler more often than usual.  
798 • your rescue inhaler does not work as well to relieve your symptoms.  
799 • you need to use 4 or more inhalations of your rescue inhaler in 24 hours for  
800 2 or more days in a row.  
801 • you use 1 whole canister of your rescue inhaler in 8 weeks.  
802 • your peak flow meter results decrease. Your healthcare provider will tell you  
803 the numbers that are right for you.

804

#### 805 **What are the possible side effects with FLOVENT DISKUS?**

#### 806 **FLOVENT DISKUS can cause serious side effects, including:**

- 807 • **fungal infection in your mouth or throat (thrush).** Rinse your mouth with  
808 water without swallowing after using FLOVENT DISKUS to help reduce your  
809 chance of getting thrush.
- 810 • **weakened immune system and increased chance of getting infections**  
811 **(immunosuppression)**
- 812 • **reduced adrenal function (adrenal insufficiency).** Adrenal insufficiency is a  
813 condition where the adrenal glands do not make enough steroid hormones. This  
814 can happen when you stop taking oral corticosteroid medicines (such as  
815 prednisone) and start taking a medicine containing an inhaled steroid (such as  
816 FLOVENT DISKUS). When your body is under stress such as from fever, trauma  
817 (such as a car accident), infection, or surgery, adrenal insufficiency can get  
818 worse and may cause death.
- 819 Symptoms of adrenal insufficiency include:  
820 • feeling tired  
821 • lack of energy  
822 • weakness  
823 • nausea and vomiting  
824 • low blood pressure
- 825 • **serious allergic reactions.** Call your healthcare provider or get emergency  
826 medical care if you get any of the following symptoms of a serious allergic

827 reaction:

- 828 • rash
- 829 • hives
- 830 • swelling of your face, mouth, and tongue
- 831 • breathing problems

832 • **bone thinning or weakness (osteoporosis)**

833 • **slowed growth in children.** A child's growth should be checked often.

834 • **eye problems including glaucoma and cataracts.** You should have regular  
835 eye exams while using FLOVENT DISKUS.

836 • **increased wheezing (bronchospasm).** Increased wheezing can happen right  
837 away after using FLOVENT DISKUS. Always have a rescue inhaler with you to  
838 treat sudden wheezing.

839 **Common side effects of FLOVENT DISKUS include:**

- 840 • upper respiratory tract infection
- 841 • throat irritation
- 842 • nausea and vomiting
- 843 • fever
- 844 • headache

845 Tell your healthcare provider about any side effect that bothers you or that does  
846 not go away.

847 These are not all the side effects with FLOVENT DISKUS. Ask your healthcare  
848 provider or pharmacist for more information.

849 Call your doctor for medical advice about side effects. You may report side effects  
850 to FDA at 1-800-FDA-1088.

851

852 **How should I store FLOVENT DISKUS?**

853 • Store FLOVENT DISKUS at room temperature between 68°F and 77°F (20°C and  
854 25°C). Keep in a dry place away from heat and sunlight.

855 • Store FLOVENT DISKUS in the unopened foil pouch and only open when ready  
856 for use.

857 • Safely throw away FLOVENT DISKUS 50 mcg in the trash **6 weeks** after you  
858 open the foil pouch or when the counter reads **0**, whichever comes first.

859 • Safely throw away FLOVENT DISKUS 100 mcg and FLOVENT DISKUS 250 mcg in  
860 the trash **2 months** after you open the foil pouch or when the counter reads **0**,  
861 whichever comes first.

- 862 • **Keep FLOVENT DISKUS and all medicines out of the reach of children.**

863

## 864 **General information about FLOVENT DISKUS**

865 Medicines are sometimes prescribed for purposes not mentioned in a Patient  
866 Information leaflet. Do not use FLOVENT DISKUS for a condition for which it was  
867 not prescribed. Do not give your FLOVENT DISKUS to other people, even if they  
868 have the same condition that you have. It may harm them.

869 This Patient Information leaflet summarizes the most important information about  
870 FLOVENT DISKUS. If you would like more information, talk with your healthcare  
871 provider or pharmacist. You can ask your healthcare provider or pharmacist for  
872 information about FLOVENT DISKUS that was written for healthcare professionals.

873 For more information about FLOVENT DISKUS, call 1-888-825-5249 or visit our  
874 website at [www.floventdiskus.com](http://www.floventdiskus.com).

875

## 876 **What are the ingredients in FLOVENT DISKUS?**

877 Active ingredient: fluticasone propionate

878 Inactive ingredient: lactose monohydrate (contains milk proteins)

879

880

## Instructions for Use

### 881 **For Oral Inhalation Only**

882

### 883 **Your FLOVENT DISKUS inhaler**



884

885

886

### 887 **Read this information before you start using your FLOVENT DISKUS** 888 **inhaler:**

- 889 • Take FLOVENT DISKUS out of the foil pouch just before you use it for the first  
890 time. Safely throw away the pouch. The DISKUS will be in the closed position.

- 891 • Write the date you opened the foil pouch in the first blank line on the label. **See**  
892 **Figure A.**
- 893 • Write the “use by” date in the second blank line on the label. **See Figure A.** If  
894 you are using FLOVENT DISKUS 50 mcg, that date is 6 weeks after the date you  
895 wrote in the first line. If you are using FLOVENT DISKUS 100 mcg or 250 mcg,  
896 that date is 2 months after the date you wrote in the first line.
- 897 • The counter should read **60**. If you have a sample (with “Sample” on the back  
898 label) or institutional (with “INSTITUTIONAL PACK” on the foil pouch) pack, the  
899 counter should read **28**.

900 **How to use your FLOVENT DISKUS inhaler**

901 **Follow these steps every time you use FLOVENT DISKUS.**

902 **Step 1. Open your FLOVENT DISKUS.**

- 903 • Hold the DISKUS in your left hand and place the thumb of your right hand in the  
904 thumb grip. Push the thumb grip away from you as far as it will go until the  
905 mouthpiece shows and snaps into place. **See Figure B.**

906 **Step 2. Slide the lever until you hear it click.**

- 907 • **Hold the DISKUS in a level, flat position** with the mouthpiece towards you.  
908 Slide the lever away from the mouthpiece as far as it will go until it **clicks**. **See**  
909 **Figure C.**
- 910 • The number on the counter will count down by 1. The DISKUS is now ready to  
911 use.



912  
913 **Figure B**



**Figure C**

914 Follow the instructions below so you will not accidentally waste a dose:

- 915 • **Do not** close the DISKUS.  
916 • **Do not** tilt the DISKUS.  
917 • **Do not** move the lever on the DISKUS.

918 **Step 3. Inhale your medicine.**

- 919 • Before you breathe in your dose from the DISKUS, breathe out (exhale) as long  
920 as you can while you hold the DISKUS level and away from your mouth. **See**  
921 **Figure D.** Do not breathe into the mouthpiece.
- 922 • Put the mouthpiece to your lips. **See Figure E.** Breathe in quickly and deeply  
923 through the DISKUS. Do not breathe in through your nose.



924 **Figure D**



925 **Figure E**

924  
925  
926

- 927 • Remove the DISKUS from your mouth **and hold your breath for about**  
928 **10 seconds**, or for as long as is comfortable for you.
- 929 • **Breathe out slowly as long as you can. See Figure D.**
- 930 • If your healthcare provider has told you to take more than 1 inhalation of  
931 FLOVENT DISKUS, repeat Steps 2 and 3.
- 932 • The DISKUS delivers your dose of medicine as a very fine powder that you may  
933 or may not taste or feel. **Do not** take an extra dose from the DISKUS even if  
934 you do not taste or feel the medicine.

935 **Step 4. Close the DISKUS.**

- 936 • Place your thumb in the thumb grip and slide it back towards you as far as it will  
937 go. **See Figure F.** Make sure the DISKUS clicks shut and you cannot see the  
938 mouthpiece.
- 939 • The DISKUS is now ready for you to take your next scheduled dose in about 12  
940 hours. **When you are ready to take your next dose, repeat Steps 1**  
941 **through 4.**

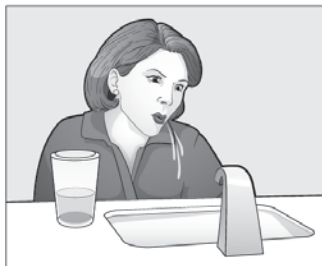


942

943 **Figure F**

944 **Step 5. Rinse your mouth.**

- 945 • **Rinse your mouth with water after breathing in the medicine.** Spit out the  
946 water. Do not swallow it. **See Figure G.**



947  
948 **Figure G**

949  
950 **When should you get a refill?**

951 The counter on top of the DISKUS shows you how many doses are left. After you  
952 have taken **55** doses (**23** doses from the sample or institutional pack), the numbers  
953 **5** to **0** will show in red. **See Figure H.** These numbers warn you there are only a  
954 few doses left and are a reminder to get a refill.  
955



956  
957 **Figure H**

958

959 **For correct use of the DISKUS, remember:**

- 960 • Always use the DISKUS in a level, flat position.  
961 • Make sure the lever firmly clicks into place.  
962 • Hold your breath for about 10 seconds after inhaling. Then breathe out fully.  
963 • After each dose, rinse your mouth with water and spit it out. Do not swallow the  
964 water.  
965 • **Do not** take an extra dose, even if you did not taste or feel the powder.  
966 • **Do not** take the DISKUS apart.  
967 • **Do not** wash the DISKUS.  
968 • Always keep the DISKUS in a dry place.  
969 • **Do not** use the DISKUS with a spacer device.

970

971 If you have questions about FLOVENT DISKUS or how to use your inhaler, call  
972 GlaxoSmithKline (GSK) at 1-888-825-5249 or visit [www.floventdiskus.com](http://www.floventdiskus.com).

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**This Patient Information and Instructions for Use have been approved by the U.S. Food and Drug Administration.**

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Research Triangle Park, NC 27709

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April 2014  
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## Patient Information

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**FLOVENT<sup>®</sup> DISKUS<sup>®</sup> [*flō' vent disk' us*] 50 mcg  
(fluticasone propionate inhalation powder, 50 mcg)**

994  
995

**FLOVENT<sup>®</sup> DISKUS<sup>®</sup> 100 mcg  
(fluticasone propionate inhalation powder, 100 mcg)**

996  
997  
998

**FLOVENT<sup>®</sup> DISKUS<sup>®</sup> 250 mcg  
(fluticasone propionate inhalation powder, 250 mcg)**

999 Read the Patient Information that comes with FLOVENT DISKUS before you start  
1000 using it and each time you get a refill. There may be new information. This Patient  
1001 Information does not take the place of talking to your healthcare provider about  
1002 your medical condition or treatment.

1003  
1004

### **What is FLOVENT DISKUS?**

1005 FLOVENT DISKUS is a prescription inhaled corticosteroid (ICS) medicine for the  
1006 long-term treatment of asthma in people aged 4 years and older.

- 1007 • ICS medicines such as fluticasone propionate help to decrease inflammation in  
1008 the lungs. Inflammation in the lungs can lead to breathing problems.

- 1009 • FLOVENT DISKUS is not used to relieve sudden breathing problems.
- 1010 • It is not known if FLOVENT DISKUS is safe and effective in children younger than
- 1011 4 years of age.

1012

1013 **Who should not use FLOVENT DISKUS?**

1014 Do not use FLOVENT DISKUS if you:

- 1015 • have a severe allergy to milk proteins. Ask your healthcare provider if you are
- 1016 not sure.
- 1017 • are allergic to fluticasone propionate or any of the ingredients in FLOVENT
- 1018 DISKUS. See “What are the ingredients in FLOVENT DISKUS?” below for a
- 1019 complete list of ingredients.

1020

1021 **What should I tell my healthcare provider before using FLOVENT DISKUS?**

1022 **Tell your healthcare provider about all of your health conditions, including**

1023 **if you:**

- 1024 • have liver problems.
- 1025 • have weak bones (osteoporosis).
- 1026 • have an immune system problem.
- 1027 • have eye problems such as glaucoma or cataracts.
- 1028 • are allergic to any of the ingredients in FLOVENT DISKUS, any other medicines,
- 1029 or food products. See “What are the ingredients in FLOVENT DISKUS?” below for
- 1030 a complete list of ingredients.
- 1031 • have any type of viral, bacterial, or fungal infection.
- 1032 • are exposed to chickenpox or measles.
- 1033 • have any other medical conditions.
- 1034 • are pregnant or planning to become pregnant. It is not known if FLOVENT
- 1035 DISKUS may harm your unborn baby.
- 1036 • are breastfeeding. It is not known if the medicine in FLOVENT DISKUS passes
- 1037 into your milk and if it can harm your baby.

1038 **Tell your healthcare provider about all the medicines you take,** including

1039 prescription and over-the-counter medicines, vitamins, and herbal supplements.

1040 FLOVENT DISKUS and certain other medicines may interact with each other. This

1041 may cause serious side effects. Especially, tell your healthcare provider if you take

1042 antifungal or anti-HIV medicines.

1043 Know the medicines you take. Keep a list of them to show your healthcare provider  
1044 and pharmacist when you get a new medicine.

1045

1046 **How should I use FLOVENT DISKUS?**

1047 **Read the step-by-step instructions for using FLOVENT DISKUS at the end of**  
1048 **this Patient Information.**

- 1049 • **Do not** use FLOVENT DISKUS unless your healthcare provider has taught you  
1050 how to use the inhaler and you understand how to use it correctly.
- 1051 • Children should use FLOVENT DISKUS with an adult's help, as instructed by the  
1052 child's healthcare provider.
- 1053 • FLOVENT DISKUS comes in 3 different strengths. Your healthcare provider  
1054 prescribed the strength that is best for you.
- 1055 • Use FLOVENT DISKUS exactly as your healthcare provider tells you to use it. **Do**  
1056 **not** use FLOVENT DISKUS more often than prescribed.
- 1057 • It may take 1 to 2 weeks or longer after you start FLOVENT DISKUS for your  
1058 asthma symptoms to get better. You must use FLOVENT DISKUS regularly.
- 1059 • **Do not** stop using FLOVENT DISKUS, even if you are feeling better, unless your  
1060 healthcare provider tells you to.
- 1061 • If you miss a dose of FLOVENT DISKUS, just skip that dose. Take your next dose  
1062 at your usual time. Do not take 2 doses at 1 time.
- 1063 • **FLOVENT DISKUS does not relieve sudden symptoms.** Always have a  
1064 rescue inhaler with you to treat sudden symptoms. If you do not have a rescue  
1065 inhaler, call your healthcare provider to have one prescribed for you.
- 1066 • Call your healthcare provider or get medical care right away if:  
1067 • your breathing problems get worse.  
1068 • you need to use your rescue inhaler more often than usual.  
1069 • your rescue inhaler does not work as well to relieve your symptoms.  
1070 • you need to use 4 or more inhalations of your rescue inhaler in 24 hours for  
1071 2 or more days in a row.  
1072 • you use 1 whole canister of your rescue inhaler in 8 weeks.  
1073 • your peak flow meter results decrease. Your healthcare provider will tell you  
1074 the numbers that are right for you.

1075

1076 **What are the possible side effects with FLOVENT DISKUS?**

1077 **FLOVENT DISKUS can cause serious side effects, including:**

- 1078 • **fungal infection in your mouth or throat (thrush)**. Rinse your mouth with  
1079 water without swallowing after using FLOVENT DISKUS to help reduce your  
1080 chance of getting thrush.
- 1081 • **weakened immune system and increased chance of getting infections**  
1082 **(immunosuppression)**
- 1083 • **reduced adrenal function (adrenal insufficiency)**. Adrenal insufficiency is a  
1084 condition where the adrenal glands do not make enough steroid hormones. This  
1085 can happen when you stop taking oral corticosteroid medicines (such as  
1086 prednisone) and start taking a medicine containing an inhaled steroid (such as  
1087 FLOVENT DISKUS). When your body is under stress such as from fever, trauma  
1088 (such as a car accident), infection, or surgery, adrenal insufficiency can get  
1089 worse and may cause death.
- 1090 Symptoms of adrenal insufficiency include:
- 1091 • feeling tired
- 1092 • lack of energy
- 1093 • weakness
- 1094 • nausea and vomiting
- 1095 • low blood pressure
- 1096 • **serious allergic reactions**. Call your healthcare provider or get emergency  
1097 medical care if you get any of the following symptoms of a serious allergic  
1098 reaction:
- 1099 • rash
- 1100 • hives
- 1101 • swelling of your face, mouth, and tongue
- 1102 • breathing problems
- 1103 • **bone thinning or weakness (osteoporosis)**
- 1104 • **slowed growth in children**. A child's growth should be checked often.
- 1105 • **eye problems including glaucoma and cataracts**. You should have regular  
1106 eye exams while using FLOVENT DISKUS.
- 1107 • **increased wheezing (bronchospasm)**. Increased wheezing can happen right  
1108 away after using FLOVENT DISKUS. Always have a rescue inhaler with you to  
1109 treat sudden wheezing.
- 1110 **Common side effects of FLOVENT DISKUS include:**
- 1111 • upper respiratory tract infection
- 1112 • throat irritation
- 1113 • nausea and vomiting
- 1114 • fever

1115 • headache

1116 Tell your healthcare provider about any side effect that bothers you or that does  
1117 not go away.

1118 These are not all the side effects with FLOVENT DISKUS. Ask your healthcare  
1119 provider or pharmacist for more information.

1120 Call your doctor for medical advice about side effects. You may report side effects  
1121 to FDA at 1-800-FDA-1088.

1122

### 1123 **How should I store FLOVENT DISKUS?**

1124 • Store FLOVENT DISKUS at room temperature between 68°F and 77°F (20°C and  
1125 25°C). Keep in a dry place away from heat and sunlight.

1126 • Store FLOVENT DISKUS in the unopened foil pouch and only open when ready  
1127 for use.

1128 • Safely throw away FLOVENT DISKUS 50 mcg in the trash **6 weeks** after you  
1129 open the foil pouch or when the counter reads **0**, whichever comes first.

1130 • Safely throw away FLOVENT DISKUS 100 mcg and FLOVENT DISKUS 250 mcg in  
1131 the trash **2 months** after you open the foil pouch or when the counter reads **0**,  
1132 whichever comes first.

1133 • **Keep FLOVENT DISKUS and all medicines out of the reach of children.**

1134

### 1135 **General information about FLOVENT DISKUS**

1136 Medicines are sometimes prescribed for purposes not mentioned in a Patient  
1137 Information leaflet. Do not use FLOVENT DISKUS for a condition for which it was  
1138 not prescribed. Do not give your FLOVENT DISKUS to other people, even if they  
1139 have the same condition that you have. It may harm them.

1140 This Patient Information leaflet summarizes the most important information about  
1141 FLOVENT DISKUS. If you would like more information, talk with your healthcare  
1142 provider or pharmacist. You can ask your healthcare provider or pharmacist for  
1143 information about FLOVENT DISKUS that was written for healthcare professionals.

1144 For more information about FLOVENT DISKUS, call 1-888-825-5249 or visit our  
1145 website at [www.floventdiskus.com](http://www.floventdiskus.com).

1146

### 1147 **What are the ingredients in FLOVENT DISKUS?**

1148 Active ingredient: fluticasone propionate

1149 Inactive ingredient: lactose monohydrate (contains milk proteins)

1150

1151

## Instructions for Use

1152 **For Oral Inhalation Only**

1153

1154 **Your FLOVENT DISKUS inhaler**



Figure A

1155

1156

1157

1158 **Read this information before you start using your FLOVENT DISKUS**  
1159 **inhaler:**

- 1160
- 1161 • Take FLOVENT DISKUS out of the foil pouch just before you use it for the first time. Safely throw away the pouch. The DISKUS will be in the closed position.
  - 1162 • Write the date you opened the foil pouch in the first blank line on the label. **See**  
1163 **Figure A.**
  - 1164 • Write the “use by” date on the second blank line in the label. **See Figure A.** If  
1165 you are using FLOVENT DISKUS 50 mcg, that date is 6 weeks after the date  
1166 you wrote in the first line. If you are using FLOVENT DISKUS 100 mcg or 250  
1167 mcg, that date is 2 months after the date you wrote in the first line.
  - 1168 • The counter should read **60**. If you have a sample (with “Sample” on the back  
1169 label) or institutional (with “INSTITUTIONAL PACK” on the foil pouch) pack, the  
1170 counter should read **28**.

1171

1172 **How to use your FLOVENT DISKUS inhaler**

1173 **Follow these steps every time you use FLOVENT DISKUS.**

1174 **Step 1. Open your FLOVENT DISKUS.**

- 1175
- 1176 • Hold the DISKUS in your left hand and place the thumb of your right hand in the  
1177 thumb grip. Push the thumb grip away from you as far as it will go until the  
mouthpiece shows and snaps into place. **See Figure B.**

1178 **Step 2. Slide the lever until you hear it click.**

1179 • **Hold the DISKUS in a level, flat position** with the mouthpiece towards you.  
1180 Slide the lever away from the mouthpiece as far as it will go until it **clicks**. **See**  
1181 **Figure C.**

1182 • The number on the counter will count down by 1. The DISKUS is now ready to  
1183 use.



1184  
1185 **Figure B**



**Figure C**

1186 Follow the instructions below so you will not accidentally waste a dose:

- 1187 • **Do not** close the DISKUS.  
1188 • **Do not** tilt the DISKUS.  
1189 • **Do not** move the lever on the DISKUS.

1190 **Step 3. Inhale your medicine.**

1191 • Before you breathe in your dose from the DISKUS, breathe out (exhale) as long  
1192 as you can while you hold the DISKUS level and away from your mouth. **See**  
1193 **Figure D.** Do not breathe into the mouthpiece.

1194 • Put the mouthpiece to your lips. **See Figure E.** Breathe in quickly and deeply  
1195 through the DISKUS. Do not breathe in through your nose.



1196  
1197 **Figure D**



**Figure E**

1199 • Remove the DISKUS from your mouth **and hold your breath for about**  
1200 **10 seconds**, or for as long as is comfortable for you.

- 1201 • **Breathe out slowly as long as you can. See Figure D.**
- 1202 • If your healthcare provider has told you to take more than 1 inhalation of
- 1203 FLOVENT DISKUS, repeat Steps 2 and 3.
- 1204 • The DISKUS delivers your dose of medicine as a very fine powder that you may
- 1205 or may not taste or feel. **Do not** take an extra dose from the DISKUS if you do
- 1206 not taste or feel the medicine.

1207 **Step 4. Close the DISKUS.**

- 1208 • Place your thumb in the thumb grip and slide it back towards you as far as it will
- 1209 go. **See Figure F.** Make sure the DISKUS **clicks** shut and you cannot see the
- 1210 mouthpiece.
- 1211 • The DISKUS is now ready for you to take your next scheduled dose in about 12
- 1212 hours. **When you are ready to take your next dose, repeat Steps 1**
- 1213 **through 4.**



1214 **Figure F**

1215

1216 **Step 5. Rinse your mouth.**

1217

- 1218 • **Rinse your mouth with water after breathing in the medicine.** Spit out the
- 1219 water. Do not swallow it. **See Figure G.**



1220 **Figure G**

1221

1222

1223 **When should you get a refill?**

1224 The counter on top of the DISKUS shows you how many doses are left. After you

1225 have taken **55** doses (**23** doses from the sample or institutional pack), the numbers

1226 **5** to **0** will show in red. **See Figure H.** These numbers warn you there are only a

1227 few doses left and are a reminder to get a refill.

1228



1229

1230

**Figure H**

1231

1232

**For correct use of the DISKUS, remember:**

1233

- Always use the DISKUS in a level, flat position.

1234

- Make sure the lever firmly clicks into place.

1235

- Hold your breath for about 10 seconds after inhaling. Then breathe out fully.

1236

- After each dose, rinse your mouth with water and spit it out. Do not swallow the water.

1237

1238

- **Do not** take an extra dose, even if you did not taste or feel the powder.

1239

- **Do not** take the DISKUS apart.

1240

- **Do not** wash the DISKUS.

1241

- Always keep the DISKUS in a dry place.

1242

- **Do not** use the DISKUS with a spacer device.

1243

1244

If you have questions about FLOVENT DISKUS or how to use your inhaler, call

1245

GlaxoSmithKline (GSK) at 1-888-825-5249 or visit [www.floventdiskus.com](http://www.floventdiskus.com).

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1247

**This Patient Information and Instructions for Use have been approved by the U.S. Food and Drug Administration.**

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GlaxoSmithKline

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