
SELEGILINE TRANSDERMAL (Emsam) Fact Sheet

Bottom Line:

Emsam is an MAOI patch with less likelihood of dietary interactions at 6 mg, and possibly at higher doses too. Probably fewer side effects than other MAOIs, such as weight gain and sexual side effects, and other potential advantages, including better compliance among patients who do not like swallowing pills and less suicide risk (it's harder to overdose on a patch than with pills). When MAOIs are indicated, this may be the least risky option to try.

FDA Indications:

Major depression.

Off-Label Uses:

Treatment-resistant depression; panic disorder; treatment-resistant anxiety disorders.

Dosage Forms:

Transdermal patch: 6 mg, 9 mg, 12 mg/24 hour patch.

Dosage Guidance:

- Start 6 mg/24 hour QD; may ↑ in increments of 3 mg/24 hour every two weeks or more, up to max 12 mg/24 hour.
- Apply to clean, dry, intact skin of upper torso (below neck and above waist), upper thigh, or outer surface of upper arm; apply at the same time each day and rotate application sites; wash hands with soap and water after handling; avoid touching sticky side of patch.

Monitoring: No routine monitoring recommended unless clinical picture warrants.

Cost: \$\$\$\$\$

Side Effects:

- Most common: Headache, insomnia, application site reaction, hypotension, diarrhea, dry mouth.
- Serious but rare: Orthostatic hypotension; caution in patients at risk (elderly, cerebrovascular disease, cardiovascular disease, hypovolemia).
- Pregnancy/breastfeeding: Not enough data to recommend.

Mechanism, Pharmacokinetics, and Drug Interactions:

- Non-selective MAOI.
- Metabolized primarily through CYP2B6 (also 2C9, 3A4/5) to active (N-desmethylselegiline, amphetamine, methamphetamine) and inactive metabolites; t_{1/2}: 18–25 hours.
- Interactions with food: When using the 6 mg/day patch, no special diet is required. When using higher doses, a tyramine-restricted diet should be followed. See Table A3 in Appendix A for more information.
- Interactions with other meds are identical to oral MAOIs, so avoid with other antidepressants, serotonergic agents, stimulants, sympathomimetics, dextromethorphan, disulfiram, meperidine, and carbamazepine. Do not use within five weeks of fluoxetine discontinuation or two weeks of other antidepressant discontinuation. Discontinue at least 10 days prior to elective surgery. Antihypertensives may exaggerate hypotensive effects. For doses higher than 6 mg, avoid use with foods or supplements high in tyramine, tryptophan, phenylalanine, or tyrosine.
- Wait two weeks after discontinuing transdermal selegiline before initiating therapy with serotonergic or any other contraindicated drug.

Clinical Pearls:

- Oral selegiline (Eldepryl) used in Parkinson's disease (≤ 10 mg/day) is a selective inhibitor of MAO-B, which metabolizes dopamine. When used transdermally as Emsam, selegiline achieves higher blood levels and non-selectively inhibits both MAO-A and MAO-B. Its antidepressant effect is thought to be due to its MAO-A inhibition, which blocks the breakdown of other centrally active neurotransmitters (norepinephrine, serotonin).
- Patch may contain conducting metal (eg, aluminum); avoid exposure of application site to external heat source, which may increase the amount of drug absorbed.

Fun Fact:

Named "Emsam" after Emily and Samuel, the children of the CEO of Somerset Pharmaceuticals (original manufacturer).