

A fluorescence microscopy image showing several cells with bright blue cytoplasm and prominent, branching filamentous structures. The cells are irregular in shape and appear to be in a network. The background is dark, making the blue-stained cells stand out.

Sinemet

Penny Noland

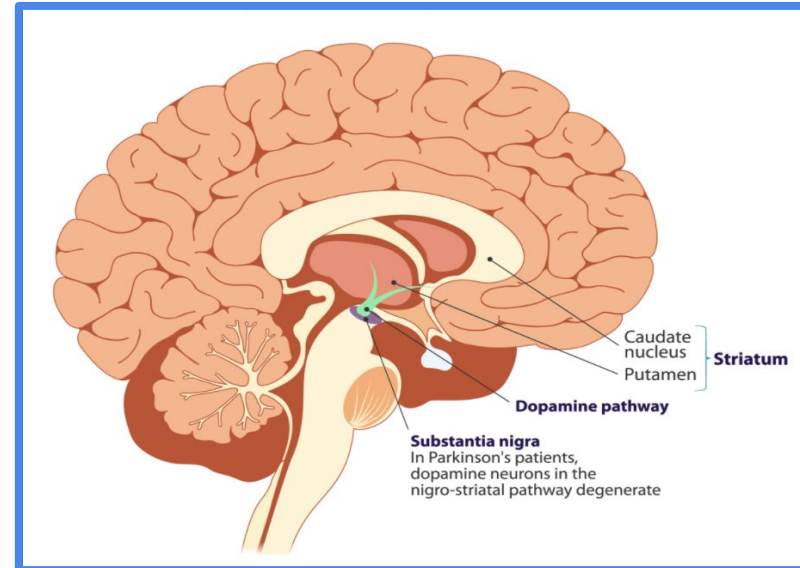
Parkinson's Disease

Parkinson's is a degenerative and progressive disorder. It affects the nerve cells located in the parts of the brain called the substantia nigra and the basal ganglia.

Symptoms are caused by lack of dopamine.

Symptoms:

- Tremors in hands or limbs, usually resting
- Bradykinesia (slowness of movement)
- Rigidity in muscles
- Depression and psychosis
- Dementia

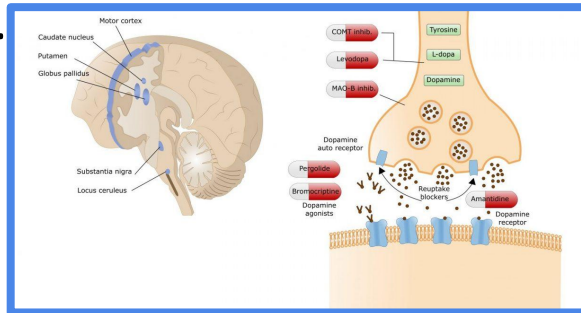


Sinemet

Sinemet is a combination of levodopa and carbidopa, which are used to treat Parkinson's disease.

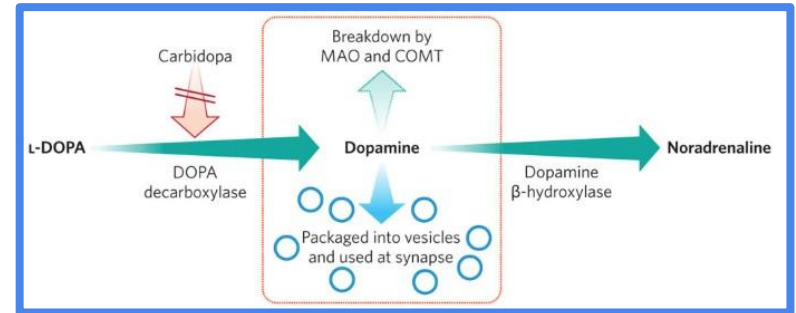
Levodopa:

- Nervous system agent.
- Taken orally and crosses the “blood-brain barrier”.
- Once crossed it is converted to dopamine.



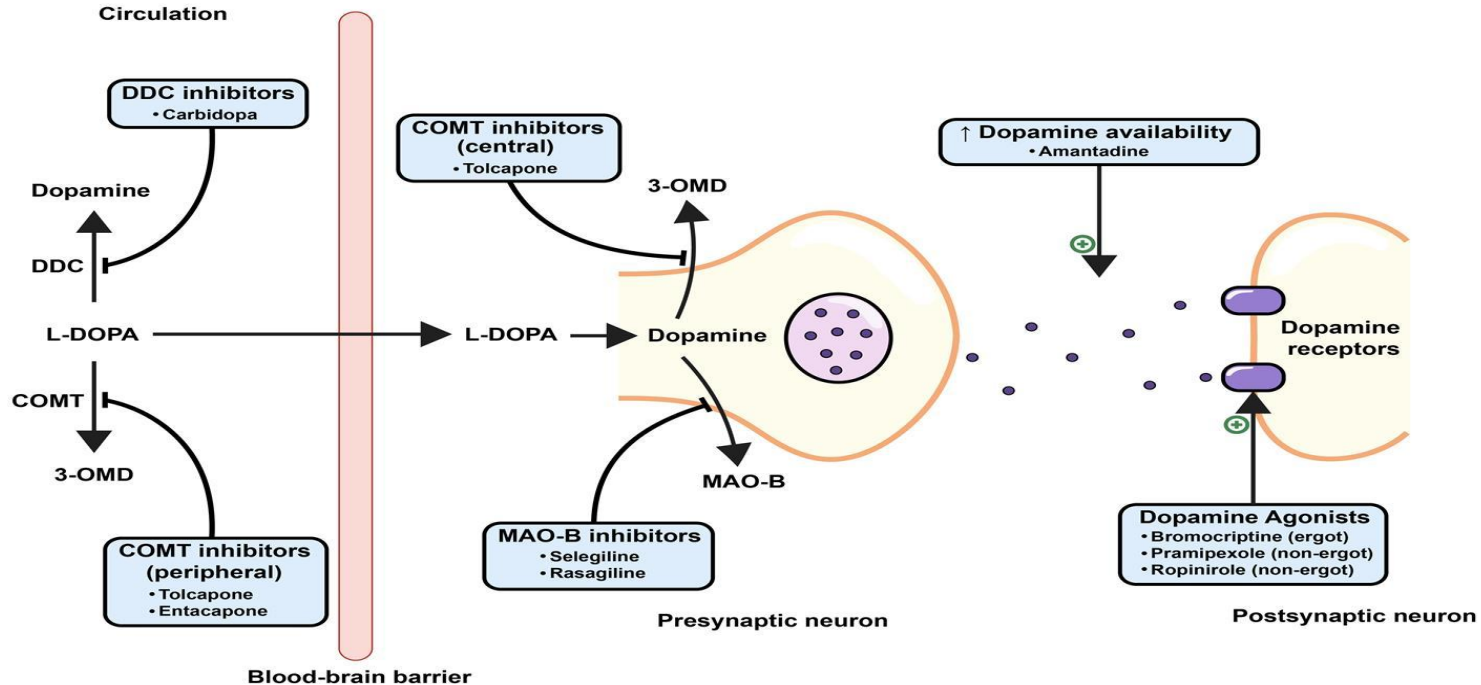
Carbidopa:

- Decarboxylase inhibitor.
- Prevents levodopa from being broken down.
- Allows for lower doses of levodopa.



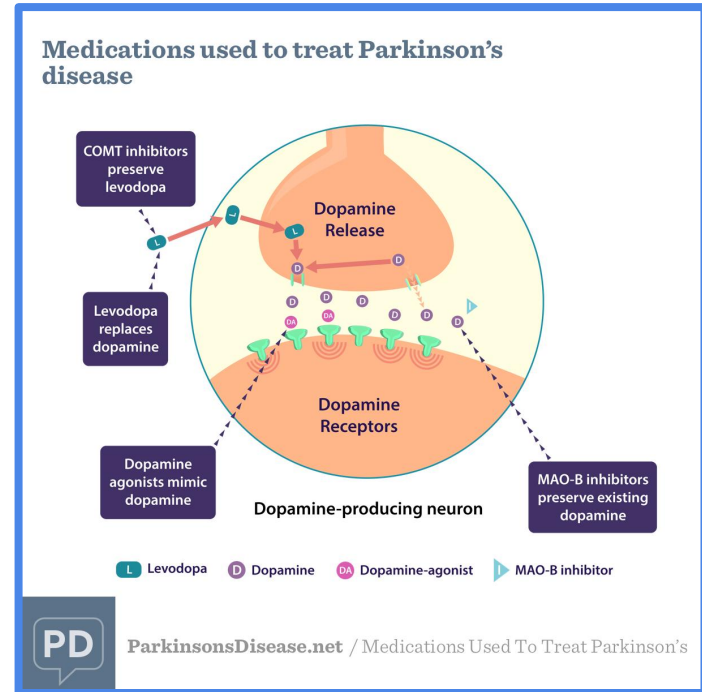
Signaling Pathway

Parkinson's Disease Drugs



Response

- Levodopa is converted to dopamine by an enzyme called DOPA decarboxylase.
- The neurotransmitter dopamine is responsible for relaying messages that can plan and control body movement.
- By allowing dopamine to be present in the synapse, the nerve signal can be transmitted appropriately.
- Increasing dopamine in the brain can improve Parkinson's symptoms.



Work Cited

<https://images.app.goo.gl/KnAe2hgCBooRdytR7>

<https://images.app.goo.gl/1ogX22JWNhzuGKjB6>

<https://images.app.goo.gl/Xm61iuhwL5o5mXQ38>

[https://mayfieldclinic.com/pe-pd.htm#:~:text=Parkinson's%20disease%20\(PD\)%20is%20a%20degenerative%20C%20progressive%20disorder%20that,plan%20and%20control%20body%20movement.](https://mayfieldclinic.com/pe-pd.htm#:~:text=Parkinson's%20disease%20(PD)%20is%20a%20degenerative%20C%20progressive%20disorder%20that,plan%20and%20control%20body%20movement.)

<https://medlineplus.gov/druginfo/meds/a601068.html#:~:text=The%20combination%20of%20levodopa%20and,monoxide%20poisoning%20or%20manganese%20poisoning.>

https://www.medicinenet.com/levodopa_with_carbidopa-oral/article.htm