acetoHEXAMIDE (a-seet-oh-hex-a-mide)

**Indications**
Management of type 2 diabetes mellitus as an adjunct to diet.

**Action**
Lowered blood sugar by stimulating the release of insulin from the pancreas and increasing insulin sensitivity at receptor sites. May also decrease hepatic glucose production. Therapeutic Effects: Lowering of blood sugar in diabetic patients.

**Pharmacokinetics**
- **Absorption:** Well absorbed following oral administration.
- **Distribution:** Unknown.
- **Protein Binding:** 65–90% bound to plasma proteins.
- **Metabolism and Excretion:** Mostly metabolized by the liver; some conversion to hydroxyhexamide, which also lowers blood sugar.
- **Half-life:** Acetohexamide—1.3 hr (up to 30 hr in renal impairment); hydroxyhexamide—4.6–6 hr.

**Contraindications/Precautions**
- Contraindicated in: Hypersensitivity; Known severe allergy to sulfonamides (e.g., sulfonylureas, thiazide/loop diuretics); Type 1 diabetes mellitus; Diabetic ketoacidosis; OB, Lactation: Safety not established; insulin recommended during pregnancy.
- Use Cautiously in: Geri: q sensitivity; dosage may be required; Renal or hepatic impairment (q risk of hypoglycemia); Infection, stress, or changes in diet (may alter blood sugar and requirements for glycemic control); Impaired thyroid, pituitary, or adrenal function (q risk of hypoglycemia).

**Adverse Reactions/Side Effects**
- **CNS:** Dizziness, drowsiness, headache, weakness.
- **GI:** Anorexia, cholestatic jaundice, constipation, cramps, diarrhea, drug-induced hepatitis, epigastric fullness, heartburn, q appetite, nausea, vomiting.
- **Derm:** Photosensitivity, rash.
- **Endo:** Hypoglycemia, syndrome of inappropriate secretion of antidiuretic hormone (SIADH).
- **Hemat:** Aplastic anemia, agranulocytosis, hemolytic anemia, leukopenia, pancytopenia, thrombocytopenia.

**Interactions**
- **Drug-Drug:** Ingestion of alcohol may result in disulfiram-like reaction. Efficacy may be reduced by concurrent use of calcium channel blockers, cholestyramine, contraceptives, diuretics, estrogen, insulin, hormonal contraceptives, loop diuretics, phenothiazines, rifampin, sympathomimetics, thiazide diuretics, thyroid hormones, and urinary alkalinizers. Beta blockers, chloramphenicol, fluconazole, gemfibrozil, histamine H2 receptor antagonists, methyldopa, NSAIDS, probenecid, salicylates, sulfonylureas, tricyclic antidepressants, and urinary acidifiers may q the risk of hypoglycemia. Concurrent use with warfarin may alter the response to both agents (q effects of both initially, then p activity; close monitoring recommended during any changes in dosage).
- **Drug-Natural Products:** Glucosamine may worsen hypoglycemia. Fenugeek, chromium, and coenzyme Q10 may produce q hypoglycemic effects.

**Route/Dosage**
- **PO (Adults):** 250 mg once daily; dose can be q 250–500 mg daily every 5–7 days (not to exceed 1.5 g/day; doses ≥1 g/day should be given as divided doses). Geriatric patients or hepatic insufficiency—dose may be required.
- **Renal Impairment**
  - **PO (Adults):** CCr 50 mL/min—Use not recommended (q risk of hypoglycemia).

**NURSING IMPLICATIONS**
- **Assessment**
  - Observe patient for signs and symptoms of hypoglycemic reactions (sweating, hunger, weakness, dizziness, tremor, tachycardia, anxiety).

  - **Coagulation test** may be necessary during therapy.
- **High Alert**
  - Monitor blood sugar and requirements for glycemic control. Impaired thyroid, pituitary, or adrenal function (q risk of hypoglycemia).
  - Discontinued.
Assess patient for allergy to sulfonamides.

- Lab Test Considerations: Monitor serum glucose and Hb A1c periodically during therapy to evaluate effectiveness of treatment.
- Monitor CBC periodically throughout therapy. Notify health care professional promptly if in blood counts occur.
- May cause an increase in AST, ALT, BUN, and serum creatinine.

- Toxicity and Overdose: Overdose is manifested by symptoms of hypoglycemia. Mild hypoglycemia may be treated with administration of oral glucose. Severe hypoglycemia should be treated with D50W followed by continuous IV infusion of more dilute dextrose solution at a rate sufficient to keep serum glucose at approximately 100 mg/dL.

Potential Nursing Diagnoses
Imbalanced nutrition: more than body requirements (Indications)
Noncompliance (Patient/Family Teaching)

- High Alert: Accidental administration of oral hypoglycemic agents to non-diabetic adults and children has resulted in serious harm or death. Before administering, confirm that patient has diabetes.
- High Alert: Do not confuse acetohexamide with acetazolamide.

Implementation
- PO: May be administered once in the morning or divided into 2 doses. Administer with meals to ensure best diabetic control and to minimize gastric irritation. Do not administer after last meal of the day.
- Tablets may be crushed and taken with fluids of patient has difficulty swallowing.

- High Alert: Dosage should be based on the patient's response. For patients on an initial dose of 250 mg/day, insulin can be discontinued immediately after starting acetohexamide. Patients taking >20 units/day should convert gradually by receiving an initial dose of acetohexamide of 250 mg and a 25–30% reduction in insulin dose the first day, with gradual insulin dose reduction as tolerated. Hospitalization should be considered during the transition from insulin to acetohexamide.

Evaluation/Desired Outcomes
- Control of blood glucose levels within the normal therapeutic window and prevention of hypoglycemia or hyperglycemic episodes.

Why was this drug prescribed for your patient?