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**Center**





# **Additional Therapies for Advancing Parkinson's disease**

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# Dopamine Agonists

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**Drug names:** Ropinirole (Requip), Pramiprexole (Mirapex), Rotigotine (Neupro), Apomorphine hydrochloride (APOKYN, KYNMOBI)

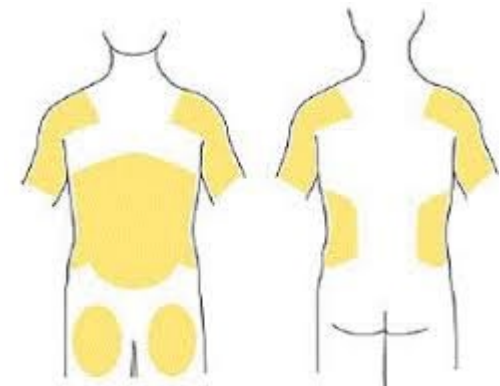
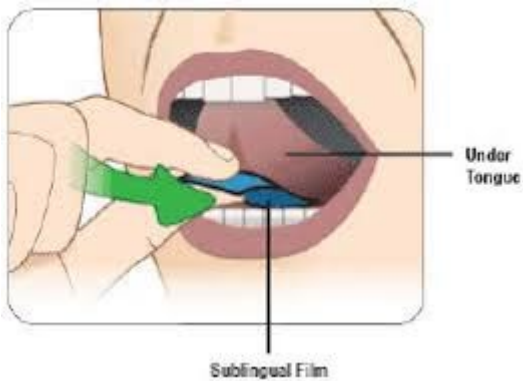
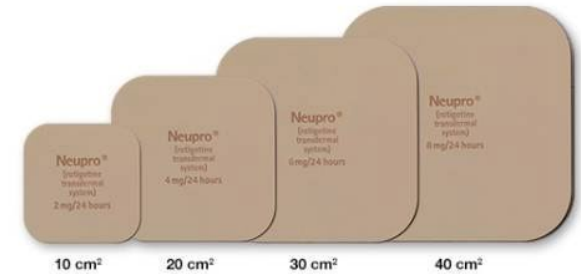
**Mechanism of action:** Stimulation dopamine receptors

**Possible side effects:**

- excessive daytime sleepiness / sudden sleep attacks
- hallucinations / confusion
- leg swelling / discoloration
- compulsive behaviors (uncontrolled shopping, gambling, eating, sexual urges)

**Other considerations:** Apokyn: off time (injectable)  
KYNMOBI: off time (under the tongue)

# Dopamine Agonists



# Amantadine

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**Drug names:** Amantadine, GoCovri, Osmolex ER

**Mechanism of action:** Potentiates CNS dopaminergic responses

**Possible side effects:**

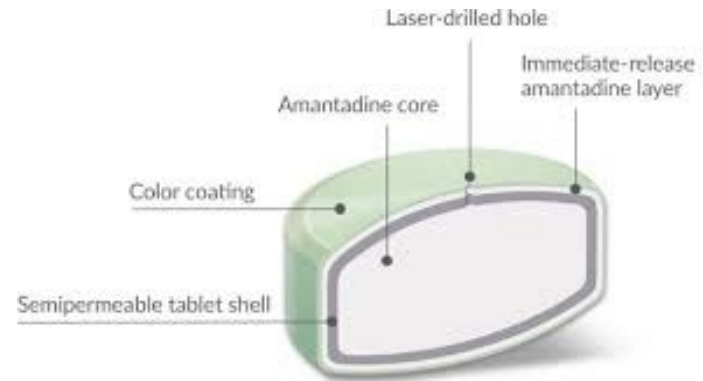
- hallucinations / paranoia / confusion
- nausea
- leg discoloration (rash)
- dry mouth
- urinary retention
- blurred vision

**Other considerations:** Newer ER versions once daily

# Amantadine

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Drug names: Amantadine, GoCovri, Osmolex ER



**Osmolex ER™**  
(amantadine)  
*Extended-release Tablets*

# Anti-cholinergics

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**Drug names:** Benztropine (Cogentin), Trihexyphenidyl HCL (Artane)

**Mechanism of action:** Antagonizes acetylcholine receptors

**Possible side effects:**

- confusion / memory issues / hallucinations
- dry mouth
- blurry vision
- urinary retention

**Other considerations:** Dry mouth (can try OTC Biotene products, hard candies, gum)

# COMT Inhibitors

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**Drug names:** Entacapone (Comtan), Opicapone (Ongentys)

**Mechanism of action:** Inhibits COMT, which increases availability of levodopa

**Possible side effects:**

- confusion / hallucinations
- discoloration of urine (reddish brown or rust-colored)
- diarrhea
- sleep attacks (opicapone)

**Other considerations:** Opicapone is once daily at night (avoid food 1 hour before and 1 hour after taking)



# MAO-B Inhibitors

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**Drug names:** Selegiline (l-deprenyl, Eldepryl), Selegiline HCL orally disintegrating (Zelapar), Rasagiline (Azilect), Safinamide (Xadago)

**Mechanism of action:** Inhibits MAO type B, which increases dopamine in the striatum

**Possible side effects:**

- mild nausea
- dry mouth
- confusion / hallucinations

**Other considerations:**

Heavy consumption (greater than 150 mg/day) of foods high in tyramine carries a risk of raising blood pressure to dangerous levels (cheeses, dried or cured meats, fava beans, beer, sauerkraut, and soybeans)

\*Xadago does not have a dietary restriction

# Adenosine A2a antagonists

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**Drug name:** istradefylline (NOURIANZ)

**Mechanism of action:** Unknown, antagonizes adenosine A2A receptors

**Possible side effects:**

- insomnia
- hallucinations
- dizziness

**Other considerations:** Once a day, no time of day restriction, no titration. 2 dosages

# Thank You



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