febuxostat (fe-bux-o-stat)

(Chem)

**Classification**
Antigout agents
Therapeutic: xanthine oxidase inhibitors

**Pregnancy Category C**

**Indications**
Chronic management of hyperuricemia in patients with a history of gout.

**Action**
Decreases production of uric acid by inhibiting xanthine oxidase. Therapeutic Effects: Lowering of serum uric acid levels with resultant decrease in gouty attacks.

**Pharmacokinetics**
Absorption: Well absorbed (49%) following oral administration.
Distribution: Unknown.
Protein Binding: 99.2%.
Metabolism and Excretion: Extensively metabolized by the liver; minimal renal excretion of unchanged drug, 45% eliminated in feces as unchanged drug, remainder is eliminated in urine and feces as inactive metabolites.
Half-life: 5–8 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>rapid</td>
<td>1–1.5 hr*</td>
<td>24 hr</td>
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*Maximum lowering of uric acid may take 2 wk

**Contraindications/Precautions**
Contraindicated in: Concurrent azathioprine or mercaptopurine.
Use Cautiously in: Severe renal impairment (CCr < 60 mL/min); Severe hepatic impairment; OB: Use only when potential maternal benefit outweighs potential fetal risk; Lactation: Use only when potential maternal benefit outweighs potential fetal risk; Pedi: Safety in children 18 yr not established.

**Adverse Reactions/Side Effects**

**GI:** Transient nausea, constipation. **Derm:** Rash. **MS:** Gout flare, arthralgia.

**Interactions**
Drug-Drug: Significantly increases levels of and risk of serious toxicity from azathioprine and mercaptopurine; concurrent use is contraindicated. May increase levels of theophylline; use cautiously together.

**Route/Dosage**

**PO (Adults):** 40 mg once daily initially; if serum uric acid does not ↓ to ≤ 6 mg/dL, dose should be ↑ to 80 mg once daily.

**NURSING IMPLICATIONS**

**Assessment**
- Assess for joint pain and swelling, especially during early therapy. Changing serum uric acid levels from mobilization of urate from tissue deposits may cause gout flare. Use prophylactic NSAID or colchicine therapy for up to 6 mos if a gout flare occurs; continue fibroblast therapy and urate-lowering concurrently.
- Monitor for signs and symptoms of MI and stroke.

**Lab Test Considerations:**
- Monitor serum uric acid levels prior to, 2 wk after initiating, and periodically thereafter. If serum uric acid levels are < 6 mg/dL after 2 wk of daily 40 mg therapy, increase dose to 80 mg daily.
- Monitor liver function at 2 and 4 mo of therapy and periodically thereafter. May cause transient AST, ALT, CPK, LDH, alkaline phosphatase and creatine.
- May cause prolonged aPTT and PT, and ↓ hematocrit, hemoglobin, RBC, platelet count, and lymphocyte, neutrophil counts. May cause ↑ WBC.
- May cause ↓ serum bicarbonate and ↑ serum sodium, glucose, potassium, and TSH levels.
- May cause ↑ serum chloride, phosphorus, uric acid, and LDL levels.

**Potential Nursing Diagnoses**
Chronic pain (Indications)

**Implementation**
- PO: May be taken with or without food and with antacids.

**Patient/Family Teaching**
- Instruct patient to take febuxostat as directed. If a gout flare occurs, continue febuxostat and consult health care professional; medications to manage gout flare may be added.
Advise patient to notify health care professional if rash, chest pain, shortness of breath, or stroke symptoms (weakness, headache, confusion, slurred speech) occur or if side effects are persistent or bothersome.

Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult health care professional before taking any other Rx, OTC, or herbal products.

Advise female patient to notify health care professional if pregnancy is planned or suspected or if breast feeding.

Emphasize the importance of follow-up lab tests to monitor therapy.

Evaluation/Desired Outcomes

● Reduction in serum uric acid levels and resultant gout attacks.

Why was this drug prescribed for your patient?