pentoxifylline  (pen-tok-i-fi-lin)

Therapeutic: blood viscosity reducing agent

Pregnancy Category C

Indications
Management of symptomatic peripheral vascular disease (intermittent claudication).

Action
Increases the flexibility of RBCs by increasing levels of cyclic adenosine monophosphate (cAMP). Decreases blood viscosity by inhibiting platelet aggregation and decreasing fibrinogen.

Therapeutic Effects:
Increased blood flow.

Pharmacokinetics
Absorption: Well absorbed following oral administration.
Distribution: Bound to RBC membrane. Enters breast milk.
Metabolism and Excretion: Metabolized by RBCs and the liver.
Half-life: 25–50 min.

TIME/ACTION PROFILE (improvement in blood flow)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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</thead>
<tbody>
<tr>
<td>PO</td>
<td>2 wk</td>
<td>8 wk</td>
<td>8 hr</td>
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Contraindications/Precautions
Contraindicated in: Hypersensitivity; Intolerance to other xanthine derivatives (caffeine and theophylline).

Use Cautiously in: Coronary artery or cerebrovascular disease; Renal disease (lower doses may be used); Geri: q risk of adverse reactions; OB, Lactation, Pedi: Safety not established.

Adverse Reactions/Side Effects

Interactions
Drug-Drug: Additive hypotension may occur with antihypertensives and nitrates. May ↑ the risk of bleeding with warfarin, heparin, aspirin, NSAIDs, clopidogrel, cefuroxime, sulfonylurea, theophylline, epiludine, ticlopidine, ticlopidine. May ↑ the risk of theophylline toxicity. Smoking may ↓ the effects. Drug-Natural Products: ↑ bleeding risk with anise, arnica, artichoke, chamomile, clove, dong quai, fenugreek, feverfew, garlic, ginger, ginkgo, Panax ginseng, licorice.

Route/Dosage
PO (Adults): 400 mg 3 times daily; if GI or CNS side effects occur, ↓ dose to 400 mg twice daily.

NURSING IMPLICATIONS

Assessment
• Assess patient for intermittent claudication prior to and periodically throughout therapy.
• Monitor BP periodically in patients on concurrent antihypertensive therapy.
• Monitor for signs and symptoms of anaphylaxis (wheezing, peri-oral or lingual edema, hemodynamic instability, rash, urticaria) during therapy.

Potential Nursing Diagnoses
Acute pain (Indications)
Activity intolerance (Indications)

Implementation
• Assess patient for intermittent claudication prior to and periodically throughout therapy.

Patient/Family Teaching
• Instruct patient to take medication as directed. Take missed doses as soon as remembered unless almost time for next dose. Consult health care professional before any changes.

Common side effects include:
- GI: abdominal discomfort, belching, bloating, diarrhea, dyspepsia, flatulence, nausea, vomiting
- CNS: agitation, dizziness, drowsiness, headache, insomnia, nervousness
- Resp: dyspnea
- CV: angina, arrhythmias, edema, flushing, hypotension
- GI: abdominal discomfort, belching, bloating, diarrhea, dyspepsia, flatulence, nausea, vomiting
Fore discontinuing medication, because several weeks of therapy may be required before effects are seen.

- May cause dizziness and blurred vision. Caution patient to avoid driving and other activities requiring alertness until response to medication is known.
- Advise patient to avoid smoking, because nicotine constricts blood vessels.
- Instruct patient to notify health care professional if nausea, vomiting, GI upset, drowsiness, dizziness, or headache persists.

**Evaluation/Desired Outcomes**

- Relief from cramping in calf muscles, buttocks, thighs, and feet during exercise.
- Improvement in walking endurance. Therapeutic effects may be seen in 2–4 wk, but therapy should be continued for ≥8 wk.

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