**Primidone (pri-mi-done)**

**Therapeutic Profile**
- **Therapeutic Class:** Anticonvulsants
- **Pregnancy Category:** D

**Indications**
- Tonic-clonic, complex partial, and focal seizures.
- Unlabeled Use: Essential (familial) tremor.

**Action**
- Decreases neuronal excitability. Increases the threshold of electric stimulation of the motor cortex.

**Pharmacokinetics**
- **Absorption:** 80–100% absorbed from the GI tract when administered orally.
- **Distribution:** Widely distributed. Crosses the placenta and enters breast milk.
- **Metabolism and Excretion:** Converted to phenobarbital and another active anticonvulsant compound (PEMA) by the liver.
- **Half-life:** 3–7 hr.

**TIME/ACTION PROFILE (anticonvulsant effect)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Onset</th>
<th>Peak</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**
- Contraindicated in: Hypersensitivity to primidone or phenobarbital; Porphyria.
- Use Cautiously in: All patients (may risk of suicidal thoughts/behaviors); Severe liver disease (dosage adjustment required); OB, Lactation: Safety not established; may cause hemorrhage in the newborn.

**Adverse Reactions/Side Effects**
- CNS:
  - Suicide thoughts, ataxia, drowsiness, vertigo, excitement (rare in children).
- EENT:
  - Visual changes.
- Resp:
  - Dyspnea.
- CV:
  - Edema, orthostatic hypotension.
- GI:
  - Anorexia, drug-induced hepatitis, nausea, vomiting.
- Derm:
  - Alopecia, rash.
- Hemat:
  - Blood dyscrasias, megaloblastic anemia.
- Misc:
  - Folic acid deficiency.

**Interactions**
- **Drug-Drug:**
  - Induces liver enzymes and may hasten metabolism and effectiveness of other drugs metabolized by the liver, including hormonal contraceptives, chloramphenicol, acetazolamide, propranolol, metoprolol, timolol, desycycline, corticosteroids, tricyclic antidepressants, phenothiazines, and quinidine. Additive CNS depression with other CNS depressants, including alcohol, antihistamines, sedative/hypnotics, and opioids.
- **Drug-Natural Products:**
  - Concomitant use of kava, valerian, skullcap, chamomile, or hops can ↑ CNS depression. See sedative interactions. St. John’s wort may affect primidone levels and effectiveness; avoid use.
- **Drug-Food:**
  - Absorption of folic acid.

**Route/Dosage**
- **PO (Adults and Children ≥8 yr):** Initial dose of 100–125 mg at bedtime for 3 days, then 100–125 mg twice daily for 3 days, then 100–125 mg 3 times daily for 3 days, then maintenance dose of 250 mg 3–4 times daily (not to exceed 2 g/day).
- **PO (Children <8 yr):** Initial dose of 50 mg at bedtime for 3 days, then 50 mg twice daily for next 3 days, then 100 mg twice daily for 3 days, then maintenance dose of 125–250 mg 3 times daily (10–25 mg/kg/day).

**NURSING IMPLICATIONS**
- **Assessment**
  - Assess location, duration, frequency, and characteristics of seizure activity; institute seizure precautions.
  - Assess patient for allergy to phenobarbital, because it is a metabolite of primidone.
  - Assess patient for signs of folic acid deficiency (mental dysfunction, unusual tiredness or weakness, psychiatric disorders, neuropathy, megaloblastic anemia). May be treated with folic acid.
  - Monitor closely for notable changes in behavior that could indicate the emergence or worsening of suicidal thoughts or behavior or depression.
- **Lab Test Considerations:** CBC and sequential multiple analysis–12 (SMA-12) tests should be monitored every 6 mos throughout course of therapy. May cause leukopenia and thrombocytopenia. May cause decreased serum folate and bilirubin concentrations.

**Patient Consultation**
- Genetic counseling or testing is recommended for patients with epilepsy and their families, as well as for children and adults who are new to epilepsy medications.
Monitor serum folate concentrations periodically during therapy.

Toxicity and Overdose: Serum primidone and phenobarbital (a major metabolite of primidone) levels should be routinely monitored. Therapeutic blood levels for primidone—5–10 mcg/mL; for phenobarbital—15–40 mcg/mL.

Signs of primidone or phenobarbital toxicity include ataxia, lethargy, changes in vision, confusion, and hypotension.

Potential Nursing Diagnoses
- Risk for injury (Indications)
- Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation
- When switching from alternative anticonvulsant medication to primidone or when adding primidone to existing regimen, increase primidone dose gradually while decreasing or continuing other anticonvulsant doses to maintain seizure control.

The need to titrate primidone alone should take at least 2 wk. This adjustment is usually made as follows:

- PO: May be administered with food to minimize GI effects. Low initial doses (25 mg twice daily) have been used in patients experiencing nausea and vomiting.
- Tablets may be crushed and mixed with food or fluids for patients with difficulty swallowing.

Patient/Family Teaching
- Instruct patient to take medication at the same time each day exactly as directed. If a dose is missed, take as soon as remembered unless within 1 hr of next dose. Abrupt withdrawal may lead to status epilepticus. Instruct patient to read the Medication Guide before starting and with each Rx refill, changes may occur.

- May cause drowsiness or dizziness. Caution patient to avoid driving or other activities requiring alertness until response to medication is known. These symptoms usually diminish in frequency and intensity with continued use of the medication. Do not resume driving until health care professional gives medical clearance based on control of seizure disorder.

- Caution patient to avoid alcohol or other CNS depressants concurrently with this medication.

- Caution patient to avoid sudden changes in position to decrease orthostatic hypotension.

- Advise patient to notify health care professional if skin rash, unusual pain, joint pain, fever, changes in vision, dysphoria, or paradoxical excitement (especially in children or the elderly) occurs. Advise patient and family to notify health care professional if thoughts about suicide or dying, attempts to commit suicide, new or worse depression; new or worse anxiety; feeling very agitated or restless; panic attacks; trouble sleeping; new or worse irritability; acting aggressive; being angry or violent; acting on dangerous impulses; an extreme increase in activity and talking, other unusual changes in behavior or mood occur.

- Instruct patient to notify health care professional of medication regimen prior to treatment or surgery.

- Advise female patients to use an additional nonhormonal method of contraception during therapy and until тест менструального цикла. Instruct patient to notify health care professional if pregnancy is planned or suspected. Encourage patients who become pregnant to enroll in the North American Antiepileptic Drug (NAAED) Pregnancy Registry by calling 1-888-233-2334 or on the web at www.aedpregnancyregistry.org. Enrollment must be done by patients themselves.

- Advise patient to carry identification describing medication regimen at all times.

- Emphasize the importance of routine exams to monitor progress.

Evaluation/Desired Outcomes
- Decrease or cessation of seizures without excessive sedation. May require 1 wk or more of therapy before therapeutic response is seen.

Why was this drug prescribed for your patient?