Reserpine (re-ser-pen)

**Classification**
Therapeutic: antihypertensives
Pharmacologic: peripherally acting antihypertensives

**Pregnancy Category:** C

**Indications**
Used in combination with other antihypertensives in the management of hypertension.

**Action**
Depletes stores of norepinephrine and inhibits uptake in postganglionic adrenergic nerve endings. Therapeutic effects: Lowering of BP.

**Pharmacokinetics**
Absorption: 40–50% absorbed after oral administration.
Distribution: Widely distributed. Crosses the placenta and enters breast milk.
Protein Binding: Highly protein bound.
Metabolism and Excretion: Metabolized by the liver. At least 50% lost in feces as unabsorbed drug after oral administration. Small amounts excreted unchanged by the kidneys.
Half-life: 11 days.

**Contraindications/Precautions**
Contraindicated in: Hypersensitivity; Active gastrointestinal disease; Severe renal insufficiency; Mental depression; Electroconvulsive therapy.
Use Cautiously in: History of peptic ulcer disease, ulcerative colitis, or gallstones; Geri: Appears on Beers list. At risk of depression, erectile dysfunction, sedation, and orthostatic hypertension at doses >0.25 mg. See Caution.

**Route/Dosage**
PO (Adults): 100–250 mcg (0.1–0.25 mg)/day is usual maintenance dose; may be given in an initial dose in patients not receiving other antihypertensives of 500 mcg (0.5 mg) daily for 1–2 wk, then increased to maintenance dose.

**Adverse Reactions/Side Effects**

<table>
<thead>
<tr>
<th>System</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNS</td>
<td>Depression, drowsiness, nervousness, nightmares</td>
</tr>
<tr>
<td>CV</td>
<td>Bradycardia, angina, arrhythmias, edema</td>
</tr>
<tr>
<td>GI</td>
<td>Diarrhea, cramps, dry mouth, GI bleeding</td>
</tr>
<tr>
<td>GU</td>
<td>Erectile dysfunction</td>
</tr>
<tr>
<td>Derm</td>
<td>Flushing</td>
</tr>
<tr>
<td>Endo</td>
<td>Galactorrhea, gynecomastia</td>
</tr>
<tr>
<td>F and E</td>
<td>Sodium and water retention</td>
</tr>
</tbody>
</table>

**Drug Interactions**

- Additive hypotension with other antihypertensives, nitrates, or acute ingestion of alcohol.
- Additive depression with digoxin, quinidine, procainamide, or other antiarrhythmics. Excitement and hypotension may result from concurrent MAO inhibitor therapy.
- May potentiate the therapeutic response to ephedrine or bretylium.
- May exaggerate the direct-acting sympathomimetic actions of dopamine, deuteramine, phenylephrine. Additive CNS depression with other CNS depressants (including alcohol, antihistamines, antipsychotics, opioid analgesics, or sedatives/hypnotics. Effects may be potentiated by concurrent MAOIs.

**Drug-Natural Products**
Concomitant use of kava, valerian, skullcap, chamomile, or hops can cause CNS depression.

**Nursing Implications**

- Monitor BP and pulse frequently during initial dosage adjustment and periodically during therapy. Notify health care professional of significant changes.
- Monitor frequency of prescription refills to determine compliance.
- Monitor intake and output ratios and daily weight and assess for edema daily, especially at beginning of therapy. Notify health care professional of weight gain or edema.
- Assess patient for depression, early morning insomnia, anorexia, erectile dysfunction, and cell depression. Notify health care professional of these symptoms develop; may necessitate discontinuation. Mental depression may have an insidious onset and may be severe enough to cause suicide. Risk of depression may persist for several months after discontinuation of therapy.
Lab Test Considerations: May cause serum prolactin concentrations.
May cause urinary catecholamine excretion and urinary vanillylmandelic acid excretion.

Potential Nursing Diagnoses
Ineffective coping (Side Effects) Deficient knowledge, related to medication regimen (Patient/Family Teaching) Noncompliance (Patient/Family Teaching)

Implementation
PO: Administer with meals or milk to minimize GI irritation.

Patient/Family Teaching
Emphasize the importance of continuing to take medication, even if feeling well. Instruct patient to take medication at the same time each day. If a dose is missed, omit and return to regular dosage schedule. Do not double doses. Consult health care professional before discontinuing medication.
Encourage patient to consult with additional interventions for hypertension (weight reduction, low-sodium diet, smoking cessation, modification of alcohol consumption, regular exercise, and stress management). Reserpine helps control but does not cure hypertension.
Instruct patient and family on proper technique for BP monitoring. Advise them to check BP at least weekly and to report significant changes to health care professional.
May cause drowsiness. Advise patient to avoid driving or other activities requiring alertness until response to medication is known.
If dry mouth occurs, frequent mouth rinses, good oral hygiene, or sugarless gum or candy may decrease effect. Notify dentist if dry mouth persists >2 wk.
Caution patient to avoid concurrent use of alcohol or other CNS depressants with this medication.
May cause nasal stuffiness. Advise patient to consult health care professional before taking any cough, cold, decongestant, or allergy remedies.
Advise patient to inform health care professional of medication regimen before treatment or surgery.

Evaluation/Desired Outcomes
Decrease in BP without appearance of side effects.

Why was this drug prescribed for your patient?