



- hallucinations
- coma
- fast heartbeat
- fast changes in your blood pressure
- increased body temperature
- muscle spasm
- loss of coordination
- nausea, vomiting or diarrhea
- **increased blood pressure**

The most common side effects of rizatriptan benzoate tablets in adults include:

- feeling sleepy or tired
- pain or pressure in your chest or throat
- dizziness

Tell your doctor if you have any side effect that bothers you or that does not go away.

If you take rizatriptan benzoate tablets too often, this may result in you getting chronic headaches. In such cases, you should contact your doctor, as you may have to stop taking rizatriptan benzoate tablets.

These are not all the possible side effects of rizatriptan benzoate tablets. For more information, ask your doctor or pharmacist.

**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 rizatriptan benzoate tablets ?

- Store rizatriptan benzoate tablets at 20°C-25°C (68°F-77°F); excursions permitted to 15°C-30°C (59°F-86°F) [See USP Controlled Room Temperature]
- Safely throw away medicine that is out of date or no longer needed.

**Keep rizatriptan benzoate tablets and all medicines out of the reach of children.**

**General Information about the safe and effective use of rizatriptan benzoate tablets.**

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

This Patient Information leaflet summarizes the most important information about rizatriptan benzoate tablets. If you would like more information, talk to your doctor. You can ask your pharmacist or doctor for information about rizatriptan benzoate tablets that is written for health professionals.

For more information, call 1-800-313-4623.

#### What are the ingredients in rizatriptan benzoate tablets?

**Active ingredient:** rizatriptan benzoate USP

**Inactive ingredients:** lactose monohydrate, microcrystalline cellulose, maize starch, ferric oxide (red), and magnesium stearate.

Proprietary names mentioned in this leaflet are trademarks of their owners.

*Information related to the usage of rizatriptan benzoate tablets and rizatriptan benzoate orally disintegrating tablets for pediatric patients aged 6 to 17 years is approved for Merck & Co., Inc.'s Rizatriptan Benzoate Tablets. However, due to Merck & Co., Inc.'s marketing exclusivity rights, this drug product is not labeled with that information.*

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

#### Rx Only

#### Manufactured by:

Jubilant Generics Limited  
Roorkee - 247661, India.

#### Marketed by :

Jubilant Cadista Pharmaceuticals Inc.  
Salisbury, MD 21801, USA .

#### Revised : 02/2015

## 8 USE IN SPECIFIC POPULATIONS

### 8.1 Pregnancy

#### Pregnancy Category C

There are no adequate and well-controlled studies in pregnant women. Rizatriptan benzoate should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

In a general reproductive study in rats, birth weights and pre- and post-weaning weight gain were reduced in the offspring of females treated prior to and during mating and throughout gestation and lactation with doses of 10 and 100 mg/kg/day. In a pre- and post-natal developmental toxicity study in rats, an increase in mortality of the offspring at birth and for the first three days after birth, a decrease in pre- and post-weaning weight gain, and decreased performance in a passive avoidance test (which indicates a decrease in learning capacity of the offspring) were observed at doses of 100 and 250 mg/kg/day. The no-effect dose for all of these effects was 5 mg/kg/day, associated with a maternal plasma exposure (AUC) approximately 7.5 times that in humans receiving the MRDD. With doses of 100 and 250 mg/kg/day, the decreases in average weight of both the male and female offspring persisted into adulthood. All effects on the offspring in both studies occurred in the absence of any apparent maternal toxicity.

In embryofetal development studies, no teratogenic effects were observed when pregnant rats and rabbits were administered doses of 100 and 50 mg/kg/day, respectively, during organogenesis. Fetal weights were decreased in conjunction with decreased maternal weight gain at the highest doses tested. The developmental no-effect dose in these studies was 10 mg/kg/day in both rats and rabbits (maternal exposures approximately 15 times human exposure at the MRDD). Toxicokinetic studies demonstrated placental transfer of drug in both species.

### 8.3 Nursing Mothers

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when rizatriptan benzoate is administered to a nursing woman. Rizatriptan is extensively excreted in rat milk, with levels in milk at least 5-fold higher than levels in maternal plasma.

### 8.4 Pediatric Use

Safety and effectiveness in pediatric patients under 6 years of age have not been established.

*Information related to the efficacy and safety of rizatriptan benzoate in the acute treatment of migraine in patients aged 6 to 17 years is approved for Merck & Co., Inc.'s Rizatriptan Benzoate Tablets. However, due to Merck & Co., Inc.'s marketing exclusivity rights, this drug product is not labeled with that information. [See Clinical Studies (14.2)].*

### 8.5 Geriatric Use

Clinical studies of rizatriptan benzoate did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients.

Although the pharmacokinetics of rizatriptan were similar in elderly (aged ≥65 years) and in younger adults (n=17), in general, dose selection for an elderly patient should be cautious, starting at the low end of the dosing range. This reflects the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

Geriatric patients who have other cardiovascular risk factors (e.g., diabetes, hypertension, smoking, obesity, strong family history of coronary artery disease) should have a cardiovascular evaluation prior to receiving rizatriptan benzoate [see *Warnings and Precautions (5.1)*].

## 10 OVERDOSAGE

No overdoses of rizatriptan benzoate were reported during clinical trials in adults.

Some adult patients who received 40 mg of rizatriptan benzoate either a single dose or as two doses with a 2-hour interdose interval had dizziness and somnolence.

In a clinical pharmacology study in which 12 adult subjects received rizatriptan benzoate, at total cumulative doses of 60 mg (given within four hours), two of the subjects experienced syncope, dizziness, bradycardia including third degree AV block, vomiting, and/or incontinence.

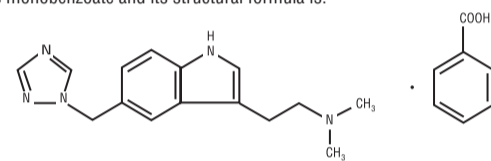
In addition, based on the pharmacology of rizatriptan benzoate, hypertension or myocardial ischemia could occur after overdosage. Gastrointestinal decontamination, (i.e., gastric lavage followed by activated charcoal) should be considered in patients suspected of an overdose with rizatriptan benzoate. Clinical and electrocardiographic monitoring should be continued for at least 12 hours, even if clinical symptoms are not observed.

The effects of hemo- or peritoneal dialysis on serum concentrations of rizatriptan are unknown.

## 11 DESCRIPTION

Rizatriptan benzoate tablets contains rizatriptan benzoate USP, a selective 5-hydroxytryptamine<sub>1B/1D</sub> (5-HT<sub>1B/1D</sub>) receptor agonist.

Rizatriptan benzoate USP is described chemically as: *N,N*-dimethyl-5-(1*H*-1,2,4-triazol-1-ylmethyl)-1*H*-indole-3-ethanamine monobenzoate and its structural formula is:



Its molecular formula is  $C_{19}H_{20}N_4O_2$ , representing a molecular weight of the free base of 269.4. Rizatriptan benzoate USP is a white to almost white, crystalline powder that is soluble in water and methanol, slightly soluble in isopropyl alcohol.

Rizatriptan benzoate tablets are available for oral administration in strengths of 5 and 10 mg (corresponding to 7.265 mg and 14.53 mg of the benzoate salt, respectively). Each compressed tablet contains the following inactive ingredients: lactose monohydrate, microcrystalline cellulose, maize starch, ferric oxide (red), and magnesium stearate.

## 12 CLINICAL PHARMACOLOGY

### 12.1 Mechanism of Action

Rizatriptan binds with high affinity to human cloned 5-HT<sub>1B/1D</sub> receptors. Rizatriptan benzoate presumably exerts its therapeutic effects in the treatment of migraine headache by binding to 5-HT<sub>1B/1D</sub> receptors located on intracranial blood vessels and sensory nerves of the trigeminal system.

### 12.3 Pharmacokinetics

#### Absorption

Rizatriptan is completely absorbed following oral administration. The mean oral absolute bioavailability of the rizatriptan benzoate tablet is about 45%, and mean peak plasma concentrations (C<sub>max</sub>) are reached in approximately 1-1.5 hours (T<sub>max</sub>). The presence of a migraine headache did not appear to affect the absorption or pharmacokinetics of rizatriptan. Food has no significant effect on the bioavailability of rizatriptan but delays the time to reach peak concentration by an hour. In clinical trials, rizatriptan benzoate was administered without regard to food.

The bioavailability and C<sub>max</sub> of rizatriptan were similar following administration of rizatriptan benzoate tablets and rizatriptan benzoate orally disintegrating tablets, but the rate of absorption is somewhat slower with rizatriptan benzoate orally disintegrating tablets, with T<sub>max</sub> delayed by up to 0.7 hour. AUC of rizatriptan is approximately 30% higher in females than in males. No accumulation occurred on multiple dosing.

#### Distribution

The mean volume of distribution is approximately 140 liters in male subjects and 110 liters in female subjects. Rizatriptan is minimally bound (14%) to plasma proteins.

#### Metabolism

The primary route of rizatriptan metabolism is via oxidative deamination by monoamine oxidase-A (MAO-A) to the indole acetic acid metabolite, which is not active at the 5-HT<sub>1B/1D</sub> receptor. N-monodesmethyl-rizatriptan, a metabolite with activity similar to that of parent compound at the 5-HT<sub>1B/1D</sub> receptor, is formed to a minor degree. Plasma concentrations of N-monodesmethyl-rizatriptan are approximately 14% of those of parent compound, and it is eliminated at a similar rate. Other minor metabolites, the N-oxide, the 6-hydroxy compound, and the sulfate conjugate of the 6-hydroxy metabolite are not active at the 5-HT<sub>1B/1D</sub> receptor.

#### Elimination

The total radioactivity of the administered dose recovered over 120 hours in urine and feces was 82% and 12%, respectively, following a single 10 mg oral administration of <sup>14</sup>C-rizatriptan. Following oral administration of <sup>14</sup>C-rizatriptan, rizatriptan accounted for about 17% of circulating plasma radioactivity. Approximately 14% of an oral dose is excreted in urine as unchanged rizatriptan while 51% is excreted as indole acetic acid metabolite, indicating substantial first pass metabolism.

The plasma half-life of rizatriptan in males and females averages 2-3 hours.

#### Cytochrome P450 Isoforms

Rizatriptan is not an inhibitor of the activities of human liver cytochrome P450 isoforms 3A4/5, 1A2, 2C9, 2C19, or 2E1; rizatriptan is a competitive inhibitor (K<sub>i</sub>=1400 nM) of cytochrome P450 2D6, but only at high, clinically irrelevant concentrations.

#### Special Populations

**Geriatric:** Rizatriptan pharmacokinetics in healthy elderly non-migraineur volunteers (age 65-77 years) were similar to those in younger non-migraineur volunteers (age 18-45 years).

**Pediatric:** *Information related to the pharmacokinetics of rizatriptan in pediatric migraineurs 6 to 17 years of age is approved for Merck & Co., Inc.'s Rizatriptan Benzoate Tablets. However, due to Merck & Co., Inc.'s marketing exclusivity rights, this drug product is not labeled with that information.*

**Gender:** The mean AUC<sub>0-∞</sub> and C<sub>max</sub> of rizatriptan (10 mg orally) were about 30% and 11% higher in females as compared to males, respectively, while T<sub>max</sub> occurred at approximately the same time.

**Hepatic impairment:** Following oral administration in patients with hepatic impairment caused by mild to moderate alcoholic cirrhosis of the liver, plasma concentrations of rizatriptan were similar in patients with mild hepatic insufficiency compared to a control group of subjects with normal hepatic function; plasma concentrations of rizatriptan were approximately 30% greater in patients with moderate hepatic insufficiency.

**Renal impairment:** In patients with renal impairment (creatinine clearance 10-60 mL/min/1.73 m<sup>2</sup>), the AUC<sub>0-∞</sub> of rizatriptan was not significantly different from that in subjects with normal renal function. In hemodialysis patients, (creatinine clearance <2 mL/min/1.73 m<sup>2</sup>), however, the AUC for rizatriptan was approximately 44% greater than that in patients with normal renal function.

**Race:** Pharmacokinetic data revealed no significant differences between African American and Caucasian subjects.

#### Drug Interactions

[See also Drug Interactions (7.1)]

**Monoamine oxidase inhibitors:** Rizatriptan is principally metabolized via monoamine oxidase, A' subtype (MAO-A). Plasma concentrations of rizatriptan may be increased by drugs that are selective MAO-A inhibitors (e.g., moclobemide) or nonselective MAO inhibitors [type A and B] (e.g., isocarboxazid, phenelzine, tranylcypromine, and pargyline). In a drug interaction study, when rizatriptan benzoate 10 mg was administered to subjects (n=12) receiving concomitant therapy with the selective, reversible MAO-A inhibitor, moclobemide 150 mg t.i.d., there were mean increases in rizatriptan AUC and C<sub>max</sub> of 119% and 41% respectively, and the AUC of the active N-monodesmethyl metabolite of rizatriptan was increased more than 400%. The interaction would be expected to be greater with irreversible MAO inhibitors. No pharmacokinetic interaction is anticipated in patients receiving selective MAO-B inhibitors [see *Contraindications (4) and Drug Interactions (7.5)*].

**Propranolol:** In a study of concurrent administration of propranolol 240 mg/day and a single dose of rizatriptan 10 mg in healthy adult subjects (n=11), mean plasma AUC for rizatriptan was increased by 70% during propranolol administration, and a four-fold increase was observed in one subject. The AUC of the active N-monodesmethyl metabolite of rizatriptan was not affected by propranolol [see *Dosage and Administration (2.4) and Drug Interactions (7.1)*].

**Nadolol/Metoprolol:** In a drug interactions study, effects of multiple doses of nadolol 80 mg or metoprolol 100 mg every 12 hours on the pharmacokinetics of a single dose of 10 mg rizatriptan were evaluated in healthy subjects (n=12). No pharmacokinetic interactions were observed.

**Paroxetine:** In a study of the interaction between the selective serotonin reuptake inhibitor (SSRI) paroxetine 20 mg/day for two weeks and a single dose of rizatriptan 10 mg in healthy subjects (n=12), neither the plasma concentrations of rizatriptan nor its safety profile were affected by paroxetine [see *Warnings and Precautions (5.7), Drug Interactions (7.4), and Patient Counseling Information (17)*].

**Oral contraceptives:** In a study of concurrent administration of an oral contraceptive during 6 days of administration of rizatriptan (10 to 30 mg/day) in healthy female volunteers (n=18), rizatriptan did not affect plasma concentrations of ethinyl estradiol or norethindrone.

## 13 NONCLINICAL TOXICOLOGY

### 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

**Carcinogenesis:** Oral carcinogenicity studies were conducted in mice (100 weeks) and rats (106 weeks) at doses of up to 125 mg/kg/day. Plasma exposures (AUC) at the highest dose tested were approximately 150 (mice) and 240 times (rats) that in humans at the maximum recommended daily dose (MRDD) of 30 mg/day. There was no evidence of an increase in tumor incidence related to rizatriptan in either species.

**Mutagenesis:** Rizatriptan was neither mutagenic nor clastogenic in a battery of *in vitro* and *in vivo* genetic toxicity studies, including: the microbial mutagenesis (Ames) assay, *in vitro* mammalian cell mutagenesis and chromosomal aberration assays, and the *in vivo* chromosomal aberration assay in mouse.

**Impairment of Fertility:** In a fertility study in rats, altered estrus cyclicity and delays in time to mating were observed in females treated orally with 100 mg/kg/day rizatriptan. The no-effect dose was 10 mg/kg/day (approximately 15 times the human exposure at the MRDD). There were no other fertility-related effects in the female rats. There was no impairment of fertility or reproductive performance in male rats treated with up to 250 mg/kg/day (approximately 550 times the human exposure at the MRDD).

## 14 CLINICAL STUDIES

### 14.1 Adults

The efficacy of rizatriptan benzoate tablets was established in four multicenter, randomized, placebo-controlled trials. Patients enrolled in these studies were primarily female (84%) and Caucasian (88%), with a mean age of 40 years (range of 18 to 71). Patients were instructed to treat a moderate to severe headache. Headache response, defined as a reduction of moderate or severe headache pain to no or mild headache pain, was assessed for up to 2 hours (Study 1) or up to 4 hours after dosing (Studies 2, 3 and 4). Associated symptoms of nausea, photophobia, and phonophobia and maintenance of response up to 24 hours post-dose were evaluated. A second dose of rizatriptan benzoate tablets was allowed 2 to 24 hours after dosing for treatment of recurrent headache in Studies 1 and 2. Additional analgesics and/or antiemetics were allowed 2 hours after initial treatment for rescue in all four studies.

In all studies, the percentage of patients achieving headache response 2 hours after treatment was significantly greater in patients who received either rizatriptan benzoate tablets 5 or 10 mg compared to those who received placebo. In a separate study, doses of 2.5 mg were not different from placebo. Doses greater than 10 mg were associated with an increased incidence of adverse effects. The results from the four controlled studies are summarized in Table 2.

**Table 2: Response Rates 2 Hours Following Treatment of Initial Headache in Studies 1, 2, 3, and 4**

Study	Placebo	Rizatriptan Benzoate Tablets 5 mg	Rizatriptan Benzoate Tablets 10 mg
1	35% (n=304)	62% <sup>†</sup> (n=458)	71% <sup>††</sup> (n=456)
2 <sup>§</sup>	37% (n=82)	-	77% (n=320)
3	23% (n=80)	63% (n=352)	-
4	40% (n=159)	60% (n=164)	67% (n=385)

<sup>†</sup>p-value <0.05 in comparison with placebo

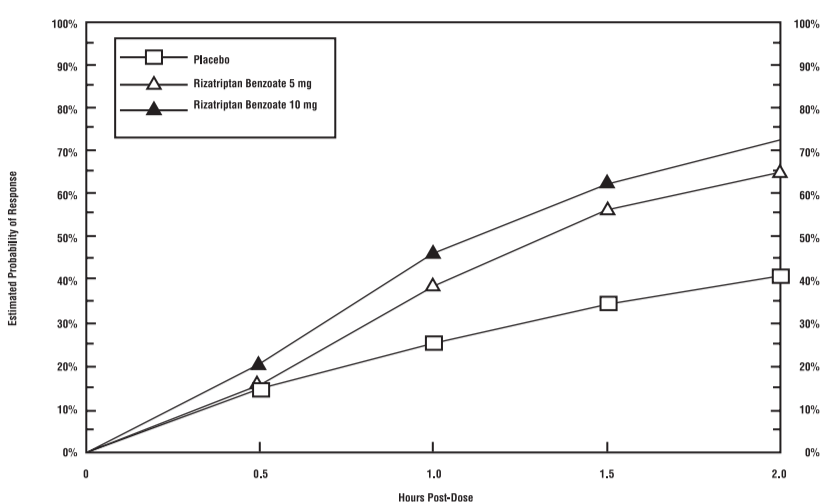
<sup>††</sup>p-value <0.05 in comparison with 5 mg

<sup>§</sup>Results for initial headache only.

Comparisons of drug performance based upon results obtained in different clinical trials may not be reliable. Because studies are conducted at different times, with different samples of patients, by different investigators, employing different criteria and/or different interpretations of the same criteria, under different conditions (dose, dosing regimen, etc.), quantitative estimates of treatment response and the timing of response may be expected to vary considerably from study to study.

The estimated probability of achieving an initial headache response within 2 hours following treatment in pooled Studies 1, 2, 3, and 4 is depicted in Figure 1.

**Figure 1: Estimated Probability of Achieving an Initial Headache Response by 2 Hours in Pooled Studies 1, 2, 3, and 4<sup>§</sup>**

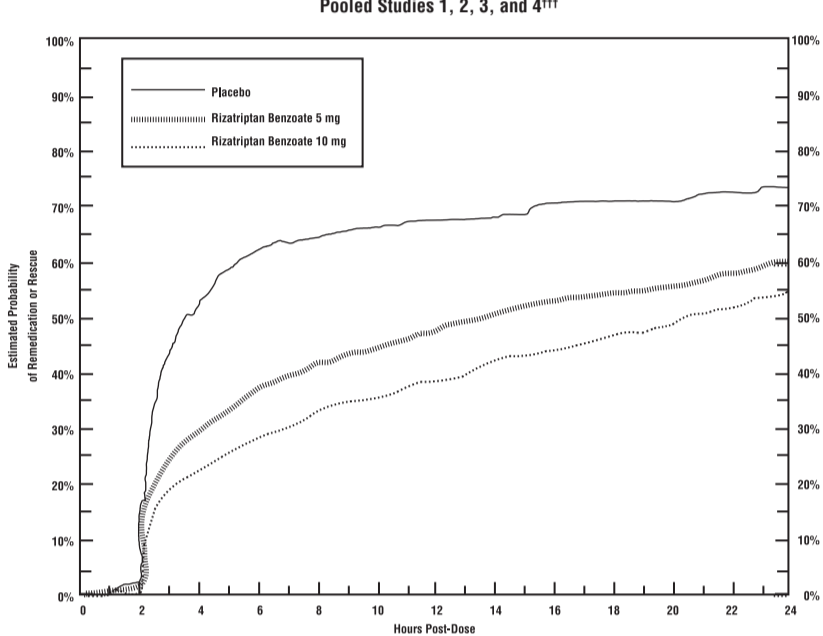


<sup>§</sup> Figure 1 shows the Kaplan-Meier plot of the probability over time of obtaining headache response (no or mild pain) following treatment with rizatriptan benzoate or placebo. The averages displayed are based on pooled data from 4 placebo-controlled, outpatient trials providing evidence of efficacy (Studies 1, 2, 3, and 4). Patients taking additional treatment or not achieving headache response prior to 2 hours were censored at 2 hours.

For patients with migraine-associated photophobia, phonophobia, and nausea at baseline, there was a decreased incidence of these symptoms following administration of rizatriptan benzoate compared to placebo.

Two to 24 hours following the initial dose of study treatment, patients were allowed to use additional treatment for pain response in the form of a second dose of study treatment or other medication. The estimated probability of patients taking a second dose or other medication for migraine over the 24 hours following the initial dose of study treatment is summarized in Figure 2.

**Figure 2: Estimated Probability of Patients Taking a Second Dose of Rizatriptan Benzoate Tablets or Other Medication for Migraines Over the 24 Hours Following the Initial Dose of Study Treatment in Pooled Studies 1, 2, 3, and 4<sup>¶¶</sup>**



<sup>¶¶</sup> This Kaplan-Meier plot is based on data obtained in 4 placebo-controlled outpatient clinical trials (Studies 1, 2, 3, and 4). Patients not using additional treatments were censored at 24 hours. The plot includes both patients who had headache response at 2 hours and those who had no response to the initial dose. Re-treatment was not allowed within 2 hours post-dose.

Efficacy was unaffected by the presence of aura; by the gender, or age of the patient; or by concomitant use of common migraine prophylactic drugs (e.g., beta-blockers, calcium channel blockers, tricyclic antidepressants) or oral contraceptives. In two additional similar studies, efficacy was unaffected by relationship to menses. There were insufficient data to assess the impact of race on efficacy.

### 14.2 Pediatric Patients 6 to 17 Years of Age

*Information contained in a clinical study relating to the efficacy of rizatriptan benzoate orally disintegrating tablets in pediatric patients (6 to 17 years old) is approved for Merck & Co., Inc.'s marketing exclusivity rights, this drug product is not labeled with that information.*

### 16 HOW SUPPLIED/STORAGE AND HANDLING

Rizatriptan benzoate tablets 5 mg, are pale pink to pink colored biconvex, capsule-shaped, uncoated tablets debossed with '414' on one side and 'C' on other side.

Carton of 12 Tablets (2x6's) NDC 59746-414-14

Carton of 18 Tablets (3x6's) NDC 59746-414-19

Rizatriptan benzoate tablets 10 mg, are pale pink to pink colored biconvex, capsule-shaped, uncoated tablets debossed with '415' on one side and 'C' on other side.

Carton of 12 Tablets (2x6's) NDC 59746-415-14

Carton of 18 Tablets (3x6's) NDC 59746-415-19

### Storage

Store rizatriptan benzoate tablets at 20°C -25°C (68°F -77°F); excursions permitted to 15°C-30°C (59°F-86°F). [See USP Controlled Room Temperature]

### 17 PATIENT COUNSELING INFORMATION

See *FDA-Approved Patient Labeling (Patient Information)*.

**Risk of Myocardial Ischemia and/or Infarction, Prinzmetal's Angina, Other Vasospasm-related Events, and Cerebrovascular Events**

Inform patients that rizatriptan benzoate tablets may cause serious cardiovascular side effects such as myocardial infarction or stroke. Although serious cardiovascular events can occur without warning symptoms, patients should be alert for the signs and symptoms of chest pain, shortness of breath, weakness, slurring of speech, and should seek for medical advice when observing any indicative sign or symptoms. Patients should be apprised of the importance of this follow-up [see *Warnings and Precautions (5.1, 5.2, 5.4, 5.5)*].

### Serotonin Syndrome

Patients should be cautioned about the risk of serotonin syndrome with the use of rizatriptan benzoate tablets or other triptans, particularly during combined use with selective serotonin reuptake inhibitors (SSRIs) or serotonin norepinephrine reuptake inhibitors (SNRIs) [see *Warnings and Precautions (5.7), Drug Interactions (7.4), and Clinical Pharmacology (12.3)*].

### Pregnancy

Inform patients that rizatriptan benzoate tablets should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus [see *Use in Specific Populations (8.1)*].

### Nursing Mothers

Advise patients to notify their healthcare provider if they are breastfeeding or plan to breastfeed [see *Use in Specific Populations (8.3)*].

### Ability To Perform Complex Tasks

Since migraines or treatment with rizatriptan benzoate tablets may cause somnolence and dizziness, instruct patients to evaluate their ability to perform complex tasks during migraine attacks and after administration of rizatriptan benzoate tablets.

### Medication Overuse Headache

Inform patients that use of acute migraine drugs for 10 or more days per month may lead to an exacerbation of headache, and encourage patients to record headache frequency and drug use (e.g., by keeping a headache diary) [see *Warnings and Precautions (5.6)*].

## Rx Only

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### Marketed by :

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