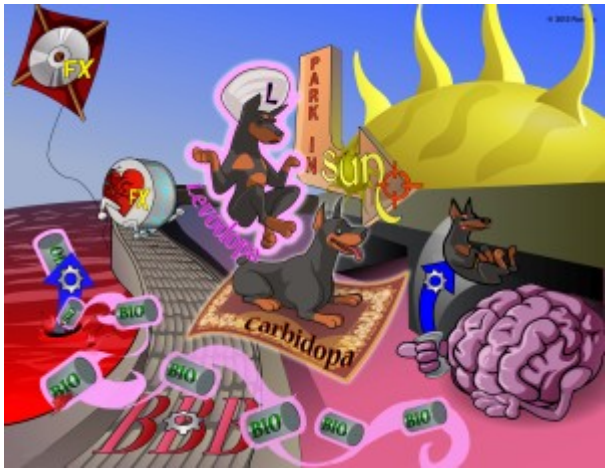
Levodopa/Carbidopa (Sinemet)

Levodopa/carbidopa, which is sometimes referred to as levocarb or sinemet, is a combination drug used to treat Parkinson's disease. This drug works by increasing dopamine delivery in the brain. Levodopa, or L-dopa, readily crosses the blood-brain barrier, and is converted to dopamine centrally. Carbidopa inhibits DOPA decarboxylase, and protects L-dopa from being broken into dopamine peripherally and in the gut. A side effect of this drug is arrhythmia, which occurs from peripheral conversion of the drug into catecholamines. Dyskinesia, which is a distortion or difficulty with voluntary movement, may occur with long term use of this drug.



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Indications

Parkinson's Disease
Park-in-sun garage
Levodopa/carbidopa is indicated to treat Parkinson's disease. Parkinson's is a degenerative disorder of the central nervous system with prominent motor symptoms. Patients' symptoms result from decreased circulating dopamine levels, due to substantia nigra destruction.

Mechanism of Action

Increase Dopamine in Brain
Up-arrow Doberman with Brain
This drug increases dopamine availability in the brain. L-dopa (levodopa), crosses the blood brain barrier and is converted to dopamine centrally.

Cross blood-brain barrier
Crossing Blood Brain Barrier
L-dopa (levodopa) is combined with carbidopa, which is an inhibitor of DOPA decarboxylase. By combining L-dopa with carbidopa, it is protected from being peripherally converted into dopamine. L-dopa readily crosses the blood brain barrier, where it can then be broken down.

Increase bioavailability
Up-arrow Bio-cans
Carbidopa prevents peripheral conversion of L-dopa (levodopa) to dopamine in the periphery and gut, increasing its availability for transport to the CNS.

Side Effects

Arrhythmias
Broken Arrhythmia-drum
Though very rare, side effects of this medication include arrhythmias and tachyarrhythmias from peripheral catecholamines being formed. This, however, is usually mitigated by carbidopa blocking peripheral conversion of dopamines.

Dyskinesia
Disc-kite
Long term use of these medications can lead to dyskinesia, which is a distortion or difficulty of voluntary movements.

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