rufinamide (ruh-fin-uh-mide)

**Classification**
Therapeutic: anticonvulsant
Pharmacologic: triazoles

**Pregnancy Category C**

**Indications**
Adjunctive treatment of seizures associated with Lennox-Gastaut syndrome in patients ≥4 yr.

**Action**
Although antiepileptic mechanism is unknown, rufinamide modulates the activity of sodium channels, prolonging the inactive state of the channel.

**Therapeutic Effects:** Decreased incidence and severity of seizures associated with Lennox-Gastaut syndrome.

**Pharmacokinetics**

**Absorption:** 85% absorbed following oral administration; food enhances absorption.
**Distribution:** Evenly distributed between erythrocytes and plasma.
**Metabolism and Excretion:** Extensively metabolized; metabolites are primarily renally excreted.
**Half-life:** 6–10 hr.

**TIME/ACTION PROFILE**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>4–6 hr</td>
<td>12 hr</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

Contraindicated in: Hypersensitivity, familial short QT syndrome, Severe hepatic impairment.

Use Cautionally in: All patients (may ↑ risk of suicidal thoughts/behaviors), Mild to moderate hepatic impairment.

- = Common drug name  
□ = Genetic Implication  
OPTDSS indicates life-threatening, underline indicates most frequent  
 discontinued

**Adverse Reactions/Side Effects**

**CNS:** Headache, somnolence, dizziness, drowsiness, decreased frequency, depression, suicidal ideation, depression, aggression, anxiety, hostility, irritability, delirium, aggression, suicidal ideation, depression, aggression, anxiety, hostility, irritability, delirium

**EENT:** Diplopia

**CV:** QT prolongation

**GI:** Nausea, changes in appetite

**GU:** Urinary frequency

**Derm:** Rash

**Hemat:** Anemia

**Neuro:** Ataxia, coordination abnormalities, gait disturbances

**Misc:** Multi-organ hypersensitivity reactions, Superinfection reactions

**Interactions**

**Drug-Drug:** Potent inducers of the CYP450 enzyme including carbamazepine, phenytoin, primidone, and phenobarbital, ↓ clearance and may ↓ blood levels; Valproate, ↓ clearance and may ↓ blood levels, valproate should be started at a low dose in patients stabilized on rufinamide; In patients stabilized on rufinamide, rufinamide should be started at a low dose. May ↓ blood levels and effectiveness of hormonal contraceptives.

**Route/Dosage**

**PO (Adults):** 400–800 mg/day in two divided doses, ↑ by 400–800 mg every 2 days until a maximum daily dose of 3200 mg/day (1600 mg twice daily) is reached.

**PO (Children ≥4 yr):** 10 mg/kg/day in two divided doses, ↑ by 10 mg/kg every 2 days until a maximum daily dose of 45 mg/kg/day or 3200 mg/day given in 2 divided doses, whichever is less, is reached.

**NURSING IMPLICATIONS**

**Assessment**
- Assess location, duration, and characteristics of seizure activity. Institute seizure precautions.
- Monitor closely for notable changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior or depression.
- Lab Test Considerations: May cause leukopenia, anemia, neutropenia, and thrombocytopenia.

**Potential Nursing Diagnoses**

- Risk for injury (Indications)

**Implementation**

- PO: Administer with food. Tablets can be cut in half for dosing flexibility. Tablets may be administered as whole or half tablets, or crushed.

**Patient/Family Teaching**

- Instruct patient to take rufinamide around the clock, as directed. Medication should be gradually discontinued every 2% every 2 days to prevent seizures.
Advise patient to read the Medication Guide before starting therapy and with each Rx refill.

- May cause drowsiness, dizziness, ataxia, and incoordination. Caution patient to avoid driving or other activities requiring alertness until response to medication is known. Tell patient to resume driving only physician gives clearance based on control of seizure disorder.

- Inform patients and families of risk of suicidal thoughts and behavior and advise that behavioral changes, emergency or worsening signs and symptoms of depression, unusual changes in mood, or emergence of suicidal thoughts, behavior, or thoughts of self-harm should be reported to health care professional immediately.

- Advise patient to notify health care professional if signs of multiorgan hypersensitivity reactions (fever, rash, fatigue, jaundice, dark urine) occur.

- Advise patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and consult health care professional before taking any new medications and to avoid taking alcohol or other CNS depressants concurrently with rufinamide.

- Advise female patients to notify health care professional if pregnancy is planned or suspected or if breast feeding. Use of rufinamide decreases effectiveness of oral contraceptives. Advise patient to use a nonhormonal method of contraception during therapy.

**Evaluation/Desired Outcomes**

- Decreased frequency and intensity of seizure activity.

**Why was this drug prescribed for your patient?**