
RIVASTIGMINE (Exelon, Exelon Patch) Fact Sheet [G]

Bottom Line:

Rivastigmine is no longer the only cholinesterase inhibitor available in patch form, but it or the new donepezil patch may be advantageous for patients who refuse or have difficulty swallowing medication. Otherwise, we generally consider rivastigmine a second-line agent due to the need for twice-daily dosing and its high rate of nausea and vomiting.

FDA Indications:

Mild to moderate Alzheimer's dementia (capsules); **mild to moderate and severe Alzheimer's dementia** (patch); **dementia associated with Parkinson's disease** (capsules and patch).

Off-Label Uses:

Other memory disorders; mild cognitive impairment.

Dosage Forms:

- **Capsules (G):** 1.5 mg, 3 mg, 4.5 mg, 6 mg.
- **Transdermal patch (G):** 4.6 mg/24 hour, 9.5 mg/24 hour, 13.3 mg/24 hour, containing rivastigmine 9 mg, 18 mg, and 27 mg, respectively.

Dosage Guidance:

- Start 1.5 mg BID with meals for four weeks, ↑ by 1.5 mg BID increments every four weeks, up to max 6 mg BID with meals.
- Patch: For mild to moderate dementia, start 4.6 mg/24 hour; if tolerated, ↑ after at least four weeks to 9.5 mg/24 hour (target and max dose). For severe dementia, titrate to 13.3 mg/24 hour (effective and max dose).
- Converting oral to patch: <6 mg/day: Use 4.6 mg/24 hour patch; 6–12 mg/day: Use 9.5 mg/24 hour patch; apply patch on next day following last oral dose.

Monitoring: No routine monitoring recommended unless clinical picture warrants.

Cost: Oral: \$; patch: \$\$

Side Effects:

- Most common: Dizziness, headache, diarrhea, anorexia, nausea, vomiting, skin reactions (patch).
- Serious but rare: Cholinesterase inhibitors may have vagotonic effects that may cause bradycardia and/or heart block with or without a history of cardiac disease; syncope reported.

Mechanism, Pharmacokinetics, and Drug Interactions:

- Acetylcholinesterase (AChE) and butyrylcholinesterase (BuChE) inhibitor.
- Metabolized extensively, although CYP enzymes minimally involved; $t_{1/2}$: 1.5 hours (oral); 3 hours (after patch removal).
- Avoid use with anticholinergic agents as they will diminish therapeutic effects; avoid beta blockers due to risk of bradycardia. CYP450 interactions not likely.

Clinical Pearls:

- Only cholinesterase inhibitor with additional indication for Parkinson's-related dementia.
- Rivastigmine inhibits both AChE and the nonspecific BuChE (also known as pseudocholinesterase), which is mostly found in the liver and GI tract; this may explain why rivastigmine causes significant GI side effects.
- Rivastigmine transdermal patch may cause less nausea and vomiting.

Fun Fact:

Exelon is also the name of a corporation that provides energy services (electric and natural gas) and is the largest nuclear operator in the United States.