Canada-Approved Medicine: This monograph describes a medication approved for use in Canada by the Therapeutic Products Directorate, a division of Health Canada’s Health Products and Food Branch. The medication is not approved by the United States Food and Drug Administration; however, a similar formulation carrying a different generic or brand name might be available outside the U.S.

gliclazide (glik-laz-ide)

**Therapeutic:** antidiabetics

**Pharmacologic:** sulfonylureas

**Indications**
Control of blood sugar in type 2 diabetes mellitus when control of diet and exercise fails or when insulin is not an option. Requires some pancreatic function.

**Action**
Lowers blood glucose by stimulating the release of insulin from the pancreas and increasing sensitivity to insulin at receptor sites.

**Therapeutic Effects:** Lowering of blood glucose in diabetic patients.

**Pharmacokinetics**
Absorption: Well absorbed following oral administration (97%).

Distribution: Unknown.

Protein Binding: 95%.

Metabolism and Excretion: Extensively metabolized; metabolites are mostly eliminated (60–70%) in urine, 10–20% in feces; 1% excreted unchanged in urine.

Half-life: Tablets—10.4 hr; modified-release tablets—16 hr.

**TIME/ACTION PROFILE (effect on blood sugar)**

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<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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<td>PO</td>
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<td>4–6 hr</td>
<td>12–24 hr</td>
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Contraindications/Precautions

**Contraindicated in:** Hypersensitivity, cross sensitivity with other sulfonylureas, unstable diabetes, type 1 diabetes mellitus, diabetic ketoacidosis, diabetic coma or precoma, severe hepatitis or renal disease, Concurrent use of oral contraceptives, alcohol or alcohol containing medications, or systemic phenothiazines. Glib should not be used during pregnancy, insulin is preferred.

**Lactation:** Should not be used during lactation, insulin is preferred.

**Use Cautiously in:** Glucose 6-phosphate dehydrogenase deficiency (risk of hemolytic anemia); Infection, stress, or changes in diet may alter requirements for control of blood sugar or require use of insulin, impaired renal, pituitary, or adrenal function, Malnutrition, high fever, prolonged nausea, or vomiting. Pediatric side effects have not been established.

**Adverse Reactions/Side Effects**

**Endo:** Hypoglycemia.

**GI:** Abdominal pain, diarrhea, dyspepsia, liver enzymes, nausea, photosensitivity, rash.

**Derm:** Photosensitivity, rashes.

**Interactions**

**Drug-Dye:** Concurrent use of chlorpromazine, corticosteroids, diuretics, salbutamol, terbutaline or antiestrogens should be undertaken with caution due alteration of effects. Concurrent use of alcohol, angiotensin converting enzyme inhibitors antiretrovirals, azole antifungals, beta-blockers, clindamycin, clofibrate, disopyramide, H2– receptor antagonists MAO inhibitors, NSAIDs, phenothiazines, salicylates, warfarin may ↑ risk of hyperglycemia. Risk of hypoglycemia with other antidiabetic agents including alpha glucosidase inhibitors, biguanides and insulin. Concurrent use of chlorpromazine, corticosteroids, diazepam, disopyramide, H2– receptor antagonists MAO inhibitors, NSAIDs, phenothiazines, salicylates, warfarin may ↑ risk of hyperglycemia and lead to loss of diabetic control. May ↑ risk of bleeding with warfarin. Concurrent use of alcohol may result in a disulfiram-like reaction and should be avoided. Beta-blockers may ↓ some symptoms of hyperglycemia.

**Route/Dosage**

**PO (Adults):** Tablets—80–320 mg/day; doses >160 mg/day should be divided and given twice daily; modified-release tablets—160 mg/day, may be increased in 160 mg increments every 2 wk until blood sugar is controlled up to 120 mg/day.
2 NURSING IMPLICATIONS

Assessment
● Observe for signs and symptoms of hypoglycemia (hunger, weakness, sweating, dizziness, tachycardia, anxiety).
● Assess patient for allergy to sulfonylureas.

Lab Test Considerations:
● Monitor serum glucose and glycosylated hemoglobin periodically during therapy to evaluate effectiveness of treatment.
● Monitor liver function periodically in patients with mild to moderate liver dysfunction. May cause an increase in ALT, alkaline phosphatase, and AST.

Potential Nursing Diagnoses
Imbalanced nutrition: more than body requirements (indications)

Implementation
● Patients on a diabetic regimen exposed to stress, fever, infection, trauma, or surgery may require administration of insulin.

Patient/Family Teaching
● Instruct patient to take gliclazide at the same time every day.
● PO: Administer with meals at the same time every day.

Evaluation/Desired Outcomes
Control of blood glucose levels to avoid episodes of hypoglycemia and hyperglycemia.

Why was this drug prescribed for your patient?