rilpivirine (ril–pi-vir-een)

**Classification**
Pharmacologic: non-nucleoside reverse transcriptase inhibitors

**Pregnancy Category** B

**Indications**
Treats treatment-naive adults with HIV infection with HIV-1 RNA ≥100,000 copies/mL at start of therapy.

**Action**
Inhibits HIV replication by non-competitively inhibiting HIV reverse transcriptase.

**Therapeutic Effects:** Slowed progression of HIV infection and decreased occurrence of opportunistic infections. Increases CD4 cell counts and decreases viral load.

**Pharmacokinetics**

- **Absorption:** Well absorbed following oral administration.
- **Distribution:** Unknown.
- **Protein Binding:** 99.7%.
- **Metabolism and Excretion:** Mostly metabolized by the liver (CYP3A enzyme system); 25% excreted unchanged in feces, 1% excreted unchanged in urine.
- **Half-life:** 50 hr.

**TIME/ACTION PROFILE (blood levels)**

<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>4–5 hr</td>
<td>24 hr</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

- **Contraindicated in:** Concurrent use of drugs that inhibit the CYP3A enzyme system including carbamazepine, dexamethasone (more than a single dose), erlotinib, phenobarbital, phenytoin, rifampin or, rifapentine. Blood levels and effectiveness and promote of virologic resistance, concurrent use contraindicated.
- **Proton pump inhibitors including esomeprazole, lansoprazole, pantoprazole, rabeprazole.** Blood levels and effectiveness and may increase resistance; concurrent use contraindicated.
- **Gastric pH:** Consider use with antacids or H2 antagonists (may decrease blood levels and effectiveness; use with caution, administer 2 hr before or 4 hr after.
- **Hepatitis B or C:** Concurrent use of antacids or H2 antagonists (may decrease blood levels and effectiveness; use with caution, administer 1.5 hr before or 4 hr after. Blood levels may be ↑ by clarithromycin, erythromycin, or troleandomycin; consider alternatives. Concurrent use with drugs that increase risk of torsades de pointes may increase risk of serious arrhythmias.
- **Nursing Implications**
- **Assessment:** Monitor closely for notable changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior.

**Route/Dosage**

**PO (Adults):** 25 mg once daily.

**NURSING IMPLICATIONS**

- **Assessment:** Monitor closely for notable changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior.
- **Contraindicated in:** Concurrent use of drugs that inhibit the CYP3A enzyme system (oral and IV). Blood levels and effectiveness, resistance.
- **Cautions:** Use cautiously in: Concurrent use of drugs that increase risk of torsades de pointes (may increase risk of serious arrhythmias). Concurrent use of other non-nucleoside reverse transcriptase inhibitors may alter blood levels and should be avoided. May alter blood levels of methadone; monitor clinical effects.
- **Drug-Natural Products:** Concurrent use of St. John's wort. Blood levels and effectiveness, resistance; concurrent use contraindicated.
- **Concurrent use of antacids or H2 antagonists.** Blood levels and effectiveness, resistance; concurrent use contraindicated.

**Adverse Reactions/Side Effects**

- **CNS:** Depression, dizziness, headache, insomnia.
- **Derm:** Rash.
- **GI:** Hepatitis.
- **Misc:** Fat redistribution, immune reconstitution syndrome.

**Interactions**

- **Drug-Drug:** Drugs that inhibit the CYP3A enzyme system including carbamazepine, dexamethasone (more than a single dose), erlotinib, phenobarbital, phenytoin, rifampin or, rifapentine. Blood levels and effectiveness and promote of virologic resistance, concurrent use contraindicated.
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**NURSING IMPLICATIONS**

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Lab Test Considerations:
- Monitor viral load and CD4 cell count regularly during therapy.
- Monitor liver function tests before and periodically during therapy in patients with underlying liver disease, hepatitis B or C, or marked \( q \) transaminase. May cause \( q \) serum creatinine, AST, ALT, total bilirubin, total cholesterol, LDL, and triglycerides.

Potential Nursing Diagnoses
- Risk for infection (Indications)
- Noncompliance (Patient/Family Teaching)

Implementation
- PO: Administer once daily with a meal.

Patient/Family Teaching
- Emphasize the importance of taking rilpivirine as directed, at the same time each day. Do not miss more than prescribed amount and do not stop taking without consulting health care professional. Take missed doses with a meal if remembered \( 12 \) hr of time dose is usually taken, omit dose and resume dosing schedule at next double dose. Advise patient to read Patient Information prior to starting therapy and with each Rx refill in case of changes.
- Advise patient to take antacids \( 2 \) hr before or \( 4 \) hr after and \( H_2 \) antagonists \( 12 \) hr before or \( 4 \) hr after rilpivirine.
- Instruct patient that rilpivirine should not be shared with others.
- Inform patient that rilpivirine does not cure AIDS or prevent associated or opportunistic infections. Rilpivirine does not prevent transmission of HIV to others through sexual contact or blood contamination. Caution patient to use a condom and to avoid sharing needles or donating blood to prevent spreading the AIDS virus to others. Advise patient that the long-term effects of rilpivirine are unknown at this time.
- Inform patients and families of risk of suicidal thoughts and behavior and advise that behaviors changes, emergence 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.

Evaluation/Desired Outcomes
- Delayed progression of AIDS and decreased opportunistic infections in patients with HIV.
- Decrease in viral load and increase in CD4 cell counts.

Why was this drug prescribed for your patient?