

# The Medical Letter®

## on Drugs and Therapeutics

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### ▶ Triptans (online only)

Table: Triptans							
Drug	Almotriptan	Eletriptan	Frovatriptan	Naratriptan	Rizatriptan	Sumatriptan <sup>1</sup>	Zolmitriptan
Brand Name (Manufacturer)	Axert (Janssen)	Relpax (Pfizer)	Frova (Endo)	Amerge (GSK)	Maxalt, Maxalt MLT (Merck)	Imitrex (GSK) Onzetra Xsail (Avanir) Sumavel DosePro (Endo) Zembrace SymTouch (Promius)	Zomig, Zomig ZMT (Impax)
Generic Available	Yes	No	Yes	Yes	Yes	Yes – for Imitrex products only	Yes – for oral tabs and ODTs only
Route of Administration	Oral	Oral	Oral	Oral	Oral	Oral; Nasal; SC	Oral; Nasal
Formulations	6.25, 12.5 mg tabs	20, 40 mg tabs	2.5 mg tabs	1, 2.5 mg tabs	5, 10 mg tabs and 5, 10 mg ODTs	Imitrex and generics – Oral: 25, 50, 100 mg tabs SC: 4, 6 mg/0.5 mL auto-injector pen and refill cartridge, vials <sup>2</sup> Nasal: 5, 20 mg/0.1 mL nasal spray Onzetra Xsail: 11 mg nasal powder caps Sumavel DosePro: 6 mg/0.5 mL SC needle-free delivery system Zembrace SymTouch: 3 mg/0.5 mL SC auto-injector	Oral: 2.5, 5 mg tabs and 2.5, 5 mg ODTs Nasal: 2.5, 5 mg/0.1 mL nasal spray
Onset of Action	30-60 min	30-60 min	~ 2 hrs	1-3 hrs	30-60 min	Tab: 30-60 min SC: ~10 min Nasal: 10-15 min	Tab: 30-60 min Nasal: 10-15 min
Elimination Half-life	3-4 hrs	~4 hrs	~25 hrs	~6 hrs	2-3 hrs	~2 hrs	2-3 hrs
Usual Adult Dosage	6.25 or 12.5 mg PO; can be repeated after 2 hrs	20 or 40 mg PO; can be repeated after 2 hrs	2.5 mg PO with fluids; can be repeated after 2 hrs	2.5 mg PO; can be repeated after 4 hrs	5 or 10 mg PO; can be repeated after 2 hrs	Oral: 50 or 100 mg PO; can be repeated after 2 hrs <sup>3</sup> SC: Sumavel DosePro <sup>4</sup> ; Imitrex, and generics <sup>3</sup> : 6 mg SC; can be repeated after 1 hr Zembrace SymTouch: 3 mg SC; can be repeated after 1 hr Nasal spray: 5, 10, or 20 mg intranasally; can be repeated after 2 hrs Nasal powder: 22 mg intranasally; can be repeated after 2 hrs	2.5 or 5 mg PO or intranasally; can be repeated after 2 hrs
Max Adult Dose	25 mg/d	80 mg/d	7.5 mg/d	5 mg/d	30 mg/d	Oral: 200 mg/d SC: 12 mg/d Nasal spray: 40 mg/d Nasal powder: 44 mg/d	10 mg/d
Adult Dosage for Renal Impairment	Severe (CrCl 10-30 mL/min): 6.25 mg starting dose	No dosage adjustment needed	No dosage adjustment needed	Severe (CrCl <15 mL/min): contraindicated Mild-moderate: 1 mg starting dose (max 2.5 mg/d)	No dosage adjustment needed	No dosage adjustment needed	No dosage adjustment needed
Adult Dosage for Hepatic Impairment	6.25 mg starting dose (max 12.5 mg/d)	Severe <sup>5</sup> : not recommended	Severe <sup>5</sup> : not recommended	Severe: contraindicated Mild-moderate: 1 mg starting dose (max 2.5 mg/d)	No dosage adjustment needed	Mild-moderate (oral): max single dose 50 mg Severe (oral, intranasal, and SC): contraindicated	Moderate-severe (oral): 1.25 mg (max 5 mg/d) Moderate-severe (intranasal): not recommended
Adult Dosage Adjustment for Drug Interactions	With a strong CYP3A4 inhibitor <sup>6</sup> : 6.25 mg starting dose (max 12.5 mg/d); avoid strong CYP3A4 inhibitors in patients with renal or hepatic impairment	With a strong CYP3A4 inhibitor: avoid use within 72 hrs of treatment	No dosage adjustment needed	No dosage adjustment needed	With propranolol: only the 5 mg dose is recommended (max 15 mg/d)	No dosage adjustment needed	With cimetidine: 2.5 mg (max 5 mg/d)

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Table: Triptans (continued)							
Drug	Almotriptan	Eletriptan	Frovatriptan	Naratriptan	Rizatriptan	Sumatriptan <sup>1</sup>	Zolmitriptan
Usual Pediatric Dosage	12-17 yrs: 6.25 or 12.5 mg PO; can be repeated after 2 hrs	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	6-17 yrs: 5 mg (<40 kg) or 10 mg (≥40 kg)	Not FDA-approved for pediatric use	Oral: not FDA-approved for pediatric use Nasal: (≥12 yrs): 2.5 or 5 mg intranasally; can be repeated after 2 hrs
Max Pediatric Dose	25 mg/d	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	The efficacy and safety of redosing within 24 hrs have not been established	Not FDA-approved for pediatric use	10 mg/d
Pediatric Dosage for Renal Impairment	Severe (CrCl 10-30 mL/min): 6.25 mg starting dose (max 12.5 mg/d)	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	No dosage adjustment needed	Not FDA-approved for pediatric use	No dosage adjustment needed
Pediatric Dosage for Hepatic Impairment	6.25 mg starting dose (max 12.5 mg/d)	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	No dosage adjustment needed	Not FDA-approved for pediatric use	Moderate-severe: not recommended
Pediatric Dosage Adjustment for Drug Interactions	With a strong CYP3A4 inhibitor: 6.25 mg starting dose (max 12.5 mg/d); avoid strong CYP3A4 inhibitors in patients with renal or hepatic impairment	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	Not FDA-approved for pediatric use	With propranolol: avoid concurrent use (<40 kg); only a single 5 mg dose is recommended (≥40 kg)	Not FDA-approved for pediatric use	With cimetidine: 2.5 mg (max 5 mg/d)
Class Adverse Effects	Tingling, flushing, dizziness, drowsiness, fatigue, and heaviness, tightness, or pressure in the chest (can occur with any triptan, but most frequently with SC sumatriptan); angina, myocardial infarction, cardiac arrhythmia, stroke, seizure, and death have occurred rarely with triptans <sup>7</sup> ; peripheral vascular ischemia, gastrointestinal vascular ischemia and infarction, and Raynaud phenomenon have also occurred						
Other Adverse Effects	Most common (≥1%): nausea, dry mouth, paresthesia	Most common (≥5%): asthenia, nausea, dizziness, somnolence	Most common (≥2%): dizziness, headache, paresthesia, dry mouth, dyspepsia, fatigue, hot or cold sensation, chest pain, skeletal pain, flushing	Most common (≥2%): paresthesia, nausea, dizziness, drowsiness, throat or neck pain/pressure	Most common (≥5%): asthenia/fatigue, somnolence, pain or pressure sensation, dizziness	Most common (≥2%): paresthesia, warm/cold sensation, chest/neck/throat/jaw pain, tightness, or pressure, vertigo, fatigue SC: burning at injection site, adverse effects more likely with SC formulation Intranasal: abnormal taste, nasal discomfort, rhinorrhea, rhinitis	Most common (≥5%): neck/throat/jaw pain, tightness, or pressure, dizziness, paresthesia, asthenia, somnolence, warm/cold sensation, nausea, heaviness sensation, dry mouth Intranasal: abnormal taste
Class Drug Interactions	A triptan should generally not be used within 24 hours of another triptan or an ergot because vasoconstriction could be additive; cases of serotonin syndrome reported with SSRIs and SNRIs, but risk is likely low <sup>8</sup>						
Other Drug Interactions	CYP3A4 inhibitors <sup>6</sup> can increase serum concentrations; dose adjustment is recommended	Propranolol can increase serum concentrations CYP3A4 inhibitors <sup>6</sup> can increase serum concentrations; avoid use within 72 hours of treatment with a strong CYP3A4 inhibitor	Propranolol can increase serum concentrations	None	MAOIs can increase serum concentrations; the drugs should not be used within 2 weeks of each other Propranolol can increase serum concentrations; dosage adjustment is recommended	MAOIs can increase serum concentrations; the drugs should not be used within 2 weeks of each other	MAOIs can increase serum concentrations; the drugs should not be used within 2 weeks of each other Propranolol and cimetidine can increase serum concentrations; dosage adjustment recommended with cimetidine
Comments	Short-acting: all short-acting oral triptans are similar in their efficacy and speed of onset <sup>9,10</sup>	Short-acting: all short-acting oral triptans are similar in their efficacy and speed of onset <sup>9,10</sup>	Longer-acting: slower onset of action and lower initial response rate than other triptans, but better tolerated <sup>11</sup>	Longer-acting: slower onset of action and lower initial response rate than other triptans, but better tolerated <sup>11</sup>	Short-acting: all short-acting oral triptans are similar in efficacy and speed of onset <sup>9,10</sup> ODTs may be taken without water	Short-acting: all short-acting oral triptans are similar in efficacy and speed of onset <sup>9,10</sup> SC: faster-acting and more effective than other triptans, but more adverse effects Intranasal: faster-acting than oral, but may have unpleasant taste; efficacy partially dependent on GI absorption of swallowed portion of dose	Short-acting: all short-acting oral triptans are similar in efficacy and speed of onset <sup>9,10</sup> Intranasal: faster-acting than oral; unpleasant taste can occur, but may be less common than with sumatriptan <sup>12</sup> ; efficacy partially dependent on GI absorption of swallowed portion of dose ODTs may be taken without water

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Table: Triptans (continued)

Drug	Almotriptan	Eletriptan	Frovatriptan	Naratriptan	Rizatriptan	Sumatriptan <sup>1</sup>	Zolmitriptan
Cost <sup>13</sup> :	generic: \$33.00 Axert: 42.70	Relpax: \$52.00	generic: \$53.60 Frova: 73.60	generic: \$11.00 Amerge: 56.60	generic: \$1.60 (tabs) 3.20 (ODTs) Maxalt: 36.60 Maxalt MLT: 36.60	generic: \$2.00 (tabs) 45.10 (vial) 179.30 (auto-injector) <sup>15</sup> 49.20 (nasal spray) Imitrex: 60.40 (tabs) 176.10 (vial) 377.50 (auto-injector) <sup>16</sup> 75.40 (nasal spray) Onzetra Xsail: 65.00 Sumavel DosePro: 169.20 Zembrace SymTouch: 149.80	generic: \$26.20 (tabs) 27.70 (ODTs) Zomig: 89.40 Zomig ZMT: 89.40 Zomig nasal spray: 61.50

ODT = orally disintegrating tablet; SC = subcutaneous; MAOIs = monoamine oxidase inhibitors

1. Also available in combination with naproxen (*Treximet* – Pernix). Use of the fixed-dose combination is more effective in relieving moderate or severe migraine pain than either of its components taken alone (S Law et al. Cochrane Database Syst Rev 2016; 4:CD008541).

2. Vials are only available in 6 mg/0.5 mL.

3. If migraine returns after initial treatment with sumatriptan injection (*Imitrex*, and generics), single doses of sumatriptan tablets can be taken at intervals  $\geq 2$  hours, up to a maximum of 100 mg/day.

4. *Sumavel DosePro* may be given at least 1 hour following a dose of another sumatriptan product.

5. Use of the drug in severe hepatic impairment has not been evaluated.

6. Inhibitors and inducers of CYP enzymes and P-glycoprotein. Med Lett Drugs Ther 2016 Aug 2 (epub). Available at [secure.medicalletter.org/downloads/CYP\\_PGP\\_Tables.pdf](https://secure.medicalletter.org/downloads/CYP_PGP_Tables.pdf). Accessed February 2, 2017.

7. G Roberto et al. Cephalalgia 2013 Aug 6 (epub).

8. PE Rolan. CNS Drugs 2012; 26:949.

9. Short-acting triptans: sumatriptan, almotriptan, eletriptan, rizatriptan, and zolmitriptan.

10. MM Johnston and AM Rapoport. Drugs 2010; 70:1505.

11. V Tullo et al. Neurol Sci 2010; 31:S51.

12. Med Lett Drugs Ther 2004; 46:7.

13. Approximate WAC for one dose at the lowest usual adult dosage. WAC = wholesaler acquisition cost or manufacturer's published price to wholesalers; WAC represents a published catalogue or list price and may not represent an actual transactional price. Source: AnalySource® Monthly. January 5, 2017. Reprinted with permission by First Databank, Inc. All rights reserved. ©2017. [www.fdbhealth.com/policies/drug-pricing-policy](http://www.fdbhealth.com/policies/drug-pricing-policy).

14. Cost for one 6 mg/0.5 mL vial.

15. Cost for two 6 mg/0.5 mL prefilled single-dose auto-injectors.

16. Cost for one auto-injector pen and two 6 mg/0.5 mL prefilled single-dose syringe cartridges.