phenelzine (fen-el-zeen)

**Classification**
Antidepressants
Pharmacologic: Monoamine oxidase (MAO) inhibitors

**Pregnancy Category**
C

**Indications**
Treatment of neurotic or atypical depression (usually reserved for patients who do not tolerate or respond to other modes of therapy [e.g., tricyclic antidepressants, SSRIs, SNRIs or electroconvulsive therapy]).

**Action**
Inhibits the enzyme monoamine oxidase, resulting in an accumulation of various neurotransmitters (dopamine, epinephrine, norepinephrine, and serotonin) in the body. Therapeutic Effects: Improved mood in depressed patients.

**Pharmacokinetics**
Absorption: Well absorbed from the GI tract.
Distribution: Crosses the placenta and probably enters breast milk.
Metabolism and Excretion: Metabolized by the liver; excreted in urine as metabolites and unchanged drug.
Half-life: 12 hr.

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

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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<tbody>
<tr>
<td>PO</td>
<td>2–4 wk</td>
<td>3–6 wk</td>
<td>2 wk</td>
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**Contraindications/Precautions**
Contraindicated in: Hypersensitivity; Liver disease; Severe renal disease; Pheochromocytoma; Heart failure; Patients undergoing elective surgery requiring general anesthesia (should be discontinued at least 10 days before surgery); Excessive consumption of caffeine; Concurrent use of meperidine, SSRIs, SNRIs, antipsychotics, tricyclics, tetracyclics, nefazodone, trazodone, procarbazine, selegiline, linezolid, carbamazepine, cyclobenzaprine, bupropion, buspirone, sympathomimetics, other MAO inhibitors, deuterocannabinoids, opioid antagonists, general anesthetics, or sympathomimetics. Concomitant use of foods containing high concentrations of tyramine. Lactation.

**Use Cautiously in:**
Pedi: May q risk of suicide attempt/ideation especially during first 1–2 mo of treatment or with dose adjustments; Schizophrenia; Bipolar disorder; Seizure disorders; Diabetes (q risk of hypoglycemia); Geri: Geriatric patients (q risk of adverse reactions). Pregnancy (safety not established); Children (safety and effectiveness not established).

**Adverse Reactions/Side Effects**
CNS: Seizures, dizziness, drowsiness, fatigue, headache, hyperreflexia, insomnia, tremor, twitching, weakness, euphoria, paresthesia, restlessness.
EENT: Blurred vision, glaucoma, nystagmus.
CV: Hypertensive crisis, edema, orthostatic hypotension.
GI: Constipation, dry mouth, abdominal pain, liver function test elevation, nausea, vomiting.
GU: Sexual dysfunction, urinary retention.
Derm: Pruritis, rashes.
F and E: Hypernatremia.
Endo: Weight gain.

**Interactions**
Drug-Drug: Serious, potentially fatal adverse reactions may occur with concurrent use of other antidepressants (SSRIs, SNRIs, bupropion, tricyclics, tetracyclics, nefazodone, trazodone), antipsychotics, cyclobenzaprine, procarbazine, selegiline, or sympathomimetics. Avoid using within 2 wk of each other (wait 5 wk from end of fluoxetine therapy). Hypertensive crisis may occur with amphetamines, methylphenidate, levodopa, dopamine, epinephrine, norepinephrine, reserpine, methyldopa, vasodilators. Hypertension or hypotension, coma, seizures, respiratory depression, and death may occur with meperidine (avoid using within 2–3 wk of MAO inhibitor therapy). Concomitant use with deuterocannabinoids may produce psychosis or bizarre behavior. Hypertension may occur with concurrent use of biphenephrine, amiodarone within 2 wk of each other. Additive hypotension may occur with antihypertensives, spinal anesthesia, epidural, or barbiturates. Additive hypotension may occur with insulin or oral hypoglycemic agents. Risk of seizures may be 5–8 times increased.

Drug-Natural Products: St. John's wort and SAMe may produce serotonin syndrome. Hypertensive crises may occur with large amounts of caffeine-containing foods (milk, tea, guaran
tum, prebiotics), sublingual nicotine, and alcohol.

**Overdosage**
Symptoms: Overdosage may produce effects associated with endogenous and exogenous catecholamines (psychosis, seizures, agitation, tachycardia, hypertension). Management: Antidotes are not available. Supportive care is indicated.

**Dosage**

- **Adults** start with 15 mg PO 3 times daily with meals; may increase by 15–30 mg PO every 2 wk.
- **Geriatric** patients and **Pediatric** patients may require lower doses.

**Renal Impairment**
Adjust dosage accordingly.

**Laboratory Tests**
Liver function tests, complete blood count, urinalysis.
Insomnia, headache, tremor, hypomania may occur with ginseng. Hypertensive crises, disorientation, and memory impairment may occur with tryptophan or supplements containing tryptamine or phenylalanine.

Drug-Food: Hypertensive crises may occur with ingestion of foods containing high concentrations of tyramine. Consumption of foods or beverages with high caffeine content increases the risk of hypertension and arrhythmias.

Route/Dosage

PO (Adults): 15 mg 3 times daily; increase to 60–90 mg/day in divided doses, after maximal benefit achieved, gradually reduce to smallest effective dose (15 mg/day or every other day).

NURSING IMPLICATIONS

Assessment

- Assess mental status, mood changes, and anxiety level frequently. Assess for suicidal tendencies, especially during early therapy. Restrict amount of drug available to patient.
- Monitor BP and pulse rate before and frequently during therapy. Report significant changes promptly.
- Monitor intake and output ratios and daily weight. Assess patient for peripheral edema and urinary retention.
- Lab Test Considerations: Assess hepatic function periodically during prolonged or high-dose therapy.
- Monitor serum glucose closely in diabetic patients; hypoglycemia may occur.

Potential Nursing Diagnoses

Ineffective Coping (Indications)
Noncompliance (Patient/Family Teaching)

Implementation

- Do not administer these medications in the evening because the psychomotor stimulating effects may cause insomnia or other sleep disturbances.
- PO: Tablets may be crushed and mixed with food or fluids for patients with difficulty swallowing.

Patient/Family Teaching

- Instruct patient to take medication as directed. Take missed doses if remembered within 24 hr; otherwise, omit and return to regular dosage schedule. Do not double-dose or take extra doses if side effects occur.
- Caution patient to avoid alcohol, CNS depressants, OTC drugs, and foods or beverages containing tyramine or excessive caffeine during and for at least 2 wk after therapy has been discontinued; they may precipitate a hypertensive crisis. Instruct patient to notify health care professional immediately if symptoms of hypertensive crisis (e.g., severe headache, palpitations, chest or throat tightness, sweating, dizziness, neck stiffness, nausea, or vomiting) develop.
- Instruct parents or guardians of children to contact health care professional immediately if child exhibits any suicidal thoughts or behaviors (e.g., worsening depression, new or worsening anxiety, agitation, panic attacks, insomnia, new or worsening irritability, violent behavior, impulsive actions, excessive talking, unusual changes in mood or behavior).
- Instruct patient to avoid alcohol, CNS depressants, OTC drugs, and foods or beverages containing tyramine or excessive caffeine during and for at least 2 wk after therapy has been discontinued; they may precipitate a hypertensive crisis. Instruct patient to notify health care professional immediately if symptoms of hypertensive crisis (e.g., severe headache, palpitations, chest or throat tightness, sweating, dizziness, neck stiffness, nausea, or vomiting) develop.
- Instruct patient to take medication as directed. Take missed doses if remembered within 24 hr; otherwise, omit and return to regular dosage schedule. Do not double-dose or take extra doses if side effects occur.
- Caution patient to avoid alcohol, CNS depressants, OTC drugs, and foods or beverages containing tyramine or excessive caffeine during and for at least 2 wk after therapy has been discontinued; they may precipitate a hypertensive crisis. Instruct patient to notify health care professional immediately if symptoms of hypertensive crisis (e.g., severe headache, palpitations, chest or throat tightness, sweating, dizziness, neck stiffness, nausea, or vomiting) develop.
- Instruct patient to notify health care professional if dry mouth, urinary retention, or constipation occurs. Frequent rinses, good oral hygiene, and sugarless candy or gum may diminish dry mouth. An increase in fluid intake, fiber, and exercise may prevent constipation.
- Advise patient to notify health care professional immediately if symptoms of hypertensive crisis develop.
- Instruct patient to notify health care professional before surgery. Therapy should be discontinued at least 2 wk before surgery. Instruct patient to notify health care professional describing medication regimen at all times.
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- Emphasize the importance of participation in psychotherapy, if recommended by
  health care professional and follow-up exams to evaluate progress. Ophthalmic
  testing should also be done periodically with long-term therapy.

Evaluation/Desired Outcomes

- Improved mood in depressed patients.
- Decreased anxiety.
- Increased appetite.
- Improved energy level.
- Improved sleep.
- Patients may require 3–6 wk of therapy before therapeutic effects of medication
  are seen.

Why was this drug prescribed for your patient?