selegiline (se-le-gi-leen)
Eldepryl, Zelapar

**Classification**
Therapeutic: antiparkinson agents
Pharmacologic: monoamine oxidase type B inhibitors

**Pregnancy Category C**

**Indications**
Management of Parkinson's disease (with levodopa or levodopa/carbidopa) in patients who fail to respond to levodopa/carbidopa alone.

**Action**
Following conversion by MAO to its active form, selegiline irreversibly binds to type B sites. Inactivation of MAO leads to increased amounts of dopamine available in the CNS. Therapeutic Effects: Increased response to levodopa/dopamine therapy in Parkinson's disease.

**Pharmacokinetics**
Absorption: Appears to be well absorbed following oral administration.
Distribution: Widely distributed.
Metabolism and Excretion: Metabolism involves some conversion to amphetamine and methamphetamine. 45% excreted in urine as metabolites.
Half-life: Unknown; orally disintegrating tablets 1.3 hr.

**TIME/ACTION PROFILE (onset of beneficial effects in Parkinson's disease)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>2–3 days</td>
<td>40–90 min</td>
<td>unknown</td>
</tr>
<tr>
<td>Orally disintegrating tablets</td>
<td>5 min</td>
<td>10–15 min</td>
<td>unknown</td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**
Contraindicated in: Hypersensitivity; Concurrent meperidine or opioid analgesic therapy (possible fatal reactions); Concurrent use of SSRIs or tricyclic antidepressants.

*Use Cautiously* in: Doses > 10 mg/day (risk of hypertensive reactions with tyramine-containing foods and some medications); History of peptic ulcer disease.

**Adverse Reactions/Side Effects**
CNS: confusion, dizziness, fainting, hallucinations, insomnia, urges (gambling, sexual), vivid dreams. DVT: edema.
GI: nausea, GI distress, cholinergic-parkinson symptoms.

**Interactions**
Drug-Drug: Concurrent use with meperidine or other opioid analgesics may possibly result in a potentially fatal reaction (excitation, sweating, rigidity, and hypertension; or hypotension and coma). Serotonin syndrome (confusion, agitation, hyperthermia, hypertension, seizures) may occur with concurrent use of methysergide or SSRI antidepressants (discontinue should be discontinued 5 wk prior to selegiline; venlafaxine should be discontinued 7 days before selegiline; other agents should be discontinued 2 wk before selegiline). Selegiline should be discontinued 2 wk before SSRI's are initiated. Concurrent use with tricyclic antidepressants may result in arrhythmias, hypotension, syncope, behavioral changes, blurred vision, dizziness, muscle rigidity, and seizures (avoid concurrent use; discontinue selegiline 2 wk before initiating tricyclic antidepressant therapy). May initially increase side effects of levodopa/carbidopa (dose of levodopa/carbidopa may need to be reduced 20–30%)

**Route/Dosage**

**PO (Adults):**
- 5 mg twice daily, with breakfast and lunch (some patients may require further dividing of doses—2.5 mg 4 times daily).
- Orally disintegrating tablets—1.25 mg once daily for at least 6 wk. After 6 wk, may increase to 2.5 mg if effect not achieved and patient is tolerating medication.

**NURSING IMPLICATIONS**

**Assessment**
- Assess patient for signs and symptoms of Parkinson's disease (tremor, muscle weakness and rigidity, ataxic gait) prior to and during therapy.
- Assess BP periodically during therapy.

**Potential Nursing Diagnoses**
- Impaired physical mobility (Indications)

**Risk for injury (Indications—Side Effects)**

**Patient Education**
- Inform patient to avoid tyramine-containing foods (possible fatal reactions).
- Instruct patient to take medication as directed.
- Instruct patient to avoid concurrent use with meperidine or other opioid analgesics.
- Instruct patient not to discontinue medication abruptly, discontinue slowly over 1 wk.
Implementation

- Do not confuse selegiline with Salagen (pilocarpine). Do not confuse Zelapar (selegiline) with Zyprexa (olanzapine).
- An attempt to reduce the dose of levodopa/carbidopa by 10–30% may be made after 2–3 days of selegiline therapy.
- PO: Administer 5-mg tablet with breakfast and lunch.
- Administer orally disintegrating tablet in the morning, before breakfast and without liquid. Remove tablet gently from blister pack with clean, dry hands immediately before administering. Do not attempt to push tablet through backing. Tablet will disintegrate within seconds when placed on tongue. Avoid food or liquid within 5 mins of administering orally disintegrating tablets.

Patient/Family Teaching

- Instruct patient to take medication as directed. Take missed doses as soon as possible, but not if late afternoon or evening or almost time for next dose. Do not double doses. Caution patient that taking more than the prescribed dose may increase side effects and place patient at risk for hypertensive crisis if foods containing tyramine are consumed.
- Advise patients using selegiline ≤20 mg/day to avoid large amounts of tyramine-containing foods, alcoholic beverages, large quantities of caffeine-containing beverages, or OTC or herbal cough or cold medications.
- Inform patient and family of the signs and symptoms of MAO inhibitor-induced hypertensive crisis (sweating, dizziness, nausea, vomiting, photophobia, headache, diarrhea, tachypnea, tremor, confusion, sleeplessness, headache, hypertension).
- Advise patient not to exceed 75 mg/day of nighttime levodopa/carbidopa.
- Advise patient to notify health care professional immediately if severe headache or any other unusual symptom occurs.
- Caution patient to change positions slowly to minimize orthostatic hypotension.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications.
- Advise patient to have periodic skin exams to check for lesions that may be melanoma.
- Advise patient to notify health care professional if new or increased gambling, sexual or other intense urges occur.
- Advise patient that increasing fluids, sugarless gum or candy, ice, or saliva substitutes may help minimize dry mouth. Consult health care professional if dry mouth continues for >2 wks.

Evaluation/Desired Outcomes

- Improved response to levodopa/carbidopa in patients with Parkinson’s disease.
- Why was this drug prescribed for your patient?