

HIGHLIGHTS OF PRESCRIBING INFORMATION

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

Eletriptan hydrobromide tablets, for oral use
Initial U.S. Approval: 2002

INDICATIONS AND USAGE

Eletriptan is a serotonin (5-HT_{1B/1D}) receptor agonist (triptan) indicated for the acute treatment of migraine with or without aura in adults (1).

Limitations of Use:

- Use only after a clear diagnosis of migraine has been established (1).
- Not indicated for the prophylactic therapy of migraine (1).
- Not indicated for the treatment of cluster headache (1).

DOSE AND ADMINISTRATION

- Single dose: 20 mg or 40 mg (2).
- Maximum single dose: 40 mg (2).
- May repeat dose after 2 hours if needed, not to exceed 80 mg in any 24-hour period (2).

DOSE FORMS AND STRENGTHS

Tablets: 20 mg and 40 mg (3).

CONTRAINDICATIONS

- History of coronary artery disease (CAD) or coronary artery vasospasm (4).
- Wolff-Parkinson-White syndrome or other cardiac accessory conduction pathway disorders (4).
- History of stroke, transient ischemic attack, or history or current evidence of hemiplegic or basilar migraine (4).
- Peripheral vascular disease (4).
- Ischemic bowel disease (4).
- Uncontrolled hypertension (4).
- Within 24 hours of treatment with another 5-HT₁ agonist, or an ergotamine-containing medication (4).
- Hypersensitivity to eletriptan (angioedema and anaphylaxis seen) (4).
- Within at least 72 hours of treatment with the following potent CYP3A4 inhibitors: ketoconazole, itraconazole, nefazodone, troleanomycin, clarithromycin, rifonavir, or neflavinir (4).

WARNINGS AND PRECAUTIONS

- Myocardial ischemia/infarction or Prinzmetal's angina: Perform cardiac evaluation in patients with multiple cardiovascular risk factors (5.1).
- Arrhythmias: Discontinue eletriptan if occurs (5.2).
- Chest/throat/neck/jaw pain, tightness, pressure, or heaviness: Generally not myocardial ischemia; evaluate high risk patients for CAD (5.3).
- Cerebral hemorrhage, subarachnoid hemorrhage, or stroke: Discontinue eletriptan if occurs (5.4).
- Gastrointestinal ischemia or infarction events, or peripheral vasospastic reactions: Discontinue eletriptan if occurs (5.5).
- Medication overuse headache: Detoxification may be necessary (5.6).
- Serotonin syndrome: Discontinue eletriptan if occurs (5.7, 7.3).

Most common adverse reactions (>5% and/or placebo) were asthenia, nausea, dizziness, and somnolence. These reactions appear to be dose-related. (6.1) To report SUSPECTED ADVERSE REACTIONS, contact 1-800-438-1985 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

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.

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FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

Eletriptan is indicated for the acute treatment of migraine with or without aura in adults.

Limitations of Use:

- Use only if a clear diagnosis of migraine has been established. If a patient has no response to the first migraine attack treated with eletriptan, reconsider the diagnosis of migraine before eletriptan is administered to treat any subsequent attacks.
- Eletriptan is not intended for the prevention of migraine attacks.
- Safety and effectiveness of eletriptan have not been established for cluster headache.

2 DOSAGE AND ADMINISTRATION

The maximum recommended single dose is 40 mg. In controlled clinical trials, single doses of 20 mg and 40 mg were effective for the acute treatment of migraine in adults. A greater proportion of patients had a response following a 40 mg dose than following a 20 mg dose (see Clinical Studies (14)).

If the migraine has not resolved by 2 hours after taking eletriptan, or returns after transient improvement, a second dose may be administered at least 2 hours after the first dose. The maximum daily dose should not exceed 80 mg. The safety of treating an average of more than 3 migraine attacks in a 30-day period has not been established.

3 DOSAGE FORMS AND STRENGTHS

20 mg Tablets: Orange, round, convex shaped, film-coated, with "PFIZER" and "REP20" debossed.

40 mg Tablets: Orange, round, convex shaped, film-coated, with "PFIZER" and "REP40" debossed.

4 CONTRAINDICATIONS

- Eletriptan is contraindicated in patients with:
 - Ischemic coronary artery disease (CAD) (angina pectoris, history of myocardial infarction, or documented silent ischemia) or coronary artery vasospasm, including Prinzmetal's angina (see Warnings and Precautions (5.1)).

- Wolff-Parkinson-White syndrome or arrhythmias associated with other cardiac accessory conduction pathway disorders (see Warnings and Precautions (5.2)).

- History of stroke, transient ischemic attack (TIA), or history or current evidence of hemiplegic or basilar migraine because these patients are at a higher risk of stroke (see Warnings and Precautions (5.4)).

- Peripheral vascular disease (see Warnings and Precautions (5.5)).
- Ischemic bowel disease (see Warnings and Precautions (5.6)).
- Uncontrolled hypertension (see Warnings and Precautions (5.8)).
- Recent use (i.e., within 24 hours) of another 5-hydroxytryptamine (5-HT₁) agonist, ergotamine-containing medication, or ergot-type medication such as dihydroergotamine (DHE) or methysergide (see Drug Interactions (7.1)).

- Hypersensitivity to eletriptan (angioedema and anaphylaxis seen) (see Warnings and Precautions (5.9)).
- Recent use (i.e., within at least 72 hours) of the following potent CYP3A4 inhibitors: ketoconazole, itraconazole, nefazodone, troleanomycin, clarithromycin, rifonavir, or neflavinir (see Drug Interactions (7.2) and Clinical Pharmacology (12.3)).

5 WARNINGS AND PRECAUTIONS

Eletriptan should only be used where a clear diagnosis of migraine has been established.

- 5.1 Myocardial Ischemia, Myocardial Infarction, and Prinzmetal's Angina

Eletriptan is contraindicated in patients with ischemic or vasospastic CAD. There have been reports of serious cardiac adverse reactions, including acute myocardial infarction, occurring within a few hours following administration of eletriptan. Some of these reactions occurred in patients without known CAD. Eletriptan may cause coronary artery vasospasm (Prinzmetal's angina), even in patients without a history of CAD.

Perform a cardiovascular evaluation in triptan-naïve patients who have multiple cardiovascular risk factors (e.g., increased age, diabetes, hypertension, smoking, obesity, strong family history of CAD) prior to receiving eletriptan. Do not use eletriptan in patients with a history of myocardial infarction or other cardiac accessory conduction pathway disorders (see Contraindications (4)).

5.2 Arrhythmias

Life-threatening disturbances of cardiac rhythm including ventricular tachycardia and ventricular fibrillation leading to death have been reported within a few hours following the administration of 5-HT_{1B/1D} agonists. Discontinue eletriptan if these disturbances occur. Eletriptan is contraindicated in patients with Wolff-Parkinson-White syndrome or arrhythmias associated with other cardiac accessory conduction pathway disorders (see Contraindications (4)).

5.3 Chest, Throat, Neck and/or Jaw Pain/Tightness/Pressure

Sensations of tightness, pain, and pressure in the chest, throat, neck, and jaw commonly occur after treatment with eletriptan and are usually non-cardiac in origin. However, perform a cardiac evaluation if these patients are at high cardiac risk. Eletriptan is contraindicated in patients with CAD or Prinzmetal's variant angina (see Contraindications (4)).

5.4 Cerebrovascular Events

Cerebral hemorrhage, subarachnoid hemorrhage, and stroke have occurred in patients treated with 5-HT_{1B/1D} agonists, and some have resulted in fatalities. In a number of cases, it appears possible that the cerebrovascular events were primary of the 5-HT₁ agonist having been administered in the incorrect belief that the symptoms experienced were a consequence of migraine, when they were not.

Before treating headaches in patients not previously diagnosed as migraineurs, and in migraineurs who present with symptoms atypical of migraine, other potentially serious neurological conditions need to be excluded. Eletriptan is contraindicated in patients with a history of stroke or TIA (see Contraindications (4)).

5.5 Other Vasospastic Reactions

Eletriptan may cause non-coronary vasospastic reactions, such as peripheral vascular ischemia, gastrointestinal vascular ischemia and infarction (presenting with abdominal pain and bloody diarrhea), and Raynaud's syndrome. In patients who experience symptoms or signs suggestive of a vasospastic reaction following the use of any 5-HT₁ agonist, rule out a vasospastic reaction before receiving a additional eletriptan doses (see Contraindications (4)).

5.6 Medication Overuse Headache

Overuse of acute migraine drugs (e.g., ergotamine, triptans, opioids, or combination of these drugs for 10 or more days per month) may lead to exacerbation of headache (medication overuse headache). Medication overuse headache may present as migraine-like daily headaches or as a marked increase in the number of migraine attacks. Detoxification of patients, including withdrawal of the overused acute migraine drugs and treatment of withdrawal symptoms (which often includes a transient worsening of headache) may be necessary.

5.7 Serotonin Syndrome

Serotonin syndrome may occur with eletriptan, particularly during co-administration with selective serotonin reuptake inhibitors (SSRIs) and norepinephrine reuptake inhibitors (SNRIs), tricyclic antidepressants (TCAs), and monoamine oxidase (MAO) inhibitors (see Drug Interactions (7.3)). Serotonin syndrome symptoms may include mental status changes (e.g., agitation, hallucinations, coma), autonomic instability (e.g., tachycardia, labile blood pressure, hyperthermia), neuromuscular aberrations (e.g., hyperreflexia, incoordination), and/or severe gastrointestinal symptoms (e.g., nausea, vomiting, diarrhea). The onset of symptoms usually occurs within minutes to hours of receiving a new or a greater dose of a serotonergic medication. Discontinue eletriptan if serotonin syndrome is suspected.

5.8 Increase in Blood Pressure

Significant elevation in blood pressure, including hypertensive crisis with acute impairment of organ systems, has been reported on rare occasions in patients treated with 5-HT_{1B/1D} agonists, including patients without a history of hypertension. Monitor blood pressure in patients treated with eletriptan. Eletriptan is contraindicated in patients with uncontrolled hypertension (see Contraindications (4)).

5.9 Anaphylactic/Anaphylactoid Reactions

There have been reports of anaphylaxis, anaphylactoid, and hypersensitivity reactions including angioedema in patients receiving eletriptan. Such reactions can be life threatening or fatal. In general, anaphylactic reactions to drugs are more likely to occur in individuals with a history of sensitivity to multiple allergens. Eletriptan is contraindicated in patients with a history of hypersensitivity reaction to eletriptan (see Contraindications (4)).

6 ADVERSE REACTIONS

The following adverse reactions are described elsewhere in other sections of the prescribing information:

- Myocardial ischemia and myocardial infarction, and Prinzmetal's angina (see Warnings and Precautions (5.2)).
- Arrhythmias (see Warnings and Precautions (5.3)).
- Chest, throat, neck, and/or jaw pain/tightness/pressure (see Warnings and Precautions (5.4)).
- Cerebrovascular events (see Warnings and Precautions (5.4)).
- Other vasospastic reactions (see Warnings and Precautions (5.5)).
- Medication overuse headache (see Warnings and Precautions (5.6)).
- Serotonin syndrome (see Warnings and Precautions (5.7)).
- Increase in blood pressure (see Warnings and Precautions (5.8)).
- Hypersensitivity reactions (see Contraindications (4) and Warnings and Precautions (5.9)).

6.1 Clinical Trials Experience

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

Among 4,597 patients who treated the first migraine headache with eletriptan in short-term placebo-controlled trials, the most common adverse reactions reported with treatment with eletriptan were asthenia, nausea, dizziness, and somnolence. These reactions appear to be dose-related.

In long-term open-label studies where patients were allowed to treat multiple migraine attacks for up to 1 year, 128 (8.3%) out of 1,544 patients discontinued treatment due to adverse reactions.

Table 1 lists adverse reactions that occurred in the subset of 5,125 migraineurs who received eletriptan doses of 20 mg, 40 mg and 80 mg or placebo in worldwide placebo-controlled trials (4) and Clinical Pharmacology (12.3).

Only adverse reactions that were more frequent in an eletriptan treatment group compared to the placebo group with an incidence greater than or equal to 2% are included in Table 1.

Table 1: Adverse Reactions Incidence in Placebo-Controlled Migraine Clinical Trials: Reactions Reported by ≥2% Patients Treated With Eletriptan and More Than Placebo

| Adverse Reaction Type | Placebo (n=988) | Eletriptan 20 mg (n=431) | Eletriptan 40 mg (n=1774) | Eletriptan 80 mg (n=1932) |
|--------------------------------------------------|-----------------|--------------------------|---------------------------|---------------------------|
| ATYPICAL SENSATIONS | | | | |
| Parosmia | 2% | 3% | 3% | 4% |
| Flushing/feeling of warmth | 2% | 2% | 2% | 2% |
| PAIN AND PRESSURE SENSATIONS | | | | |
| Chest—tightness/pain/pressure | 1% | 1% | 2% | 4% |
| Abdominal—pain/discomfort/stomach pain/pressure | 1% | 1% | 2% | 2% |
| DIGESTIVE | | | | |
| Dry mouth | 2% | 2% | 3% | 4% |
| Dyspepsia | 1% | 1% | 2% | 2% |
| Dysphagia—throat tightness/difficulty swallowing | 0.2% | 1% | 2% | 2% |
| NEUROLOGICAL | | | | |
| Dizziness | 3% | 3% | 6% | 7% |
| Somnolence | 4% | 3% | 6% | 7% |
| Headache | 3% | 4% | 3% | 4% |
| OTHER | | | | |
| Asthenia | 3% | 4% | 5% | 10% |

The frequency of adverse reactions in clinical trials did not increase when up to 2 doses of eletriptan were taken within 24 hours. The incidence of adverse reactions in controlled clinical trials was not affected by gender, age, or race of the patients. Adverse reaction frequencies were also unchanged by concomitant use of drugs commonly taken for migraine prophylaxis (e.g., SSRIs, beta blockers, calcium channel blockers, tricyclic antidepressants, estrogen replacement therapy or oral contraceptives).

8.2 Postmarketing Experience

The following adverse reaction(s) have been identified through post approval use of eletriptan. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Neurological: seizure

Digestive: vomiting

7 DRUG INTERACTIONS

7.1 Ergot-Containing Drugs Including Other 5-HT_{1B/1D} Agonists

Ergot-containing drugs have been reported to cause prolonged vasospastic reactions. Because these effects may be additive, use of ergotamine-containing or ergot-type medications (like dihydroergotamine (DHE) or methysergide) and eletriptan within 24 hours of each other is contraindicated. Concomitant use of other 5-HT₁ agonists within 24 hours of eletriptan treatment is contraindicated (see Contraindications (4)).

7.2 CYP3A4 Inhibitors

Potent CYP3A4 inhibitors significantly increase the exposure of eletriptan. Eletriptan should not be used within at least 72 hours of treatment with potent CYP3A4 inhibitors (see Contraindications (4) and Clinical Pharmacology (12.3)).

7.3 Selective Serotonin Reuptake Inhibitors/Serotonin and Norepinephrine Reuptake Inhibitors and Serotonin Synthesis Inhibitors

Cases of serotonin syndrome have been reported during co-administration of triptans and SSRIs, SNRIs, TCAs and MAO inhibitors (see Warnings and Precautions (5.7)).

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. In reproductive toxicity studies in pregnant animals, oral administration of eletriptan was associated with developmental toxicity (decreased fetal and pup weights and an increased incidence of fetal structural abnormalities at clinically relevant plasma exposures. Eletriptan should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

When pregnant rats were administered eletriptan during the period of organogenesis at doses of 10, 30 or 100 mg/kg/day, fetal weights were decreased and the incidences of ventral and sternal variations were increased at 100 mg/kg/day (approximately 12 times the maximum recommended human dose (MRHD) of 80 mg/day on a mg/m² basis). The 30 and 100 mg/kg/day doses were also maternally toxic, as evidenced by decreased maternal body weight gain during gestation. The no-effect dose for developmental toxicity in rats was 30 mg/kg/day, which is approximately 4 times the MRHD on a mg/m² basis.

When doses of 5, 10, or 50 mg/kg/day were given to pregnant rabbits throughout organogenesis, fetal weights were decreased at 50 mg/kg/day, which is approximately 12 times the MRHD on a mg/m² basis. The incidences of fused sternaebrae and vena cava deviations were increased at all doses. Maternal toxicity was not evident at any dose. A no-effect dose for developmental toxicity in rabbits was not established; the lowest dose tested (5 mg/kg/day) is similar to the MRHD on a mg/m² basis.

8.2 Nursing Mothers

Eletriptan is excreted in human milk. Caution should be exercised when eletriptan is administered to a nursing woman.

8.4 Pediatric Use

Safety and effectiveness in pediatric patients have not been established. The efficacy of eletriptan tablets (40 mg) in patients 11-17 was not established in a randomized, placebo-controlled trial of 274 adolescent migraineurs (see Clinical Studies (14)). Adverse reactions observed were similar in nature to those reported in clinical trials in adults. Postmarketing experience with other triptans includes a limited number of reports that describe pediatric patients who have experienced clinically serious adverse reactions that are similar in nature to those reported rarely in adults. Long-term safety of eletriptan was studied in 76 adolescent patients who received treatment for up to one year. A similar profile of adverse reactions to that of adults was observed. The long-term safety of eletriptan in pediatric patients has not been established.

8.5 Geriatric Use

Blood pressure was increased to a greater extent in elderly subjects than in young subjects. The pharmacokinetic disposition of eletriptan in the elderly is similar to that seen in younger adults (see Clinical Pharmacology (12.3)). In clinical trials, there were no apparent differences in efficacy or the incidence of adverse reactions between patients under 65 years of age and those 65 and above.

8.6 Hepatic Impairment

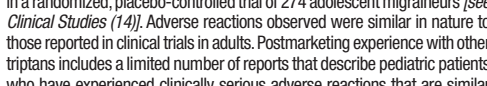
The effect of severe hepatic impairment on eletriptan metabolism has not been evaluated. Eletriptan is not recommended for use in patients with severe hepatic impairment (see Clinical Pharmacology (12.3)).

10 OVERDOSAGE

The elimination half-life of eletriptan is about 4 hours (see Clinical Pharmacology (12.3)), therefore monitoring of patients after overdose with eletriptan should continue for at least 20 hours or longer while symptoms or signs persist. There is no specific antidote to eletriptan. It is unknown what effect hemodialysis or peritoneal dialysis has on the serum concentration of eletriptan.

11 DESCRIPTION

Eletriptan tablets contain eletriptan hydrobromide, which is a selective 5-hydroxytryptamine 1B/1D (5-HT_{1B/1D}) receptor agonist. Eletriptan hydrobromide is chemically designated as (R)-3-[1-(1-Methyl-2-pyrrolidinyl)methyl]-5-[2-(phenylsulfonylethyl)-1H-indole monohydrobromide], and it has the following chemical structure:



The empirical formula is C₂₈H₃₀N₂O₂S · HBr, representing a molecular weight of 463.43. Eletriptan hydrobromide is a white to light pale colored powder that is readily soluble in water.

Each eletriptan tablet for oral administration contains 24.2 or 48.5 mg of eletriptan hydrobromide equivalent to 20 mg or 40 mg of eletriptan, respectively. Each tablet also contains the inactive ingredients microcrystalline cellulose NF, titanium dioxide NF, croscarmellose sodium USP, magnesium stearate NF, titanium dioxide NF, hypromellose, triacetin USP and FD&C Yellow No. 6 aluminum lake.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Eletriptan binds with high affinity to 5-HT_{1A}, 5-HT_{1B}, and 5-HT_{1D} receptors, has modest affinity for 5-HT_{1C}, 5-HT_{1E}, 5-HT_{1F}, and 5-HT₂ receptors. Migraines are likely due to local cranial vasodilation and/or to the release of sensory neuropeptides (vasovascular instigating peptide, substance P and calcitonin gene-related peptide) through nerve endings in the trigeminal system. The therapeutic activity of eletriptan for the treatment of migraine headache is thought to be due to the agonist effects at the 5-HT_{1B/1D} receptors on intracranial blood vessels (including the arterio-venous anastomoses) and sensory nerves of the trigeminal system which result in cranial vessel constriction and inhibition of pro-inflammatory neuropeptide release.

13 Pharmacokinetics

Absorption: Eletriptan is well absorbed after oral administration with peak plasma levels occurring approximately 1.5 hours after dosing to healthy subjects. In patients with moderate to severe migraine the median T_{max} is 2.0 hours. The mean absolute bioavailability of eletriptan is approximately 50%. The oral pharmacokinetics are slightly more than dose-proportional over the clinical dose range. The AUC and C_{max} of eletriptan are increased by approximately 20 to 30% following oral administration with a high fat meal. Eletriptan can be taken with or without food.

Distribution: The volume of distribution of eletriptan following intravenous administration is 138L. Plasma protein binding is moderate and approximately 85%.

Metabolism: The N-demethylated metabolite of eletriptan is the only known active metabolite. This metabolite shows vasoconstriction similar to eletriptan in animal models. Though the half-life of the metabolite is estimated to be about 13 hours, the plasma concentration of the N-demethylated metabolite is 10-20% of parent drug and is unlikely to contribute significantly to the overall effect of the parent compound.

In vitro studies indicate that eletriptan is primarily metabolized by cytochrome P-450 enzyme CYP3A4 (see Contraindications (4) and Drug Interactions (7.2)).

Elimination: The terminal elimination half-life of the metabolite is approximately 13 hours. Mean renal clearance (CL_R) following oral administration is approximately 3.9 L/h. Non-renal clearance accounts for about 90% of the total clearance.

Special Populations

Age: The pharmacokinetics of eletriptan are generally unaffected by age. Blood pressure was increased to a greater extent in elderly subjects than in younger subjects (see Use in Specific Populations (8.5)). The pharmacokinetic disposition of eletriptan in the elderly is similar to that seen in younger adults. There is a statistically significant increased half-life from about 4.4 hours to 5.7 hours between elderly (65 to 93 years of age) and younger adult subjects (18 to 45 years