

**ROPINIROLE- ropinirole tablet, film coated, extended release**  
**Dr. Reddys Laboratories Limited**

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**HIGHLIGHTS OF PRESCRIBING INFORMATION**

**These highlights do not include all the information needed to use ROPINIROLE EXTENDED-RELEASE TABLETS safely and effectively. See full prescribing information for ROPINIROLE EXTENDED-RELEASE TABLETS.**

**ROPINIROLE extended-release tablets, for oral use**

**Initial U.S. Approval: 1997**

----- **RECENT MAJOR CHANGES** -----

Dosage and Administration (2.2) 3/2017

Warnings and Precautions (5.1, 5.2, 5.3, 5.4, 5.5, 5.6) 3/2017

----- **INDICATIONS AND USAGE** -----

Ropinirole extended-release tablets are non-ergoline dopamine agonist indicated for the treatment of Parkinson's disease. (1)

----- **DOSAGE AND ADMINISTRATION** -----

- Ropinirole extended-release tablets are taken once daily, with or without food; tablets must be swallowed whole and must not be chewed, crushed, or divided (2.1)
- The recommended starting dose is 2 mg taken once daily for 1 to 2 weeks, the dose should be increased by 2 mg/day at 1 week or longer intervals. The maximum recommended dose of ropinirole extended release tablets is 24 mg/day (2.2, 14.2)
- Renal Impairment: In patients with end-stage renal disease on hemodialysis, the maximum recommended dose is 18 mg/day (2.2)
- If ropinirole extended-release tablets must be discontinued, it should be tapered gradually over a 7-day period, retitration of ropinirole extended-release tablets may be warranted if therapy is interrupted (2.1, 2.2)
- Patients may be switched directly from immediate-release ropinirole to ropinirole extended-release tablets, the initial switching dose of ropinirole extended-release tablets should approximately match the total daily dose of immediate-release ropinirole (2.3)

----- **DOSAGE FORMS AND STRENGTHS** -----

Tablets: 2 mg, 4 mg, 6 mg, 8 mg, and 12 mg (3)

----- **CONTRAINDICATIONS** -----

History of hypersensitivity/allergic reaction (including urticaria, angioedema, rash, pruritus) to ropinirole or to any of the excipients (4)

----- **WARNINGS AND PRECAUTIONS** -----

- Sudden onset of sleep and somnolence may occur (5.1)
- Syncope may occur (5.2)
- Hypotension, including orthostatic hypotension may occur (5.3)
- Elevation of blood pressure and changes in heart rate may occur (5.4)
- May cause hallucinations and psychotic-like behaviors (5.5)
- May cause or exacerbate dyskinesia (5.6)
- May cause problems with impulse control or compulsive behaviors (5.7)

----- **ADVERSE REACTIONS** -----

- Most common adverse reactions (incidence for ropinirole extended-release tablets all doses at least 5% greater than placebo in either a flexible-dose study) in patients with advanced Parkinson's disease were nausea, dyskinesia, dizziness, and hallucination (6.1)
- In a flexible-dose study in patients with early Parkinson's, the most common adverse reactions (at least 5% incidence for ropinirole extended-release tablets) were nausea, somnolence, abdominal pain/discomfort, dizziness, headache, and constipation. (6.1)

**To report SUSPECTED ADVERSE REACTIONS, contact Dr. Reddy's Laboratories Inc. at 1-888-375-3784 or FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch).**

----- **DRUG INTERACTIONS** -----

- Inhibitors or inducers of CYP1A2: May alter the clearance of ropinirole; dose adjustment of ropinirole extended-release tablets may be required (7.1, 12.3)
- Hormone replacement therapy (HRT): Starting or stopping HRT treatment may require dose adjustment of ropinirole extended-release tablets (7.2, 12.3)

- Dopamine antagonists (e.g., neuroleptics, metoclopramide): May reduce efficacy of ropinirole extended-release tablets (7.3)

-----USE IN SPECIFIC POPULATIONS -----

Pregnancy: Based on animal data, may cause fetal harm. (8.1)

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

Revised: 8/2017

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## **FULL PRESCRIBING INFORMATION**

### **1 INDICATIONS AND USAGE**

#### **1.1 Parkinson's Disease**

Ropinirole extended-release tablets are indicated for the treatment of Parkinson's disease.

### **2 DOSAGE AND ADMINISTRATION**

#### **2.1 General Dosing Recommendations**

- Ropinirole extended-release tablets are taken once daily, with or without food [see **Clinical Pharmacology (12.3)**].
- Tablets must be swallowed whole and must not be chewed, crushed, or divided.
- If a significant interruption in therapy with ropinirole extended-release tablets has occurred, retitration of therapy may be warranted.

#### **2.2 Dosing for Parkinson's Disease**

The recommended starting dose of ropinirole extended-release tablets is 2 mg taken once daily for 1 to 2 weeks, followed by increases of 2 mg/day at weekly or longer intervals, based on therapeutic response and tolerability. Monitor patients at least weekly during dose titration. Too rapid a rate of titration may lead to the selection of a dose that does not provide additional benefit, but increases the risk of adverse reactions.

Ropinirole extended-release tablets should be discontinued gradually over a 7-day period.

#### **Renal Impairment**

No dose adjustment is necessary in patients with moderate renal impairment (creatinine clearance of 30 to 50 mL/min). The recommended initial dose of ropinirole extended-release tablets for patients with end-stage renal disease on hemodialysis is 2 mg once daily. Further dose escalations should be based on tolerability and need for efficacy. The recommended maximum total daily dose is 18 mg/day in patients receiving regular dialysis. Supplemental doses after dialysis are not required. The use of ropinirole extended-release tablets in patients with severe renal impairment without regular dialysis has not been studied.

#### **2.3 Switching from Immediate-Release Ropinirole Tablets to Ropinirole Extended-Release Tablets**

Patients may be switched directly from immediate-release ropinirole to ropinirole extended-release

tablets. The initial dose of ropinirole extended-release tablets should approximately match the total daily dose of the immediate-release formulation of ropinirole, as shown in Table 1.

**Table 1. Conversion from Immediate-Release Ropinirole Tablets to Ropinirole Extended-Release Tablets**

Immediate-Release Ropinirole Tablets Total Daily Dose (mg)	Ropinirole Extended-Release Tablets Total Daily Dose (mg)
0.75 to 2.25	2
3 to 4.5	4
6	6
7.5 to 9	8
12	12
15	16
18	18
21	20
24	24

Following conversion to ropinirole extended-release tablets, the dose may be adjusted depending on therapeutic response and tolerability [see **Dosage and Administration (2.2)**].

#### **2.4 Effect of Gastrointestinal Transit Time on Medication Release**

Ropinirole extended-release tablets are designed to release medication over a 24-hour period. If rapid gastrointestinal transit occurs, there may be risk of incomplete release of medication and medication residue being passed in the stool.

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

**2 mg:** pink colored, capsule shaped, biconvex, film coated tablets debossed 'R2' on one side and plain on the other side.

**4 mg:** light brown colored, capsule shaped, biconvex, film coated tablets debossed 'R4' on one side and plain on the other side.

**6 mg:** white colored, capsule shaped, biconvex, film coated tablets debossed 'R6' on one side and plain on the other side.

**8 mg:** brick red colored, capsule shaped, biconvex, film coated tablets debossed 'R8' on one side and plain on the other side.

**12 mg:** light green colored, capsule shaped, biconvex, film coated tablets debossed 'R12' on one side and plain on the other side.

### **4 CONTRAINDICATIONS**

Ropinirole extended-release tablets are contraindicated in patients known to have a hypersensitivity/allergic reaction (including urticaria, angioedema, rash, pruritus) to ropinirole or any of the excipients.

### **5 WARNINGS AND PRECAUTIONS**

## 5.1 Falling Asleep during Activities of Daily Living and Somnolence

Patients treated with ropinirole extended-release tablets have reported falling asleep while engaged in activities of daily living, including driving or operating machinery, which sometimes resulted in accidents. Although many of these patients reported somnolence while on ropinirole, some perceived that they had no warning signs such as excessive drowsiness, and believed that they were alert immediately prior to the event. Some have reported these events more than 1 year after initiation of treatment. Among the 613 patients who received ropinirole extended-release tablets in flexible-dose clinical trials (Study 1 and Study 3), <1% of patients reported sudden onset of sleep and < 1% of patients reported a motor vehicle accident in which it is not known if falling asleep was a contributing factor. During a placebo-controlled flexible-dose trial in patients with advanced Parkinson's disease (Study 1), somnolence was reported in 7% of 202 patients on ropinirole extended-release tablets compared with 4% of 191 patients on placebo. During a flexible-dose, active-control, crossover trial in early Parkinson's disease (Study 3), somnolence was reported in 11% of 140 patients on ropinirole extended-release tablets compared with 15% of 149 patients on an immediate-release formulation of ropinirole tablets [see **Adverse Reactions (6.1)**].

It has been reported that falling asleep while engaged in activities of daily living usually occurs in a setting of pre-existing somnolence, although patients may not give such a history. For this reason, prescribers should reassess patients for drowsiness or sleepiness, especially since some of the events occur well after the start of treatment. Prescribers should also be aware that patients may not acknowledge drowsiness or sleepiness until directly questioned about drowsiness or sleepiness during specific activities. Before initiating treatment with ropinirole extended-release tablets, patients should be advised of the potential to develop drowsiness and specifically asked about factors that may increase the risk with ropinirole extended-release tablets such as concomitant sedating medications or alcohol, the presence of sleep disorders, and concomitant medications that increase ropinirole plasma levels (e.g., ciprofloxacin) [see **Drug Interactions (7.1)**]. If a patient develops significant daytime sleepiness or episodes of falling asleep during activities that require active participation (e.g., driving a motor vehicle, conversations, eating), ropinirole extended-release tablets should ordinarily be discontinued [see **Dosage and Administration (2.2)**]. If a decision is made to continue ropinirole extended-release tablets, patients should be advised to not drive and to avoid other potentially dangerous activities. There is insufficient information to establish that dose reduction will eliminate episodes of falling asleep while engaged in activities of daily living.

## 5.2 Syncope

Syncope, sometimes associated with bradycardia, was observed in association with treatment with ropinirole extended-release tablets in patients with Parkinson's disease.

In a placebo-controlled flexible-dose trial in patients with advanced Parkinson's disease (Study 1), syncope occurred in 1% of patients on ropinirole extended-release tablets compared with 0% of patients on placebo [see **Adverse Reactions (6.1)**].

Because the trials conducted with ropinirole extended-release tablets excluded patients with significant cardiovascular disease, patients with significant cardiovascular disease should be treated with caution.

## 5.3 Hypotension/Orthostatic Hypotension

Patients with Parkinson's disease may have impaired ability to respond normally to a fall in blood pressure after standing from lying down or seated position. Patients on ropinirole extended-release tablets should be monitored for signs and symptoms of orthostatic hypotension, especially during dose escalation, and should be informed of the risk for syncope and hypotension [see **Patient Counseling Information (17)**].

In a placebo-controlled flexible-dose trial in patients with advanced Parkinson's disease (Study 1), hypotension was reported as an adverse reaction in 2% of patients on ropinirole extended-release tablets, compared with 0% of patients on placebo. In this study, orthostatic hypotension was reported as

an adverse reaction in 5% of patients on ropinirole extended-release tablets, and 1% of patients on placebo [see **Adverse Reactions (6.1)**]. Some patients experienced hypotension or orthostatic hypotension that started in the titration and persisted into the maintenance period. There was also a higher incidence for the combined adverse reaction terms of “hypotension”, “orthostatic hypotension”, “dizziness”, “vertigo”, and “blood pressure decreased” in 7% of patients on ropinirole extended-release tablets compared with 3% of patients on placebo. The increased incidence of those events with ropinirole extended-release tablets was observed in a setting in which patients were very carefully titrated, and patients with clinically relevant cardiovascular disease or symptomatic orthostatic hypotension at baseline had been excluded from this trial. The frequency of orthostatic hypotension (systolic blood pressure decrements  $\geq 20$  mm Hg) at any time during the trial was 38% for ropinirole extended-release tablets vs. 31% for placebo.

Significant decrements in blood pressure unrelated to standing were also reported in some patients taking ropinirole extended-release tablets.

#### **5.4 Elevation of Blood Pressure and Changes in Heart Rate**

The potential for elevation in blood pressure and changes in heart rate should be considered when treating patients with cardiovascular disease with ropinirole extended-release tablets.

In a placebo-controlled flexible-dose trial in patients with advanced Parkinson’s disease (Study 1), the frequency of systolic blood pressure increase ( $\geq 40$  mm Hg) in the semi-supine position was 8% of patients on ropinirole extended-release tablets vs. 5% of patients on placebo. In the standing position, the frequency of systolic blood pressure increase ( $\geq 40$  mm Hg) was 9% for ropinirole extended-release tablets vs. 6% for placebo. There was no clear effect of ropinirole extended-release tablets on average heart rate.

#### **5.5 Hallucinations/Psychotic-like Behavior**

In a placebo-controlled flexible-dose trial in patients with advanced Parkinson’s disease (Study 1), 8% of patients on ropinirole extended-release tablets reported hallucination, compared with 2% of patients on placebo [see **Adverse Reactions (6.1)**]. Hallucinations led to discontinuation of treatment in 2% of patients on ropinirole extended-release tablets and 1% of patients on placebo. The incidence of hallucination was increased in elderly patients (i.e., older than 65 years) treated with ropinirole extended-release tablets [see **Use in Specific Populations (8.5)**].

Postmarketing reports indicate that patients may experience new or worsening mental status and behavioral changes, which may be severe, including psychotic-like behavior during treatment with ropinirole or after starting or increasing the dose of ropinirole. Other drugs prescribed to improve the symptoms of Parkinson’s disease can have similar effects on thinking and behavior. This abnormal thinking and behavior can consist of one or more of a variety of manifestations including paranoid ideation, delusions, hallucinations, confusion, psychotic-like behavior, disorientation, aggressive behavior, agitation, and delirium.

Patients with a major psychotic disorder should ordinarily not be treated with ropinirole extended-release tablets because of the risk of exacerbating the psychosis. In addition, certain medications used to treat psychosis may exacerbate the symptoms of Parkinson’s disease and may decrease the effectiveness of ropinirole extended-release tablets [see **Drug Interactions (7.3)**].

#### **5.6 Dyskinesia**

Ropinirole extended-release tablets may cause or exacerbate pre-existing dyskinesia in patients treated with L-dopa for Parkinson’s disease.

In a placebo-controlled flexible-dose trial in patients with advanced Parkinson’s disease (Study 1), the incidence of dyskinesia was 13% in patients on ropinirole extended-release tablets and 3% in patients on placebo [see **Adverse Reactions (6.1)**].

Decreasing the dose of the dopaminergic drug may ameliorate this adverse reaction.

### **5.7 Impulse Control/Compulsive Behaviors**

Reports suggest that patients can experience intense urges to gamble, increased sexual urges, intense urges to spend money, binge or compulsive eating, and/or other intense urges, and the inability to control these urges while taking one or more of the medications, including ropinirole extended-release tablets, that increase central dopaminergic tone and that are generally used for the treatment of Parkinson's disease. In some cases, although not all, these urges were reported to have stopped when the dose was reduced or the medication was discontinued. Because patients may not recognize these behaviors as abnormal, it is important for prescribers to specifically ask patients or their caregivers about the development of new or increased gambling urges, sexual urges, uncontrolled spending, binge or compulsive eating, or other urges while being treated with ropinirole extended-release tablets. Physicians should consider dose reduction or stopping the medication if a patient develops such urges while taking ropinirole extended-release tablets.

### **5.8 Withdrawal-Emergent Hyperpyrexia and Confusion**

A symptom complex resembling the neuroleptic malignant syndrome (characterized by elevated temperature, muscular rigidity, altered consciousness, and autonomic instability), with no other obvious etiology, has been reported in association with rapid dose reduction, withdrawal of, or changes in, dopaminergic therapy. Therefore, it is recommended that the dose be tapered at the end of treatment with ropinirole extended-release tablets as a prophylactic measure [see **Dosage and Administration (2.2)**].

### **5.9 Melanoma**

Epidemiological studies have shown that patients with Parkinson's disease have a higher risk (2-to approximately 6-fold higher) of developing melanoma than the general population. Whether the increased risk observed was due to Parkinson's disease or other factors, such as drugs used to treat Parkinson's disease, is unclear. In the clinical development program (N = 613), one patient treated with ropinirole extended-release tablets and also levodopa/carbidopa developed melanoma.

For the reasons stated above, patients and providers are advised to monitor for melanomas frequently and on a regular basis when using ropinirole extended-release tablets. Ideally, periodic skin examinations should be performed by appropriately qualified individuals (e.g., dermatologists).

### **5.10 Fibrotic Complications**

Cases of retroperitoneal fibrosis, pulmonary infiltrates, pleural effusion, pleural thickening, pericarditis, and cardiac valvulopathy have been reported in some patients treated with ergot-derived dopaminergic agents. While these complications may resolve when the drug is discontinued, complete resolution does not always occur.

Although these adverse reactions are believed to be related to the ergoline structure of these compounds, whether other, non-ergot-derived dopamine agonists such as ropinirole, can cause them is unknown.

Cases of possible fibrotic complications, including pleural effusion, pleural fibrosis, interstitial lung disease, and cardiac valvulopathy have been reported in the development program and postmarketing experience for ropinirole. In the clinical development program (N=613), 2 patients treated with ropinirole extended-release tablets had pleural effusion. While the evidence is not sufficient to establish a causal relationship between ropinirole and these fibrotic complications, a contribution of ropinirole cannot be excluded.

### **5.11 Retinal Pathology**

Retinal degeneration was observed in albino rats in the 2-year carcinogenicity study at all doses tested.

The lowest dose tested (1.5 mg/kg/day) is less than the maximum recommended human dose (MRHD) of 24 mg/day on a mg/m<sup>2</sup> basis. Retinal degeneration was not observed in a 3-month study in pigmented rats, in a 2-year carcinogenicity study in albino mice, or in 1-year studies in monkeys or albino rats. The significance of this effect for humans has not been established, but involves disruption of a mechanism that is universally present in vertebrates (e.g., disk shedding).

Ocular electroretinogram (ERG) assessments were conducted during a 2-year, double-blind, multicenter, flexible-dose, L-dopa-controlled clinical trial of immediate-release ropinirole in patients with Parkinson's disease; 156 patients (78 on immediate-release ropinirole, mean dose: 11.9 mg/day and 78 on L-dopa, mean dose: 555.2 mg/day) were evaluated for evidence of retinal dysfunction through electroretinograms. There was no clinically meaningful difference between the treatment groups in retinal function over the duration of the trial.

## 5.12 Binding to Melanin

Ropinirole binds to melanin-containing tissues (e.g., eyes, skin) in pigmented rats. After a single dose, long-term retention of drug was demonstrated, with a half-life in the eye of 20 days.

## 6 ADVERSE REACTIONS

The following adverse reactions are described in more detail in other sections of the label:

- Hypersensitivity [see **Contraindications (4)**]
- Falling Asleep during Activities of Daily Living and Somnolence [see **Warnings and Precautions (5.1)**]
- Syncope [see **Warnings and Precautions (5.2)**]
- Hypotension/Orthostatic Hypotension [see **Warnings and Precautions (5.3)**]
- Elevation of Blood Pressure and Changes in Heart Rate [see **Warnings and Precautions (5.4)**]
- Hallucinations/Psychotic-like Behavior [see **Warnings and Precautions (5.5)**]
- Dyskinesia [see **Warnings and Precautions (5.6)**]
- Impulse Control/Compulsive Behaviors [see **Warnings and Precautions (5.7)**]
- Withdrawal-Emergent Hyperpyrexia and Confusion [see **Warnings and Precautions (5.8)**]
- Melanoma [see **Warnings and Precautions (5.9)**]
- Fibrotic Complications [see **Warnings and Precautions (5.10)**]
- Retinal Pathology [see **Warnings and Precautions (5.11)**]

### 6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared with rates in the clinical trials of another drug (or of another development program of a different formulation of the same drug) and may not reflect the rates observed in practice.

During the premarketing development of ropinirole extended-release tablets, patients with advanced Parkinson's disease received ropinirole extended-release tablets or placebo as adjunctive therapy with L-dopa in a flexible-dose clinical trial. In a flexible-dose trial, patients with early Parkinson's disease were treated with ropinirole extended-release tablets or the immediate-release formulation of ropinirole tablets without L-dopa.

#### Advanced Parkinson's Disease (with L-dopa)

Study 1 was a 24-week, double-blind, placebo-controlled, flexible-dose trial in patients with advanced Parkinson's disease. In Study 1, the most commonly observed adverse reactions in patients treated with ropinirole extended-release tablets (incidence at least 5% greater than placebo) were dyskinesia, nausea, dizziness, and hallucinations.

In Study 1, approximately 6% of patients treated with ropinirole extended-release tablets discontinued



treatment due to adverse reactions compared with 5% of patients who received placebo. The most common adverse reaction in patients treated with ropinirole extended-release tablets causing discontinuation of treatment with ropinirole extended-release tablets was hallucination (2%).

Table 2 lists adverse reactions that occurred in at least 2% (and were numerically greater than placebo) of patients with advanced Parkinson's disease treated with ropinirole extended-release tablets who participated in Study 1. In this trial, either ropinirole extended-release tablets or placebo was used as an adjunct to L-dopa.

**Table 2. Incidence of Adverse Reactions in a Placebo-Controlled Flexible-Dose Trial in Advanced Stage Parkinson's Disease in Patients Taking L-dopa (Study 1) (Events  $\geq$ 2% of Patients Treated with Ropinirole Extended-Release Tablets and More Common than on Placebo)<sup>a</sup>**

Body System/Adverse Reaction	Ropinirole Extended-Release Tablets (n = 202) %	Placebo (n = 191) %
Ear and labyrinth disorders		
Vertigo	4	2
Gastrointestinal disorders		
Nausea	11	4
Abdominal pain/discomfort	6	3
Constipation	4	2
Diarrhea	3	2
Dry mouth	2	<1
General disorders		
Edema peripheral	4	1
Injury, poisoning, and procedural complications		
Fall <sup>b</sup>	2	1
Musculoskeletal and connective tissue disorders		
Back pain	3	2
Nervous system disorders		
Dyskinesia <sup>b</sup>	13	3
Dizziness	8	3
Somnolence	7	4
Psychiatric disorders		
Hallucination	8	2
Anxiety	2	1
Vascular disorders		
Orthostatic hypotension	5	1
Hypertension <sup>b</sup>	3	2
Hypotension	2	0

<sup>a</sup> Patients may have reported multiple adverse reactions during the trial or at discontinuation; thus, patients may be included in more than one category.

<sup>b</sup> Dose-related.

Although this trial was not designed for optimally characterizing dose-related adverse reactions, there was a suggestion (based upon comparison of incidence of adverse reactions across dose ranges for ropinirole extended-release tablets and placebo) that the incidence for dyskinesia, hypertension, and fall was dose-related to ropinirole extended-release tablets.

During the titration phase, the incidence of adverse reactions in descending order of percent treatment

difference was dyskinesia, nausea, abdominal pain/discomfort, orthostatic hypotension, dizziness, vertigo, hypertension, peripheral edema, and dry mouth. During the maintenance phase, the most frequently observed adverse reactions were dyskinesia, nausea, dizziness, hallucination, somnolence, fall, hypertension, abnormal dreams, constipation, chest pain, bronchitis, and nasopharyngitis. Some adverse reactions developing in the titration phase persisted ( $\geq 7$  days) into the maintenance phase. These “persistent” adverse reactions included dyskinesia, hallucination, orthostatic hypotension, and dry mouth.

### Early Parkinson’s Disease (without L-dopa)

Study 3 was a 36-week, flexible-dose crossover trial in patients with early Parkinson’s disease who were first treated with ropinirole extended-release tablets or the immediate-release formulation of ropinirole tablets and then crossed over to treatment with the other formulation. In Study 3, the most commonly observed adverse reactions ( $\geq 5\%$ ) in patients treated with ropinirole extended-release tablets were nausea (19%), somnolence (11%), abdominal pain/discomfort (7%), dizziness (6%), headache (6%), and constipation (5%).

## **6.2 Adverse Reactions Observed during the Clinical Development of the Immediate-Release Formulation of Ropinirole Tablets for Parkinson’s Disease (Advanced and Early)**

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared with rates in the clinical trials of another drug (or of another development program of a different formulation of the same drug) and may not reflect the rates observed in practice.

In patients with advanced Parkinson's disease who were treated with the immediate-release formulation of ropinirole tablets, the most common adverse reactions ( $\geq 5\%$  treatment difference from placebo; presented in order of decreasing treatment difference frequency) were dyskinesia (21%), somnolence (12%), nausea (12%), dizziness (10%), confusion (7%), hallucinations (6%), headache (5%), and increased sweating (5%). In patients with early Parkinson's disease who were treated with the immediate-release formulation of ropinirole tablets, the most common adverse reactions ( $\geq 5\%$  treatment difference from placebo; presented in order of decreasing treatment difference frequency) were nausea (38%), somnolence (34%), dizziness (18%), syncope (11%), asthenic condition (11%), viral infection (8%), leg edema (6%), vomiting (5%), and dyspepsia (5%).

## **7 DRUG INTERACTIONS**

### **7.1 CYP1A2 Inhibitors and Inducers**

*In vitro* metabolism studies showed that CYP1A2 is the major enzyme responsible for the metabolism of ropinirole. There is thus the potential for inducers or inhibitors of this enzyme to alter the clearance of ropinirole. Therefore, if therapy with a drug known to be a potent inducer or inhibitor of CYP1A2 is stopped or started during treatment with ropinirole extended-release tablets, adjustment of the dose of ropinirole extended-release tablets may be required. Coadministration of ciprofloxacin, an inhibitor of CYP1A2, with immediate-release ropinirole increases the AUC and  $C_{max}$  of ropinirole [see **Clinical Pharmacology (12.3)**]. Cigarette smoking is expected to increase the clearance of ropinirole since CYP1A2 is known to be induced by smoking [see **Clinical Pharmacology (12.3)**].

### **7.2 Estrogens**

Population pharmacokinetic analysis revealed that higher doses of estrogens (usually associated with hormone replacement therapy [HRT]) reduced the clearance of ropinirole. Starting or stopping HRT may require adjustment of dosage of ropinirole extended-release tablets [see **Clinical Pharmacology (12.3)**].

### **7.3 Dopamine Antagonists**

Because ropinirole is a dopamine agonist, it is possible that dopamine antagonists such as neuroleptics (e.g., phenothiazines, butyrophenones, thioxanthenes) or metoclopramide may reduce the efficacy of ropinirole extended-release tablets.

## **8 USE IN SPECIFIC POPULATIONS**

### **8.1 Pregnancy**

**Risk Summary** There are no adequate data on the developmental risk associated with the use of ropinirole extended-release tablets in pregnant women. In animal studies, ropinirole had adverse effects on development when administered to pregnant rats at doses similar to (neurobehavioral impairment) or greater than (teratogenicity and embryoletality at >36 times) the maximum recommended human dose (MRHD) for Parkinson's disease. Ropinirole doses associated with teratogenicity and embryoletality in pregnant rats were associated with maternal toxicity. In pregnant rabbits, ropinirole potentiated the teratogenic effects of L-dopa when these drugs were administered in combination [see **Data**].

In the U.S. general population, the estimated background risk of major birth defects and of miscarriage in clinically recognized pregnancies is 2 to 4% and 15 to 20%, respectively. The background risk of major birth defects and miscarriage in the indicated populations is unknown.

#### **Data**

**Animal Data:** Oral administration of ropinirole (0, 20, 60, 90, 120, or 150 mg/kg/day) to pregnant rats during organogenesis resulted in embryoletality, increased incidence of fetal malformations (digit, cardiovascular, and neural tube defects) and variations, and decreased fetal weight at the two highest doses. These doses were also associated with maternal toxicity. The highest no-effect dose for adverse effects on embryofetal development (90 mg/kg/day) is approximately 36 times the MRHD for Parkinson's disease (24 mg/day) on a body surface area (mg/m<sup>2</sup>) basis.

No effect on embryofetal development was observed in rabbits when ropinirole was administered alone during organogenesis at oral doses of 0, 1, 5, or 20 mg/kg/day (up to 16 times the MRHD on a mg/m<sup>2</sup> basis). In pregnant rabbits, there was a greater incidence and severity of fetal malformations (primarily digit defects) when ropinirole (10 mg/kg/day) was administered orally during gestation in combination with L-dopa (250 mg/kg/day) than when L-dopa was administered alone. This drug combination was also associated with maternal toxicity.

Oral administration of ropinirole (0, 0.1, 1, or 10 mg/kg/day) to rats during late gestation and continuing throughout lactation resulted in neurobehavioral impairment (decreased startle response) and decreased body weight in offspring at the highest dose. The no-effect dose of 1 mg/kg/day is less than the MRHD on a mg/m<sup>2</sup> basis.

### **8.2 Lactation**

#### **Risk Summary**

There are no data on the presence of ropinirole in human milk, the effects of ropinirole on the breastfed infant, or the effects of ropinirole on milk production. However, inhibition of lactation is expected because ropinirole inhibits secretion of prolactin in humans. Ropinirole or metabolites, or both, are present in rat milk.

The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for ropinirole extended-release tablets and any potential adverse effects on the breastfed infant from ropinirole or from the underlying maternal condition.

### **8.4 Pediatric Use**

Safety and effectiveness in pediatric patients have not been established.

## 8.5 Geriatric Use

Dose adjustment is not necessary in elderly (65 years and older) patients, as the dose of ropinirole extended-release tablets is individually titrated to clinical therapeutic response and tolerability. Pharmacokinetic trials conducted in patients demonstrated that oral clearance of ropinirole is reduced by 15% in patients older than 65 years compared with younger patients [see **Clinical Pharmacology (12.3)**].

In flexible-dose clinical trials of ropinirole extended-release tablets, 387 patients were 65 years and older and 107 were 75 and older. Among patients receiving ropinirole extended-release tablets, hallucination was more common in elderly patients (10%) compared with non-elderly patients (2%). In these trials, the incidence of overall adverse reactions increased with increasing age for both patients receiving ropinirole extended-release tablets and placebo.

## 8.6 Renal Impairment

No dose adjustment is necessary in patients with moderate renal impairment (creatinine clearance of 30 to 50 mL/min). For patients with end-stage renal disease on hemodialysis, a reduced maximum dose is recommended [see **Dosage and Administration (2.2)**, **Clinical Pharmacology (12.3)**].

The use of ropinirole extended-release tablets in patients with severe renal impairment (creatinine clearance less than 30 mL/min) without regular dialysis has not been studied.

## 8.7 Hepatic Impairment

The pharmacokinetics of ropinirole have not been studied in patients with hepatic impairment.

## 10 OVERDOSAGE

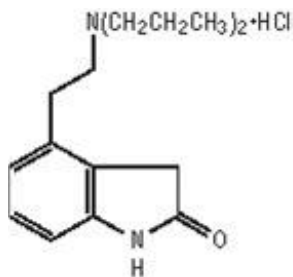
The symptoms of overdose with ropinirole extended-release tablets are generally related to its dopaminergic activity. General supportive measures are recommended. Vital signs should be maintained, if necessary.

In clinical trials, there have been patients who accidentally or intentionally took more than their prescribed dose of ropinirole. The largest overdose reported with immediate-release ropinirole in clinical trials was 435 mg taken over a 7-day period (62.1 mg/day). Of patients who received a dose greater than 24 mg/day, reported symptoms included adverse events commonly reported during dopaminergic therapy (nausea, dizziness), as well as visual hallucinations, hyperhidrosis, claustrophobia, chorea, palpitations, asthenia, and nightmares. Additional symptoms reported for overdoses included vomiting, increased coughing, fatigue, syncope, vasovagal syncope, dyskinesia, agitation, chest pain, orthostatic hypotension, somnolence, and confusional state.

## 11 DESCRIPTION

Ropinirole extended-release tablets contains ropinirole, a non-ergoline dopamine agonist as the hydrochloride salt. The chemical name of ropinirole hydrochloride is 4-[2-(dipropylamino)ethyl]-1,3-dihydro-2H-indol-2-one and the molecular formula is  $C_{16}H_{24}N_2O \cdot HCl$ . The molecular weight is 296.84 (260.38 as the free base).

The structural formula is:



Ropinirole hydrochloride USP is a pale cream to light pinkish – yellow powder with a melting range of 243° to 250°C and a solubility of 133 mg/mL in water.

Ropinirole extended-release tablets are formulated as a monolithic slow release matrix tablet with coating. Each biconvex, capsule-shaped tablet contains 2.28 mg, 4.56 mg, 6.84 mg, 9.12 mg, or 13.68 mg ropinirole hydrochloride USP equivalent to ropinirole 2 mg, 4 mg, 6 mg, 8 mg, or 12 mg, respectively. Inactive ingredients consist of anhydrous lactose, carboxy methylcellulose sodium, colloidal silicon dioxide, ethyl cellulose, hypromellose, magnesium stearate, polyethylene glycol, povidone, titanium dioxide and triethyl citrate. Additionally red iron oxide (for 2 mg and 8 mg tablet), FD&C Yellow #6 (for 4 mg tablet), FD&C Blue #2 (for 4 mg and 12 mg tablet), yellow iron oxide (for 8 mg and 12 mg tablet) and black iron oxide (for 8 mg tablet).

## 12 CLINICAL PHARMACOLOGY

### 12.1 Mechanism of Action

Ropinirole is a non-ergoline dopamine agonist. The precise mechanism of action of ropinirole as a treatment for Parkinson's disease is unknown, although it is thought to be related to its ability to stimulate dopamine D<sub>2</sub> receptors within the caudate-putamen in the brain.

### 12.2 Pharmacodynamics

Clinical experience with dopamine agonists, including ropinirole, suggests an association with impaired ability to regulate blood pressure resulting in orthostatic hypotension, especially during dose escalation. In some subjects in clinical trials, blood pressure changes were associated with the emergence of orthostatic symptoms, bradycardia, and, in one case in a healthy volunteer, transient sinus arrest with syncope [see **Warnings and Precautions (5.2, 5.3)**].

The mechanism of orthostatic hypotension induced by ropinirole is presumed to be due to a D<sub>2</sub>-mediated blunting of the noradrenergic response to standing and subsequent decrease in peripheral vascular resistance. Nausea is a common concomitant symptom of orthostatic signs and symptoms.

At oral doses as low as 0.2 mg, ropinirole suppressed serum prolactin concentrations in healthy male volunteers.

Immediate-release ropinirole had no dose-related effect on ECG wave form and rhythm in young, healthy, male volunteers in the range of 0.01 to 2.5 mg.

Immediate-release ropinirole had no dose- or exposure-related effect on mean QT intervals in healthy male and female volunteers titrated to doses up to 4 mg/day. The effect of ropinirole on QTc intervals at higher exposures achieved either due to drug interactions, hepatic impairment, or at higher doses has not been systematically evaluated.

### 12.3 Pharmacokinetics

Increase in systemic exposure of ropinirole following oral administration of 2 to 12 mg of ropinirole extended-release tablets was approximately dose-proportional. For ropinirole extended-release tablets, steady-state concentrations of ropinirole are expected to be achieved within 4 days of dosing.

Absorption

In clinical trials with immediate-release ropinirole, more than 88% of a radiolabeled dose was recovered in urine, and the absolute bioavailability was 45% to 55%, indicating approximately 50% first-pass effect.

The bioavailability of ropinirole extended-release tablets is similar to that of immediate-release ropinirole tablets. In a repeat-dose trial in subjects with Parkinson's disease using ropinirole extended-release tablets 8 mg, the dose-normalized AUC(0-24) and C<sub>min</sub> for ropinirole extended-release tablets and immediate-release ropinirole were similar. Dose-normalized C<sub>max</sub> was, on average, 12% lower for ropinirole extended-release tablets than for the immediate-release formulation and the median time-to-peak concentration was 6 to 10 hours. In a single-dose trial, administration of ropinirole extended-release tablets to healthy volunteers with food (i.e., high-fat meal) increased AUC by approximately 30% and C<sub>max</sub> by approximately 44%, compared with dosing under fasted conditions. In a repeat-dose trial in patients with Parkinson's disease, food (i.e., high-fat meal) increased AUC by approximately 20% and C<sub>max</sub> by approximately 44%; T<sub>max</sub> was prolonged by 3 hours (median prolongation) compared with dosing under fasted conditions [see **Dosage and Administration (2)**].

### Distribution

Ropinirole is widely distributed throughout the body, with an apparent volume of distribution of 7.5 L/kg. It is up to 40% bound to plasma proteins and has a blood-to-plasma ratio of 1:1.

### Metabolism

Ropinirole is extensively metabolized by the liver. The major metabolic pathways are N-despropylation and hydroxylation to form the inactive N-despropyl metabolite and hydroxy metabolites. The N-despropyl metabolite is converted to carbamyl glucuronide, carboxylic acid, and N-despropyl hydroxy metabolites. The hydroxy metabolite of ropinirole is rapidly glucuronidated.

*In vitro* studies indicate that the major cytochrome P450 enzyme involved in the metabolism of ropinirole is CYP1A2, an enzyme known to be induced by smoking and omeprazole, and inhibited by, for example, fluvoxamine, mexiletine, and the older fluoroquinolones such as ciprofloxacin and norfloxacin.

### Elimination

The clearance of ropinirole after oral administration is 47 L/h and its elimination half-life is approximately 6 hours. Less than 10% of the administered dose is excreted as unchanged drug in urine. N-despropyl ropinirole is the predominant metabolite found in urine (40%), followed by the carboxylic acid metabolite (10%), and the glucuronide of the hydroxy metabolite (10%).

### Drug Interactions

*Digoxin:* Coadministration of immediate-release ropinirole (2 mg three times daily) with digoxin (0.125 to 0.25 mg once daily) did not alter the steady-state pharmacokinetics of digoxin in 10 patients.

*Theophylline:* Administration of theophylline (300 mg twice daily, a substrate of CYP1A2) did not alter the steady-state pharmacokinetics of immediate-release ropinirole (2 mg three times daily) in 12 patients with Parkinson's disease. Immediate-release ropinirole (2 mg three times daily) did not alter the pharmacokinetics of theophylline (5 mg/kg intravenously) in 12 patients with Parkinson's disease.

*Ciprofloxacin:* Coadministration of ciprofloxacin (500 mg twice daily), an inhibitor of CYP1A2, with immediate-release ropinirole (2 mg three times daily) increased ropinirole AUC by 84% on average and C<sub>max</sub> by 60% (n = 12 patients).

*Estrogens:* Population pharmacokinetic analysis revealed that estrogens (mainly ethinylestradiol: intake 0.6 to 3 mg over 4-month to 23-year period) reduced the oral clearance of ropinirole by 36% in 16 patients.

*L-dopa:* Coadministration of carbidopa + L-dopa (10/100 mg twice daily) with immediate-release

ropinirole (2 mg three times daily) had no effect on the steady-state pharmacokinetics of ropinirole (n = 28 patients). Oral administration of immediate-release ropinirole 2 mg three times daily increased mean steady-state  $C_{max}$  of L-dopa by 20%, but its AUC was unaffected (n = 23 patients).

*Commonly Administered Drugs:* Population analysis showed that commonly administered drugs, e.g., selegiline, amantadine, tricyclic antidepressants, benzodiazepines, ibuprofen, thiazides, antihistamines, and anticholinergics, did not affect the oral clearance of ropinirole. An in vitro study indicates that ropinirole is not a substrate for P-gp. Ropinirole and its circulating metabolites do not inhibit or induce P450 enzymes; therefore, ropinirole is unlikely to affect the pharmacokinetics of other drugs by a P450 mechanism.

### Specific Populations

Because therapy with ropinirole extended-release tablets is initiated at a low dose and gradually titrated upward according to clinical tolerability to obtain the optimum therapeutic effect, adjustment of the initial dose based on gender, weight, or age is not necessary.

*Age:* Oral clearance of ropinirole is reduced by 15% in patients older than 65 years compared with younger patients. Dosage adjustment is not necessary in the elderly (older than 65 years), as the dose of ropinirole is to be individually titrated to clinical response.

*Gender:* Female and male patients showed similar clearance.

*Race:* The influence of race on the pharmacokinetics of ropinirole has not been evaluated.

*Cigarette Smoking:* Smoking is expected to increase the clearance of ropinirole since CYP1A2 is known to be induced by smoking. In a trial in patients with Restless Legs Syndrome, smokers (n=7) had an approximately 30% lower  $C_{max}$  and a 38% lower AUC than did nonsmokers (n = 11) when those parameters were normalized for dose.

*Renal Impairment:* Based on population pharmacokinetic analysis, no difference was observed in the pharmacokinetics of ropinirole in subjects with moderate renal impairment (creatinine clearance between 30 to 50 mL/min) compared with an age-matched population with creatinine clearance above 50 mL/min. Therefore, no dosage adjustment is necessary in patients with moderate renal impairment.

A trial of immediate-release ropinirole in subjects with end-stage renal disease on hemodialysis has shown that clearance of ropinirole was reduced by approximately 30%. The recommended maximum dose is lower in these patients [see **Dosage and Administration (2.2)**].

The use of ropinirole in subjects with severe renal impairment (creatinine clearance less than 30 mL/min) without regular dialysis has not been studied.

*Hepatic Impairment:* The pharmacokinetics of ropinirole have not been studied in patients with hepatic impairment. Because ropinirole is extensively metabolized by the liver, these patients may have higher plasma levels and lower clearance of ropinirole than patients with normal hepatic function.

*Other Diseases:* Population pharmacokinetic analysis revealed no change in the clearance of ropinirole in patients with concomitant diseases such as hypertension, depression, osteoporosis/arthritis, and insomnia compared with patients with Parkinson's disease only.

## 13 NONCLINICAL TOXICOLOGY

### 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

#### Carcinogenesis

Two-year carcinogenicity studies of ropinirole were conducted in mice at oral doses of 0, 5, 15, and 50 mg/kg/day and in rats at oral doses of 0, 1.5, 15, and 50 mg/kg/day.

In rats, there was an increase in testicular Leydig cell adenomas at all doses tested. The lowest dose tested (1.5 mg/kg/day) is less than the MRHD for Parkinson's disease (24 mg/day) on a mg/m<sup>2</sup> basis. The

endocrine mechanisms believed to be involved in the production of these tumors in rats are not considered relevant to humans.

In mice, there was an increase in benign uterine endometrial polyps at a dose of 50 mg/kg/day. The highest dose not associated with this finding (15 mg/kg/day) is 3 times the MRHD on a mg/m<sup>2</sup> basis.

#### Mutagenesis

Ropinirole was not mutagenic or clastogenic in *in vitro* (Ames, chromosomal aberration in human lymphocytes, mouse lymphoma *tk*) assays, or in the *in vivo* mouse micronucleus test.

#### Impairment of Fertility

When administered to female rats prior to and during mating and throughout pregnancy, ropinirole caused disruption of implantation at oral doses of 20 mg/kg/day (8 times the MRHD on a mg/m<sup>2</sup> basis) or greater. This effect in rats is thought to be due to the prolactin-lowering effect of ropinirole. In rat studies using a low oral dose (5 mg/kg) during the prolactin-dependent phase of early pregnancy (gestation days 0 to 8), ropinirole did not affect female fertility at oral doses up to 100 mg/kg/day (40 times the MRHD on a mg/m<sup>2</sup> basis). No effect on male fertility was observed in rats at oral doses up to 125 mg/kg/day (50 times the MRHD on a mg/m<sup>2</sup> basis).

## 14 CLINICAL STUDIES

The effectiveness of ropinirole was initially established with the immediate-release formulation (ropinirole tablets) for the treatment of early and advanced Parkinson's disease in 3 randomized, double-blind, placebo-controlled trials.

The effectiveness of ropinirole extended-release tablets in the treatment of Parkinson's disease was supported by 2 randomized, double-blind, multicenter flexible-dose clinical trials and clinical pharmacokinetic considerations. One trial conducted in patients with advanced Parkinson's disease compared ropinirole extended-release tablets with placebo as adjunctive therapy to L-dopa (Study 1). A second trial compared ropinirole extended-release tablets with ropinirole tablets in patients with early phase Parkinson's disease not receiving L-dopa (Study 3).

In these trials, a variety of measures were used to assess the effects of treatment (e.g., Unified Parkinson's Disease Rating Scale [UPDRS] scores, and patient diaries recording time "on" and "off", tolerability of L-dopa dose reductions). The UPDRS is a multi-item rating scale intended to evaluate mentation (Part I), activities of daily living (Part II), motor performance (Part III), and complications of therapy (Part IV). Part III of the UPDRS contains 14 items designed to assess the severity of the cardinal motor findings in patients with Parkinson's disease (e.g., tremor, rigidity, bradykinesia, postural instability) scored for different body regions and has a maximum (worst) score of 108.

### 14.1 Trials in Patients with Advanced Parkinson's Disease (with L-dopa)

**Study 1 (Flexible-Dose Trial)** The effectiveness of ropinirole extended-release tablets as adjunctive therapy to L-dopa in patients with Parkinson's disease was established in a 24-week, randomized, double-blind, placebo-controlled, parallel-group, flexible-dose, clinical trial in 393 patients (Hoehn & Yahr criteria Stages II-IV) who were not adequately controlled by L-dopa therapy. Patients were allowed to be on concomitant selegiline, amantadine, anticholinergics, and catechol-O-methyltransferase (COMT) inhibitors provided the doses were stable for at least 4 weeks prior to screening and throughout the trial. The primary efficacy endpoint evaluated was the mean change from baseline in total awake time spent "off".

Patients in this trial had a mean disease duration of 8.6 years, had a mean duration of exposure to L-dopa of 6.5 years, had experienced a minimum of 3 hours awake time "off" with a baseline average of approximately 7 hours awake time "off", and had a mean baseline UPDRS motor score of approximately 30 points. The mean baseline dose of L-dopa was 824 mg/day in the group receiving ropinirole extended-release tablets was 824 mg/day and 776 mg/day for the placebo group. Patients initiated



treatment at 2 mg/day for 1 week, followed by increases of 2 mg/day at weekly intervals, to a minimum dose of 6 mg/day. The following week, the total daily dose of ropinirole extended-release tablets could be further increased (based upon therapeutic response and tolerability) to 8 mg/day. Once a daily dose of 8 mg/day was reached, the background L-dopa dosage was reduced. Thereafter, the daily dose could be increased by up to 4 mg/day approximately every 2 weeks until an optimal dose was achieved (based upon therapeutic response and tolerability). The mean dose of ropinirole extended-release tablets at the end of Week 24 was 18.8 mg/day. Dose titrations were based upon the degree of symptom control, planned L-dopa dosage reduction, and/or tolerability. The maximal allowed daily dosage for ropinirole extended-release tablets was 24 mg/day.

The primary efficacy endpoint was mean change from baseline in total awake time spent “off” at Week 24. At baseline, the mean total awake time spent “off” was approximately 7 hours in each treatment group. At Week 24, the total awake time spent “off”, on average, had decreased by approximately 2 hours in the group receiving ropinirole extended-release tablets and by approximately one-half hour in the placebo group. The adjusted mean difference in total awake time spent “off” between ropinirole extended-release tablets and placebo was -1.7 hours, which was statistically significant (analysis of covariance [ANCOVA],  $P < 0.0001$ ). Results for this endpoint, showing the statistical superiority of ropinirole extended-release tablets over placebo, are presented in Table 5.

**Table 5. Change from Baseline in Total Awake Time Spent "Off" (Primary Efficacy Endpoint) at Week 24 (Study 1)**

	<b>Ropinirole Extended-Release Tablets (n = 201)</b>	<b>Placebo (n = 190)</b>
Mean “Off” Time at Baseline (hours)	7	7
Mean Change from Baseline in “Off “ Time (hours)	-2.1	-0.4
Treatment Difference (Ropinirole Extended-Release Tablets - PLACEBO)		- 1.7

The difference between groups in favor of ropinirole extended-release tablets, with regard to a decrease in total “off” hours, was primarily related to an increase in total “on” hours without troublesome dyskinesia. Patients treated with ropinirole extended-release tablets had a mean reduction in L-dopa dose of 278 mg/day (34%), while patients treated with placebo had a mean reduction of 164 mg/day (21%). In patients who reduced their L-dopa dose, reduction was sustained in 93% of patients treated with ropinirole extended-release tablets and in 72% of patients treated with placebo ( $P < 0.001$ ).

#### **14.2 Trials in Patients with Early Parkinson's Disease (without L-dopa)**

Study 3 (Flexible-Dose Trial) A 36-week multicenter, double-blind, titration/3-period maintenance, flexible-dose, cross-over trial compared the efficacy of ropinirole extended-release tablets with the immediate-release formulation of ropinirole immediate-release tablets in 161 patients with early phase Parkinson’s disease (Hoehn & Yahr Stages I-III) with limited prior exposure to L-dopa or dopamine agonists. Eligible patients were randomized (1:1:1:1) to 4 treatment sequences (2 were titrated on immediate-release formulation of ropinirole tablets and 2 on ropinirole extended-release tablets). Titration rate of immediate-release formulation of ropinirole tablets was slower than that of the ropinirole extended-release tablets. Patients were titrated, during the 12-week titration period, to their optimal dosage, based upon tolerance and therapeutic response. This was followed by 3 consecutive 8-week maintenance periods, during which patients were either maintained on the prior formulation or switched to the alternative formulation. All switches were performed overnight by using the approximately equivalent doses of ropinirole. The primary efficacy endpoint was the change of UPDRS motor score within each maintenance period.

Patients in all 4 groups started out with similar UPDRS motor scores (about 21) at baseline. All groups exhibited similar improvement in UPDRS total motor scores from baseline until the completion of the

titration phase, with a change in score of about -9 observed for the groups started on immediate-release formulation of ropinirole tablets and of about -10 for the groups started on ropinirole extended-release tablets. No difference was observed between groups when switches were made between identical formulations or between different formulations. This suggests therapeutic dosage equivalence between the immediate-release formulation of ropinirole tablets and ropinirole extended-release tablets.

The optimal daily dose at the end of the titration period for patients on immediate-release formulation of ropinirole tablets was substantially lower (mean: 7 mg) compared with the dose at the end of the titration period for patients on ropinirole extended-release tablets (mean: 18 mg). In this trial, the marked difference in the final optimal dosages suggests that the higher doses afforded no additional benefit when compared with the lower doses [see **Dosage and Administration (2.2)**].

## 16 HOW SUPPLIED/STORAGE AND HANDLING

Each biconvex, capsule-shaped, film-coated tablet contains ropinirole hydrochloride USP equivalent to the labeled amount of ropinirole as follows:

Ropinirole extended-release tablets, 2 mg are pink colored, capsule shaped, biconvex, film coated tablets debossed 'R2' on one side and plain on the other side and are supplied in bottles of 30, 90 and 500.

Bottles of 30	NDC 55111-659-30
Bottles of 90	NDC 55111-659-90
Bottles of 500	NDC 55111-659-05

Ropinirole extended-release tablets, 4 mg are light brown colored, capsule shaped, biconvex, film coated tablets debossed 'R4' on one side and plain on the other side and are supplied in bottles of 30, 90 and 500.

Bottles of 30	NDC 55111-661-30
Bottles of 90	NDC 55111-661-90
Bottles of 500	NDC 55111-661-05

Ropinirole extended-release tablets, 6 mg are white colored, capsule shaped, biconvex, film coated tablets debossed 'R6' on one side and plain on the other side and are supplied in bottles of 30, 90 and 500.

Bottles of 30	NDC 55111-727-30
Bottles of 90	NDC 55111-727-90
Bottles of 500	NDC 55111-727-05

Ropinirole extended-release tablets, 8 mg are brick red colored, capsule shaped, biconvex, film coated tablets debossed 'R8' on one side and plain on the other side and are supplied in bottles of 30, 90 and 500.

Bottles of 30	NDC 55111-662-30
Bottles of 90	NDC 55111-662-90
Bottles of 500	NDC 55111-662-05

Ropinirole extended-release tablets, 12 mg are light green colored, capsule shaped, biconvex, film coated tablets debossed 'R12' on one side and plain on the other side and are supplied in bottles of 30, 90 and 500.

Bottles of 30	NDC 55111-728-30
Bottles of 90	NDC 55111-728-90

Bottles of 500

NDC 55111-728-05

## Storage

Store at 20°-25°C (68°-77°F); [see USP Controlled Room Temperature]. Dispense in a tight, light-resistant container as defined in the USP.

## 17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information).

### Dosing Instructions

Instruct patients to take ropinirole extended-release tablets only as prescribed. If a dose is missed, advise patients not to double their next dose. Ropinirole extended-release tablets can be taken with or without food. Inform patients to swallow ropinirole extended-release tablets whole and not to chew, crush, or divide the tablets [see **Dosage and Administration (2.1)**]. Ropinirole is the active ingredient in both ropinirole extended-release tablets and ropinirole tablets (the immediate-release formulation). Ask your patients if they are taking another medication containing ropinirole.

### Hypersensitivity/Allergic Reactions

Advise patients about the potential for developing a hypersensitivity/allergic reaction including manifestations such as urticaria, angioedema, rash, and pruritus when taking any ropinirole product. Inform patients who experience these or similar reactions after starting ropinirole tablets or ropinirole extended-release tablets, to immediately contact their healthcare professional [see **Contraindications (4)**].

### Falling Asleep during Activities of Daily Living and Somnolence

Alert patients to the potential sedating effects caused by ropinirole extended-release tablets, including somnolence and the possibility of falling asleep while engaged in activities of daily living. Because somnolence is a frequent adverse reaction with potentially serious consequences, patients should not drive a car, operate machinery, or engage in other potentially dangerous activities until they have gained sufficient experience with ropinirole extended-release tablets to gauge whether or not it adversely affects their mental and/or motor performance. Advise patients that if increased somnolence or episodes of falling asleep during activities of daily living (e.g., conversations, eating, driving a motor vehicle, etc.) are experienced at any time during treatment, they should not drive or participate in potentially dangerous activities until they have contacted their physician. Advise patients of possible additive effects when patients are taking other sedating medications, alcohol, or other central nervous system depressants (e.g., benzodiazepines, antipsychotics, antidepressants, etc.) in combination with ropinirole extended-release tablets or when taking a concomitant medication (e.g., ciprofloxacin) that increases plasma levels of ropinirole [see **Warnings and Precautions (5.1)**].

### Syncope and Hypotension/Orthostatic Hypotension

Advise patients that they may experience syncope and may develop hypotension with or without symptoms such as dizziness, nausea, syncope, and sometimes sweating while taking ropinirole extended-release tablets, especially if they are elderly. Hypotension and/or orthostatic symptoms may occur more frequently during initial therapy or with an increase in dose at any time (cases have been seen after weeks of treatment). Postural/orthostatic symptoms may be related to sitting up or standing. Accordingly, caution patients against standing rapidly after sitting or lying down, especially if they have been doing so for prolonged periods and especially at the initiation of treatment with ropinirole extended-release tablets [see **Warnings and Precautions (5.2, 5.3)**].

### Elevation of Blood Pressure and Changes in Heart Rate

Alert patients to the possibility of increases in blood pressure during treatment with ropinirole extended-release tablets. Exacerbation of hypertension may occur. Medication dose adjustment may be

necessary if elevation of blood pressure is sustained over multiple evaluations. Alert patients with cardiovascular disease, who may not tolerate marked changes in heart rate to the possibility that they may experience significant increases or decreases in heart rate during treatment with ropinirole extended-release tablets [see **Warnings and Precautions (5.4)**].

### **Hallucinations/Psychotic-like Behavior**

Inform patients that they may experience hallucinations (unreal visions, sounds, or sensations) and other psychotic-like behavior can occur while taking ropinirole extended-release tablets. The elderly are at greater risk than younger patients with Parkinson's disease. This risk is greater in patients who are taking ropinirole extended-release tablets with L-dopa or taking higher doses of ropinirole extended-release tablets, and may also be further increased in patients taking any other drugs that increase dopaminergic tone. Tell patients to report hallucinations or psychotic-like behavior to their healthcare provider promptly should they develop [see **Warnings and Precautions (5.5)**].

### **Dyskinesia**

Inform patients that ropinirole extended-release tablets may cause and/or exacerbate pre-existing dyskinesias [see **Warnings and Precautions (5.6)**].

### **Impulse Control/Compulsive Behaviors**

Advise patients that they may experience impulse control and/or compulsive behaviors while taking one or more of the medications (including ropinirole extended-release tablets) that increase central dopaminergic tone, that are generally used for the treatment of Parkinson's disease. Advise patients to inform their physician or healthcare provider if they develop new or increased gambling urges, sexual urges, uncontrolled spending, binge or compulsive eating, or other urges while being treated with ropinirole extended-release tablets. Physicians should consider dose reduction or stopping the medication if a patient develops such urges while taking ropinirole extended-release tablets [see **Warnings and Precautions (5.7)**].

### **Withdrawal-Emergent Hyperpyrexia and Confusion**

Advise patients to contact their healthcare provider if they wish to discontinue ropinirole extended-release tablets or decrease the dose of ropinirole extended-release tablets [see **Warnings and Precautions (5.8)**].

### **Melanoma**

Advise patients with Parkinson's disease that they have a higher risk of developing melanoma. Advise patients to have their skin examined on a regular basis by a qualified healthcare provider (e.g., dermatologist) when using ropinirole extended-release tablets [see **Warnings and Precautions (5.9)**].

### **Nursing Mothers**

Because of the possibility that ropinirole may be excreted in breast milk, discuss the developmental and health benefits of breastfeeding along with the mother's clinical need for ropinirole extended-release tablets and any potential adverse effects on the breastfed child from ropinirole or from the underlying maternal condition [see **Use in Specific Populations (8.2)**]. Advise patients that ropinirole extended-release tablets could inhibit lactation because ropinirole inhibits prolactin secretion.

### **Pregnancy**

Because experience with ropinirole in pregnant women is limited and ropinirole has been shown to have adverse effects on embryofetal development in animals, including teratogenic effects, advise patients of this potential risk. Advise patients to notify their physician if they become pregnant or intend to become pregnant during therapy [see **Use in Specific Populations (8.1)**].

## **Patient Information**

### **Ropinirole Extended-Release Tablets**

**Important Note:** Ropinirole extended-release tablets have not been studied in Restless Legs Syndrome (RLS) and is not approved for the treatment of RLS. However, an immediate-release form of ropinirole is approved for the treatment of moderate to severe primary RLS.

## **What is the most important information I should know about ropinirole extended-release tablets?**

### **Ropinirole extended-release tablets can cause serious side effects including:**

- **Falling asleep during normal activities.** You may fall asleep while doing normal activities such as driving a car, doing physical tasks, or using hazardous machinery while taking ropinirole extended-release tablets. You may suddenly fall asleep without being drowsy or without warning. This may result in having accidents. Your chances of falling asleep while doing normal activities while taking ropinirole extended-release tablets are greater if you take other medicines that cause drowsiness. Tell your healthcare provider right away if this happens. Before starting ropinirole extended-release tablets, be sure to tell your healthcare provider if you take any medicines that make you drowsy.
- **Fainting.** Fainting can happen, and sometimes your heart rate may be decreased. This can happen especially when you start taking ropinirole extended-release tablets or your dose is increased. Tell your healthcare provider if you faint, feel dizzy or feel light-headed.
- **Decrease in blood pressure.** Ropinirole extended-release tablets can decrease your blood pressure. Decreases in your blood pressure (hypotension), can happen, especially when you start taking ropinirole extended-release tablets or when your dose is changed. If you faint or feel dizzy, nauseated, or sweaty when you stand up from sitting or lying down (orthostatic hypotension), this may mean that your blood pressure is decreased. When you change position from lying down or sitting to standing up, you should do it carefully and slowly. Call your healthcare provider if you have any of the symptoms of decreased blood pressure listed above.
- **Increase in blood pressure.** Ropinirole extended-release tablets may increase your blood pressure.
- **Changes in heart rate (decrease or increase).** Ropinirole extended-release tablets can decrease or increase your heart rate.
- **Hallucinations and other psychotic-like behavior.** Ropinirole extended-release tablets can cause or worsen psychotic-like behavior including hallucinations (seeing or hearing things that are not real), confusion, excessive suspicion, aggressive behavior, agitation, delusional beliefs (believing things that are not real), and disorganized thinking. The chances of having hallucinations or these other psychotic-like changes are higher in people with Parkinson's disease who are taking ropinirole extended-release tablets or taking higher doses of these drugs. If you have hallucinations or any of these other psychotic-like changes, talk with your healthcare provider.
- **Uncontrolled sudden movements.** Ropinirole extended-release tablets may cause uncontrolled sudden movements or make such movements you already have worse or more frequent. Tell your healthcare provider if this happens. The doses of your anti-Parkinson's medicine may need to be changed.
- **Unusual urges.** Some patients taking ropinirole extended-release tablets get urges to behave in a way unusual for them. Examples of this are an unusual urge to gamble, increased sexual urges and behaviors, or an uncontrollable urge to shop, spend money, or eat. If you notice or your family notices that you are developing any unusual behaviors, talk to your healthcare provider.
- **Increased chance of skin cancer (melanoma).** People with Parkinson's disease may have a higher chance of getting melanoma. It is not known if ropinirole extended-release tablets increase your chances of getting melanoma. You and your healthcare provider should check your skin on a regular basis. Tell your healthcare provider right away if you notice any changes in your skin such as a change in the size, shape, or color of moles on your skin.

## **What are ropinirole extended-release tablets?**

- Ropinirole extended-release tablets are long-acting prescription medicine containing ropinirole (taken 1 time a day) that is used only to treat Parkinson's disease but not to treat RLS.

Having one of these conditions does not mean you have or will develop the other condition.

You should not be taking more than 1 medicine containing ropinirole. Tell your healthcare provider if you are taking any other medicine containing ropinirole.

It is not known if ropinirole extended-release tablets are safe and effective for use in children younger than 18 years of age.

## **Do not take ropinirole extended-release tablets if you:**

- are allergic to ropinirole or any of the ingredients in ropinirole extended-release tablets. See the end of this page for a complete list of the ingredients in ropinirole extended-release tablets.
- Get help right away if any of the symptoms of an allergic reaction cause problems swallowing or breathing.

Call your healthcare provider if you have any of the symptoms of an allergic reaction. Symptoms of an allergic reaction may include:

- hives
- rash
- swelling of the face, lips, mouth, tongue, or throat
- itching

## **Before taking ropinirole extended-release tablets, tell your healthcare provider about all of your medical conditions, including if you.**

- have daytime sleepiness from a sleep disorder to have unexpected or unpredictable sleepiness or periods of sleep.
- start or stop taking other medicines while you are taking ropinirole extended-release tablets. This may increase your chances of getting side effects.
- start or stop smoking while you are taking ropinirole extended-release tablets. Smoking may decrease the treatment effect of ropinirole extended-release tablets.
- feel dizzy, nauseated, sweaty, or faint when you stand up from sitting or lying down.
- drink alcoholic beverages. This may increase your chances of becoming drowsy or sleepy while taking ropinirole extended-release tablets.
- have high or low blood pressure.
- have or have had heart problems.
- are pregnant or plan to become pregnant. It is not known if ropinirole extended-release tablets can harm your unborn baby.
- are breastfeeding or plan to breastfeed. It is now known if ropinirole extended-release passes into your breast milk. The amount of breast milk you make may be decreased while taking ropinirole extended-release tablets. Talk to your healthcare provider to decide if you should breastfeed while taking ropinirole extended-release tablets.

Tell your healthcare provider about all the medicines you take, including prescription and over the counter medicines, vitamins, and herbal supplements. Some of these medicines may increase your chances of getting side effects while taking ropinirole extended-release tablets.

## **How should I take ropinirole extended-release tablets?**

- Take ropinirole extended-release tablets exactly as directed by your healthcare provider.
- Take ropinirole extended-release tablets with or without food.
- **Do not** suddenly stop taking ropinirole extended-release tablets without talking to your healthcare

provider. If you stop this medicine suddenly, you may develop fever, confusion, or severe muscle stiffness.

- Before starting ropinirole extended-release tablets, you should talk to your healthcare provider about what to do if you miss a dose. If you have missed the previous dose and it is time for your next dose, **do not double the dose.**
- Your healthcare provider will start you on a low dose of ropinirole extended-release tablets. Your healthcare provider will change the dose until you are taking the right amount of medicine to control your symptoms. **It may take several weeks before you reach a dose that controls your symptoms.**
- Contact your healthcare provider if you stop taking ropinirole extended-release tablets for any reason. Do not restart without talking with your healthcare provider.
- Your healthcare provider may prescribe ropinirole extended-release tablets alone, or add ropinirole extended-release tablets to medicine that you are already taking for Parkinson's disease.
- You should not substitute ropinirole tablets for ropinirole extended-release tablets or ropinirole extended-release tablets for ropinirole tablets without talking with your healthcare provider.

**If you are taking ropinirole extended-release tablets:**

- Take ropinirole extended-release tablets 1 time each day for Parkinson's disease, preferably at or around the same time of day.
- Swallow ropinirole extended-release tablets whole. Do not chew, crush, or split ropinirole extended-release tablets.
- Ropinirole extended-release tablets release drug over a 24-hour period. If you have a condition where medicine passes through your body too quickly, such as diarrhea, the tablet(s) may not dissolve completely and you may see tablet residue in your stool. If this happens, let your healthcare provider know as soon as possible.

**What are the possible side effects of ropinirole extended-release tablets?**

**Ropinirole extended-release tablets can cause serious side effects including:**

- See **“What is the most important information I should know about ropinirole extended-release tablets?”**

The most common side effects of ropinirole extended-release tablets include:

- fainting
- sleepiness or drowsiness
- hallucinations (seeing or hearing things that are not real)
- dizziness
- nausea or vomiting
- uncontrolled sudden movements
- upset stomach, abdominal pain or discomfort
- fatigue, tiredness, or weakness
- confusion
- headache
- leg swelling
- increased sweating
- constipation
- suddenly falling asleep
- high blood pressure (hypertension)

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

These are not all of the possible side effects with ropinirole extended-release tablets.

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

FDA-1088.

**How should I store ropinirole extended-release tablets?**

- Store ropinirole extended-release tablets at 20°-25°C (68°-77°F); [see USP Controlled Room Temperature].
- Keep ropinirole extended-release tablets in a tightly closed container and out of direct sunlight.

**Keep ropinirole extended-release tablets and all medicines out of the reach of children.**

**General information about the safe and effective use of ropinirole extended-release tablets**

Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not take ropinirole extended-release tablets for a condition for which it was not prescribed. Do not give ropinirole extended-release tablets to other people, even if they have the same symptoms that you have. It may harm them.

You can ask your pharmacist or healthcare provider for information about ropinirole extended-release tablets that is written for health professionals.

**What are the ingredients in ropinirole extended-release tablets?**

**The following ingredients are in ropinirole extended-release tablets:**

**Active ingredient:** ropinirole (as ropinirole hydrochloride USP)

**Inactive ingredients:** anhydrous lactose, carboxy methylcellulose sodium, colloidal silicon dioxide, ethyl cellulose, hypromellose, magnesium stearate, polyethylene glycol, povidone, titanium dioxide and triethyl citrate. Additionally red iron oxide (for 2 mg and 8 mg tablet), FD&C Yellow #6 (for 4 mg tablet), FD&C Blue #2 (for 4 mg and 12 mg tablet), yellow iron oxide (for 8 mg and 12 mg tablet) and black iron oxide (for 8 mg tablet).

**For more information, call 1-888-375-3784.**

This Patient Information has been approved by the U.S. Food and Drug Administration.

Rx Only

Manufactured by:

**Dr. Reddy's Laboratories Limited**

Bachupally - 500 090 INDIA

Revised: 0817

Dispense with Patient Information Sheet available at:

[www.drreddys.com/pi/ropiniroletabs.pdf](http://www.drreddys.com/pi/ropiniroletabs.pdf)

**PACKAGE LABEL.PRINCIPAL DISPLAY PANEL SECTION**

Unvarnished Area Consists of: 2D Barcode, Lot Number, Expiry Date and Serial Number

2 mg container label



NDC 55111-659-30

**rOPINIRole**  
Extended-Release  
Tablets, 2 mg\*

Rx Only  
30 Tablets

Pharmacist: Dispense with  
Patient Information Sheet

Dr.Reddy's

For Patient Information Sheet, please visit: [www.drreddys.com/pi/ropiniroletabs.pdf](http://www.drreddys.com/pi/ropiniroletabs.pdf)  
Or Scan QR code to see Patient Information Sheet:

\*Each tablet contains 228 mg ropinirole HCl USP equivalent to 2 mg ropinirole.  
Usual Dosage: See prescribing information for complete dosing instructions.  
Do not use if safety seal under cap is broken or missing.  
Store at 20°-25°C (68°-77°F) [see USP Controlled Room Temperature].  
Mfd. By: Dr. Reddy's Laboratories Limited  
Bachupally - 500 090  
INDIA  
R - 0417  
M.L. 59/RR/AP/97/F/R  
150068602

3 55111659303  
GTIN : 0035511659303

Unvarnished Area  
30 x 35 mm

4 mg container label

NDC 55111-661-30

**rOPINIRole**  
Extended-Release  
Tablets, 4 mg\*

Rx Only  
30 Tablets

Pharmacist: Dispense with  
Patient Information Sheet

Dr.Reddy's

For Patient Information Sheet, please visit: [www.drreddys.com/pi/ropiniroletabs.pdf](http://www.drreddys.com/pi/ropiniroletabs.pdf)  
Or Scan QR code to see Patient Information Sheet:

\*Each tablet contains 456 mg ropinirole HCl USP equivalent to 4 mg ropinirole.  
Usual Dosage: See prescribing information for complete dosing instructions.  
Do not use if safety seal under cap is broken or missing.  
Store at 20°-25°C (68°-77°F) [see USP Controlled Room Temperature].  
Mfd. By: Dr. Reddy's Laboratories Limited  
Bachupally - 500 090  
INDIA  
R - 0417  
M.L. 59/RR/AP/97/F/R  
150068603

3 55111661306  
GTIN : 0035511661306

Unvarnished Area  
30 x 35 mm

6 mg container label

NDC 55111-727-30

**rOPINIRole**  
Extended-Release  
Tablets, 6 mg\*

Rx Only  
30 Tablets

Pharmacist: Dispense with  
Patient Information Sheet

Dr.Reddy's

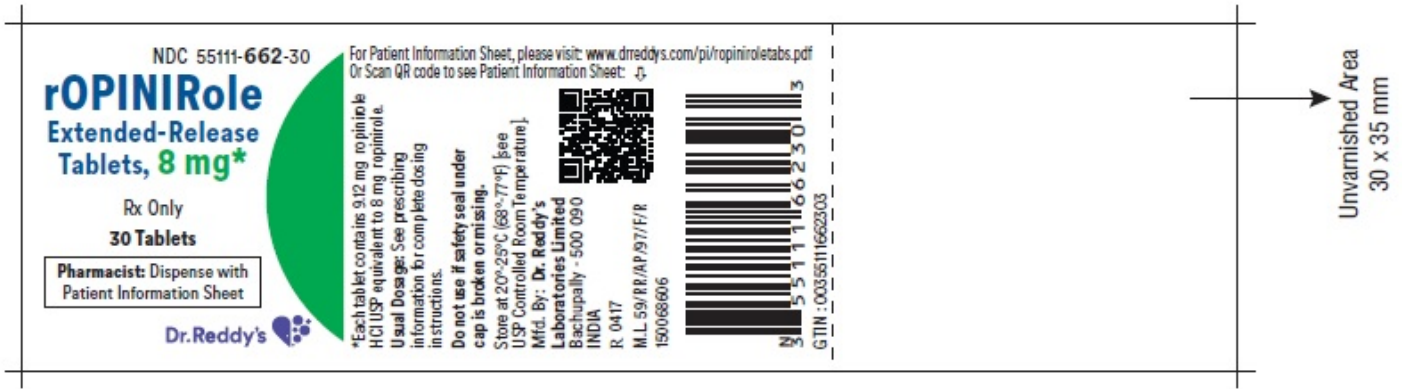
For Patient Information Sheet, please visit: [www.drreddys.com/pi/ropiniroletabs.pdf](http://www.drreddys.com/pi/ropiniroletabs.pdf)  
Or Scan QR code to see Patient Information Sheet:

\*Each tablet contains 684 mg ropinirole HCl USP equivalent to 6 mg ropinirole.  
Usual Dosage: See prescribing information for complete dosing instructions.  
Do not use if safety seal under cap is broken or missing.  
Store at 20°-25°C (68°-77°F) [see USP Controlled Room Temperature].  
Mfd. By: Dr. Reddy's Laboratories Limited  
Bachupally - 500 090  
INDIA  
R - 0417  
M.L. 59/RR/AP/97/F/R  
150068605

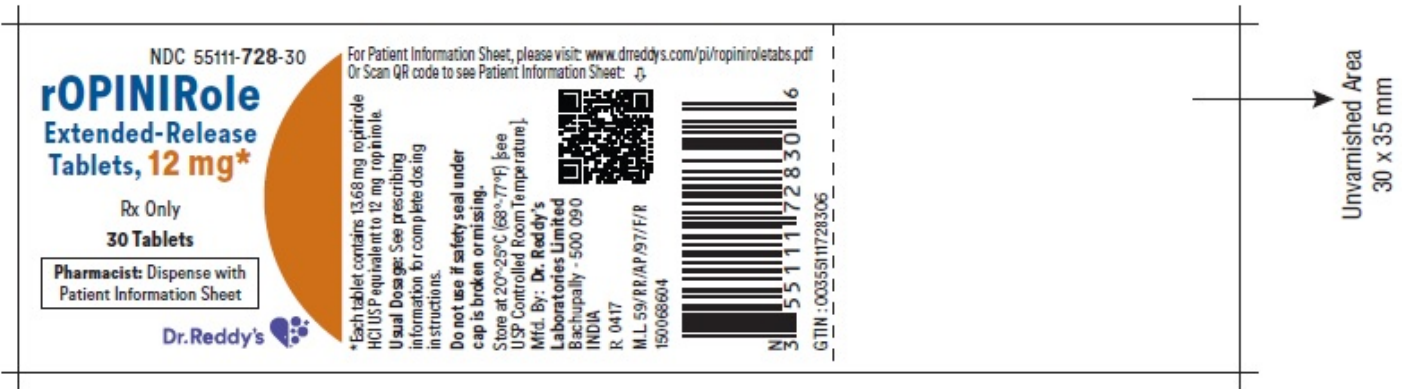
3 55111727309  
GTIN : 0035511727309

Unvarnished Area  
30 x 35 mm

8 mg container label



12 mg container label



## ROPINIROLE

ropinirole tablet, film coated, extended release

### Product Information

<b>Product Type</b>	HUMAN PRESCRIPTION DRUG	<b>Item Code (Source)</b>	NDC:55111-659
<b>Route of Administration</b>	ORAL		

### Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
Ropinirole Hydrochloride (UNII: D7ZD41RZ19) (Ropinirole - UNII:030PYR8953)	Ropinirole	2 mg

### Inactive Ingredients

Ingredient Name	Strength
anhydrous lactose (UNII: 3SY5LH9PMK)	
carboxymethylcellulose sodium (UNII: K679OBS311)	
silicon dioxide (UNII: ETJ7Z6XBU4)	
Hypromellose, Unspecified (UNII: 3NXW29V3WO)	
magnesium stearate (UNII: 70097M6I30)	
POLYETHYLENE GLYCOL, UNSPECIFIED (UNII: 3WJQ0SDW1A)	
povidone (UNII: FZ989GH94E)	
TITANIUM DIOXIDE (UNII: 15FIX9V2JP)	

triethyl citrate (UNII: 8Z96QXD6UM)	
FERRIC OXIDE RED (UNII: 1K09F3G675)	
ETHYLCELLULOSES (UNII: 7Z8S9VYZ4B)	

### Product Characteristics

Color	PINK	Score	no score
Shape	CAPSULE	Size	12mm
Flavor		Imprint Code	R2
Contains			

### Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:55111-659-30	30 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
2	NDC:55111-659-90	90 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
3	NDC:55111-659-05	500 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	

### Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA201576	06/06/2012	

## ROPINIROLE

ropinirole tablet, film coated, extended release

### Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:55111-661
Route of Administration	ORAL		

### Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
Ropinirole Hydrochloride (UNII: D7ZD41RZI9) (Ropinirole - UNII:030PYR8953)	Ropinirole	4 mg

### Inactive Ingredients

Ingredient Name	Strength
anhydrous lactose (UNII: 3SY5LH9PMK)	
carboxymethylcellulose sodium (UNII: K679OBS311)	
silicon dioxide (UNII: ETJ7Z6XBU4)	
Hypromellose, Unspecified (UNII: 3NXW29V3WO)	
magnesium stearate (UNII: 70097M6I30)	
POLYETHYLENE GLYCOL, UNSPECIFIED (UNII: 3WJQ0SDW1A)	
povidone (UNII: FZ989GH94E)	
TITANIUM DIOXIDE (UNII: 15FIX9V2JP)	

triethyl citrate (UNII: 8Z96QXD6UM)	
FD&C YELLOW NO. 6 (UNII: H77VEI93A8)	
ETHYLCELLULOSES (UNII: 7Z8S9VYZ4B)	
FD&C BLUE NO. 2 (UNII: L06K8R7DQK)	

### Product Characteristics

Color	BROWN ("light brown")	Score	no score
Shape	CAPSULE	Size	12mm
Flavor		Imprint Code	R4
Contains			

### Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:55111-661-30	30 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
2	NDC:55111-661-90	90 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
3	NDC:55111-661-05	500 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	

### Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA201576	06/06/2012	

## ROPINIROLE

ropinirole tablet, film coated, extended release

### Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:55111-727
Route of Administration	ORAL		

### Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
Ropinirole Hydrochloride (UNII: D7ZD41RZI9) (Ropinirole - UNII:030PYR8953)	Ropinirole	6 mg

### Inactive Ingredients

Ingredient Name	Strength
anhydrous lactose (UNII: 3SY5LH9PMK)	
carboxymethylcellulose sodium (UNII: K679OBS311)	
silicon dioxide (UNII: ETJ7Z6XBU4)	
Hypromellose, Unspecified (UNII: 3NXW29V3WO)	
magnesium stearate (UNII: 70097M6I30)	
POLYETHYLENE GLYCOL, UNSPECIFIED (UNII: 3WJQ0SDW1A)	

povidone (UNII: FZ989GH94E)	
TITANIUM DIOXIDE (UNII: 15FIX9V2JP)	
ETHYLCELLULOSES (UNII: 7Z8S9VYZ4B)	
triethyl citrate (UNII: 8Z96QXD6UM)	

### Product Characteristics

Color	WHITE	Score	no score
Shape	CAPSULE	Size	12mm
Flavor		Imprint Code	R6
Contains			

### Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:55111-727-30	30 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
2	NDC:55111-727-90	90 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
3	NDC:55111-727-05	500 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	

### Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA201576	06/06/2012	

## ROPINIROLE

ropinirole tablet, film coated, extended release

### Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:55111-662
Route of Administration	ORAL		

### Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
Ropinirole Hydrochloride (UNII: D7ZD41RZI9) (Ropinirole - UNII:030PYR8953)	Ropinirole	8 mg

### Inactive Ingredients

Ingredient Name	Strength
anhydrous lactose (UNII: 3SY5LH9PMK)	
carboxymethylcellulose sodium (UNII: K679OBS311)	
silicon dioxide (UNII: ETJ7Z6XBU4)	
Hypromellose, Unspecified (UNII: 3NXW29V3WO)	
magnesium stearate (UNII: 70097M6I30)	
POLYETHYLENE GLYCOL, UNSPECIFIED (UNII: 3WJQ0SDW1A)	
povidone (UNII: FZ989GH94E)	

TITANIUM DIOXIDE (UNII: 15FIX9V2JP)	
triethyl citrate (UNII: 8Z96QXD6UM)	
FERRIC OXIDE YELLOW (UNII: EX438O2MRT)	
FERROSFERRIC OXIDE (UNII: XM0M87F357)	
ETHYLCELLULOSES (UNII: 7Z8S9VYZ4B)	
FERRIC OXIDE RED (UNII: 1K09F3G675)	

### Product Characteristics

Color	RED	Score	no score
Shape	CAPSULE	Size	12mm
Flavor		Imprint Code	R8
Contains			

### Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:55111-662-30	30 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
2	NDC:55111-662-90	90 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
3	NDC:55111-662-05	500 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	

### Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA201576	06/06/2012	

## ROPINIROLE

ropinirole tablet, film coated, extended release

### Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:55111-728
Route of Administration	ORAL		

### Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
Ropinirole Hydrochloride (UNII: D7ZD41RZI9) (Ropinirole - UNII:030PYR8953)	Ropinirole	12 mg

### Inactive Ingredients

Ingredient Name	Strength
anhydrous lactose (UNII: 3SY5LH9PMK)	
carboxymethylcellulose sodium (UNII: K679OBS311)	
silicon dioxide (UNII: ETJ7Z6XBU4)	
Hypromellose, Unspecified (UNII: 3NXW29V3WO)	

<b>magnesium stearate</b> (UNII: 70097M6B0)	
<b>POLYETHYLENE GLYCOL, UNSPECIFIED</b> (UNII: 3WJQ0SDW1A)	
<b>povidone</b> (UNII: FZ989GH94E)	
<b>TITANIUM DIOXIDE</b> (UNII: 15FIX9V2JP)	
<b>triethyl citrate</b> (UNII: 8Z96QXD6UM)	
<b>FERRIC OXIDE YELLOW</b> (UNII: EX438O2MRT)	
<b>ETHYLCELLULOSES</b> (UNII: 7Z8S9VYZ4B)	
<b>FD&amp;C BLUE NO. 2</b> (UNII: L06K8R7DQK)	

### Product Characteristics

<b>Color</b>	GREEN	<b>Score</b>	no score
<b>Shape</b>	CAPSULE	<b>Size</b>	12mm
<b>Flavor</b>		<b>Imprint Code</b>	R12
<b>Contains</b>			

### Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:55111-728-30	30 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
2	NDC:55111-728-90	90 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	
3	NDC:55111-728-05	500 in 1 BOTTLE; Type 0: Not a Combination Product	06/06/2012	

### Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA201576	06/06/2012	

**Labeler** - Dr. Reddys Laboratories Limited (650562841)

### Establishment

Name	Address	ID/FEI	Business Operations
Dr. Reddys Laboratories Limited		918608162	analysis(55111-659, 55111-661, 55111-662, 55111-727, 55111-728) , manufacture(55111-659, 55111-661, 55111-662, 55111-727, 55111-728)

Revised: 11/2018

Dr. Reddys Laboratories Limited