

PARKINSON DISEASE

MANDISA KAKAZA
DEPT OF NEUROLOGY
STEVE BIKO ACADEMIC HOSPITAL
UNIVERSITY OF PRETORIA



INTRODUCTION

AN
E S S A Y
ON THE
SHAKING PALSY.

BY
JAMES PARKINSON,
MEMBER OF THE ROYAL COLLEGE OF SURGEONS.

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AN
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CHAPTER I.

DEFINITION—HISTORY—ILLUSTRATIVE CASES.

SHAKING PALSY. (*Paralysis Agitans.*)

Involuntary tremulous motion, with lessened muscular power, in parts not in action and even when supported; with a propensity to bend the trunk forwards, and to pass from a walking to a running pace: the senses and intellects being uninjured.



DIAGNOSING PD



The criteria for diagnosis of PD set forth by the United Kingdom Parkinson's Disease Society Brain Bank consists of 3 diagnostic steps

1. Determining whether a patient's symptoms fall within the broader category of parkinsonism (defined as presentation of bradykinesia in addition to **muscular rigidity**, **4- to 6-Hz rest tremor**, or **postural instability** unrelated to visual, vestibular, cerebellar, or proprioceptive dysfunction)
2. Ruling out those patients presenting with a spectrum of exclusion criteria
3. Including those patients presenting with specific positive criteria, any 3 of which, taken together, constitute a PD diagnosis after both stages 1 and 2 have been met.



NON-MOTOR FEATURES OF PD



Before diagnosis - Stages 1 & 2

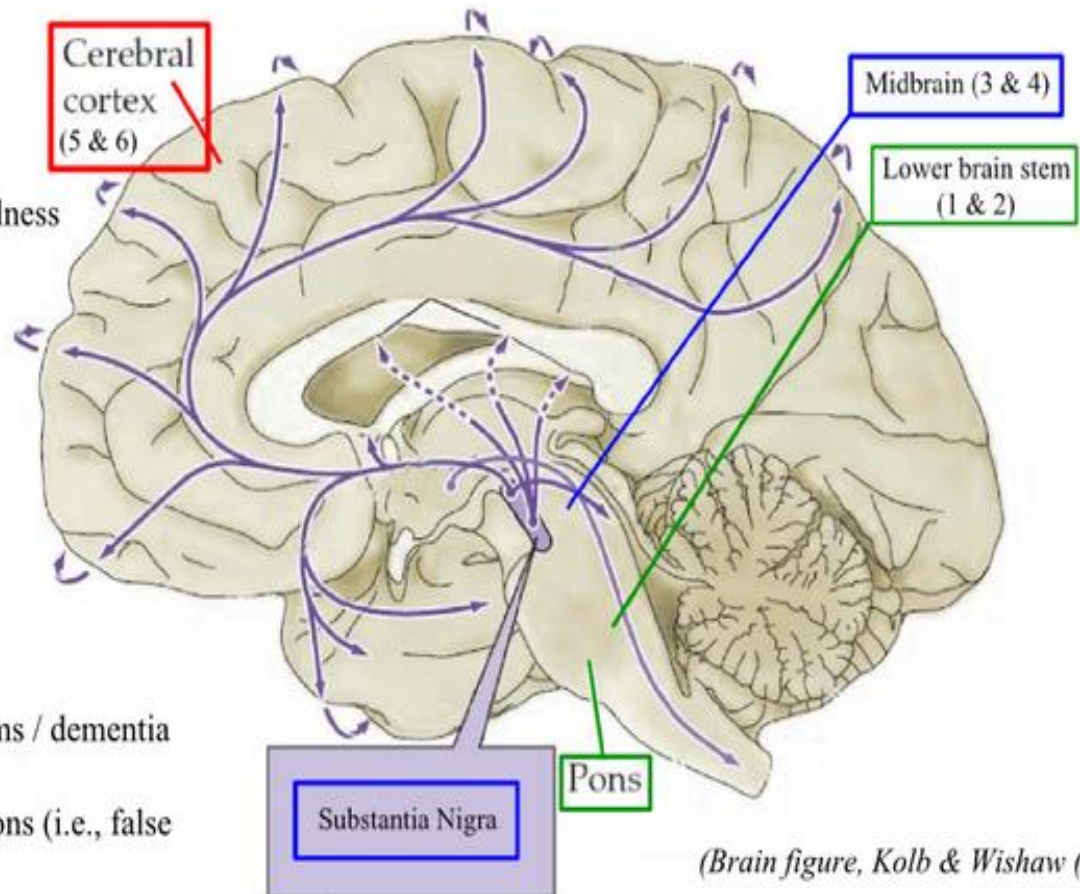
- loss of smell
- disturbance of sleep and wakefulness
- lowered blood pressure
- constipation
- anxiety / depression

At diagnosis - Stages 3 & 4

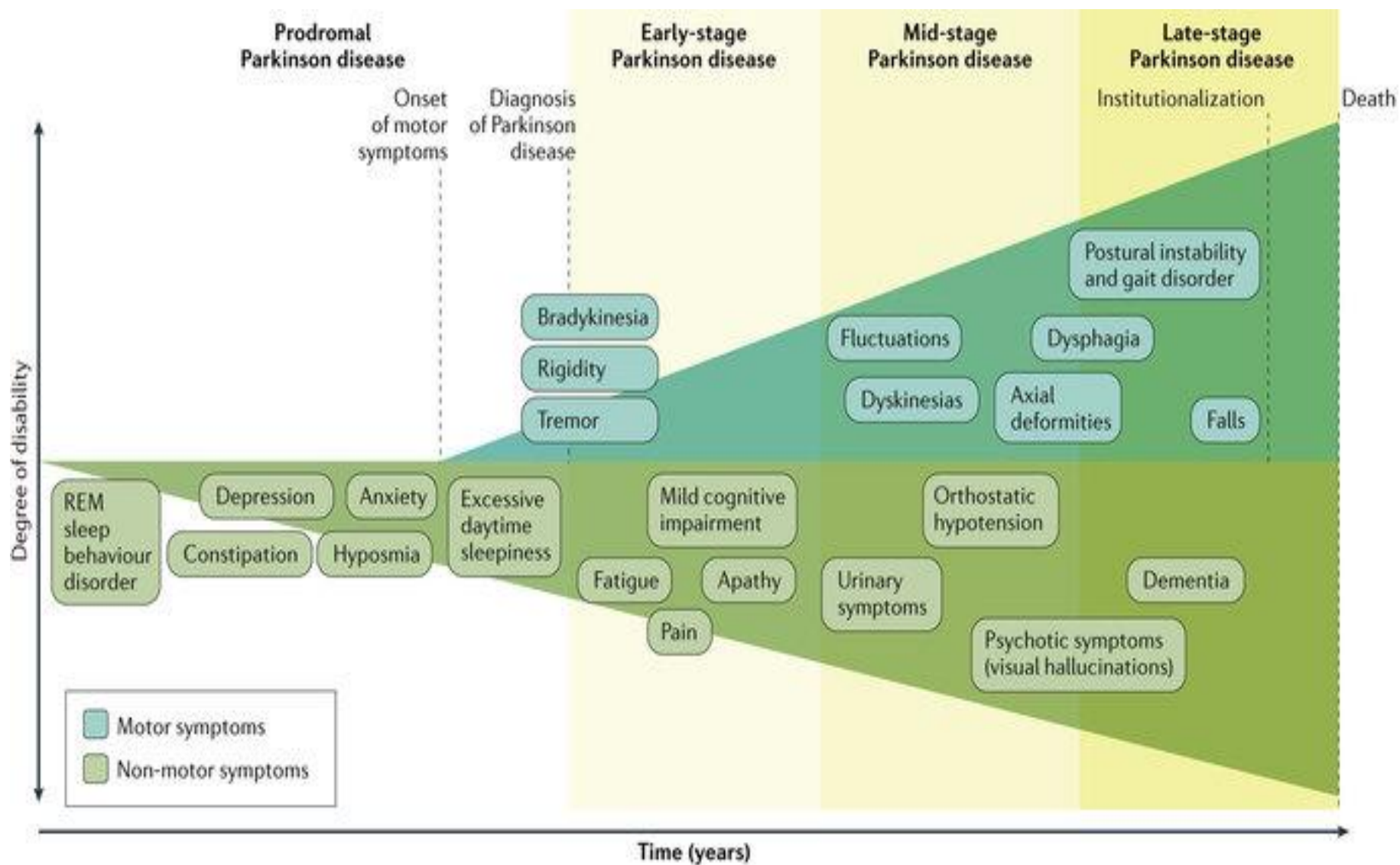
- movement problems
- subtle thinking problems

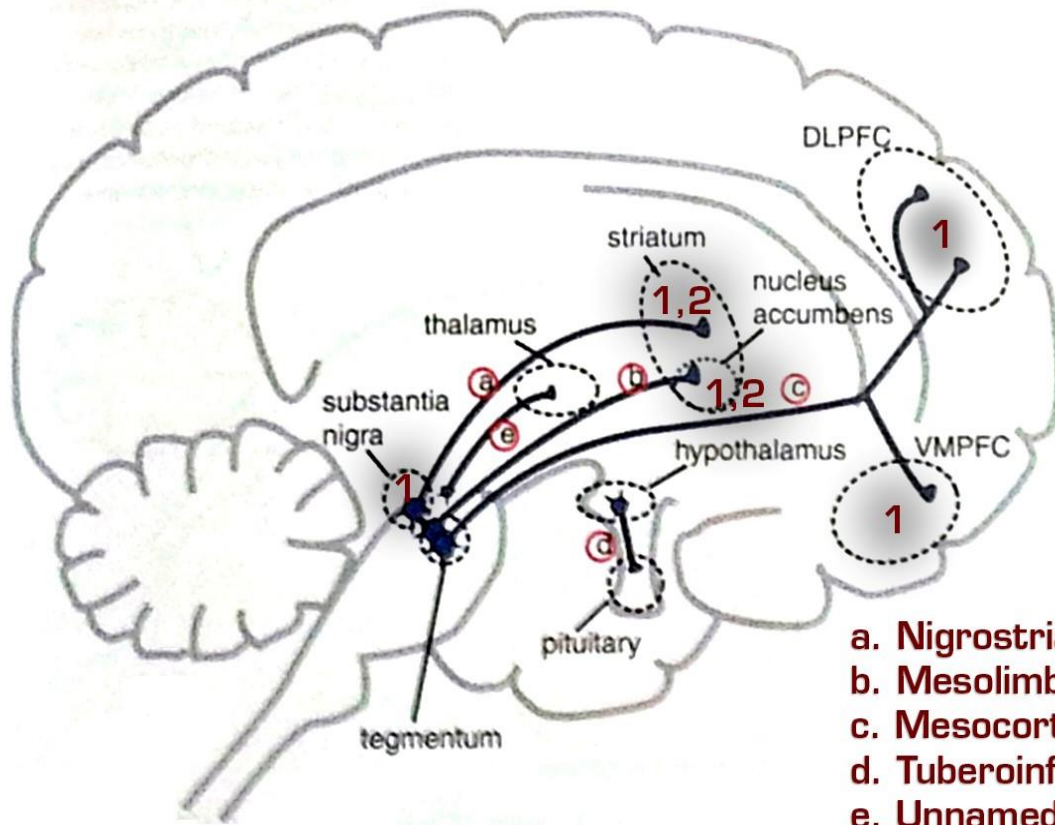
Later disease - Stages 5 & 6

- worsening movement problems
- more significant thinking problems / dementia
- worsening anxiety / depression
- hallucinations / paranoia / delusions (i.e., false beliefs)



(Brain figure, Kolb & Wishaw (2003))



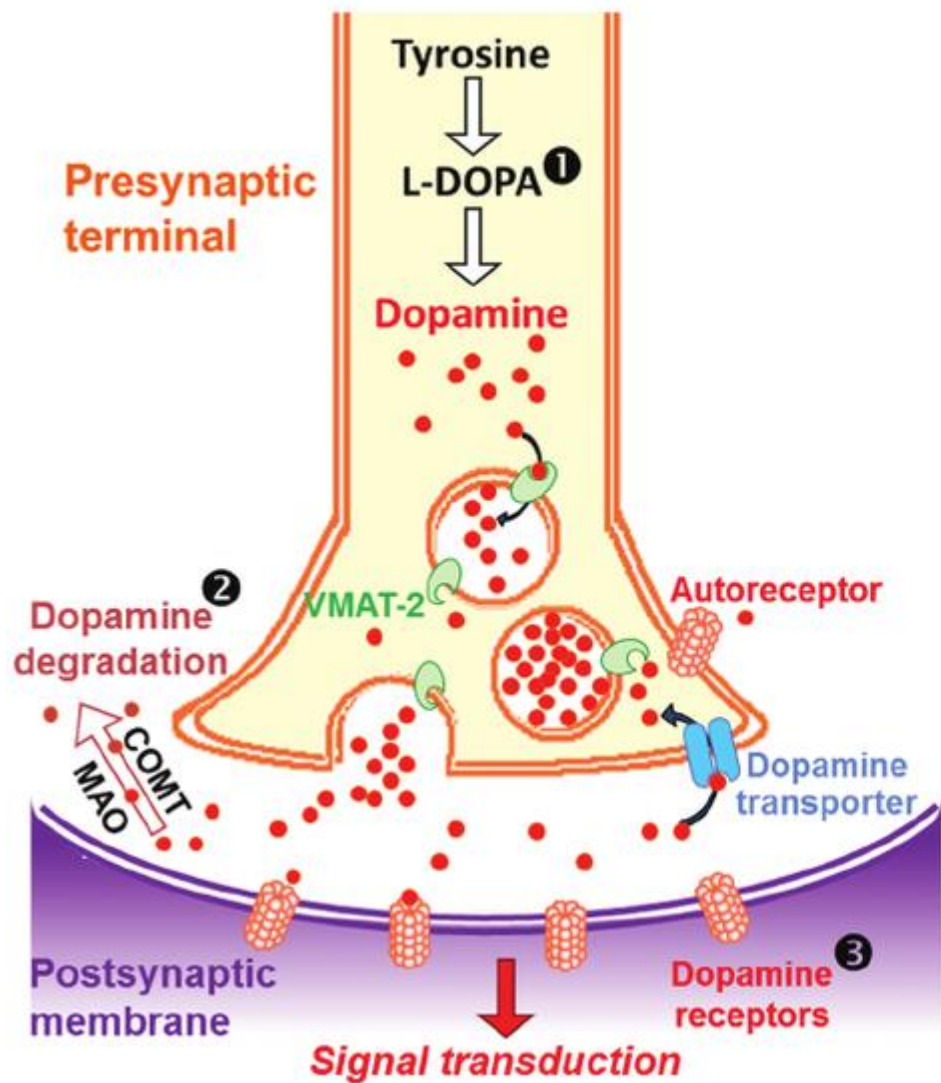


1. Dopamine receptor class 1 (D1 & D5 receptors)
2. Dopamine receptor class 2 (D2, D3, D4 receptors)

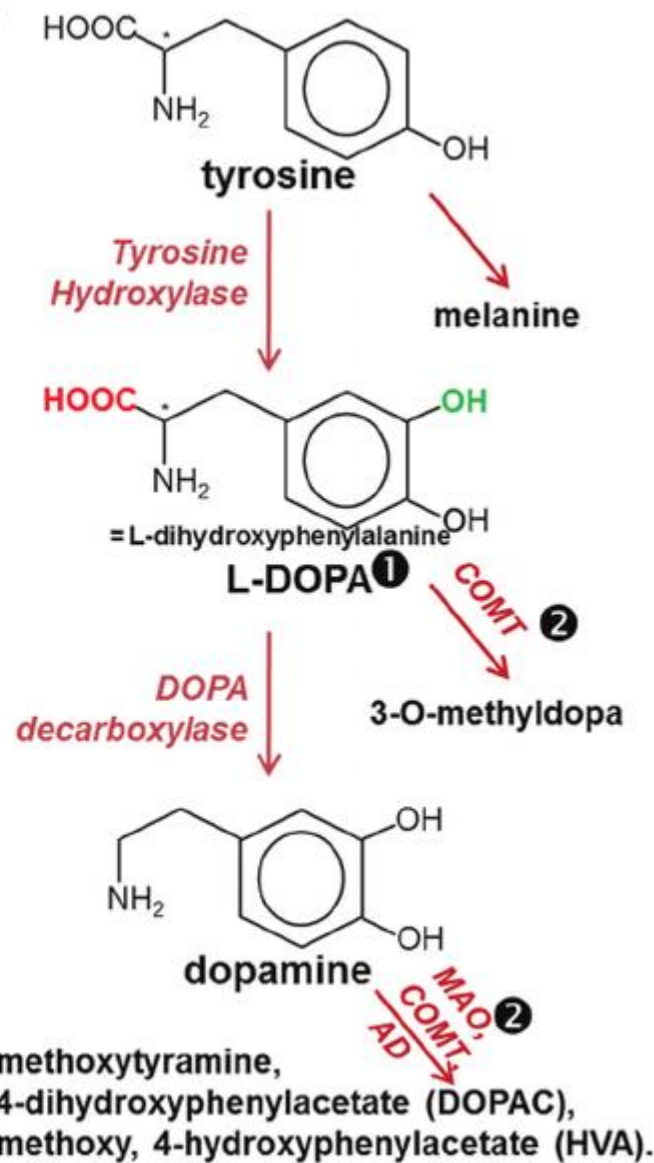
- a. Nigrostriatal: Motor function and movement
- b. Mesolimbic: Pleasure/Euphoria
- c. Mesocortical: Cognition & Emotion
- d. Tuberoinfundibular: Prolactin secretion
- e. Unnamed: Function not yet resolved

TREATMENT OF PD

(a) Dopaminergic synapse



(b)



Medications for Treatment of De Novo Patient (Rating of Evidence)

- MAO B inhibitors ([Level A](#))

- o Rasagiline
- o Selegiline

- Levodopa (Level A)

- o Levodopa/Carbidopa - immediate release
- o Levodopa/Benserazide – immediate release

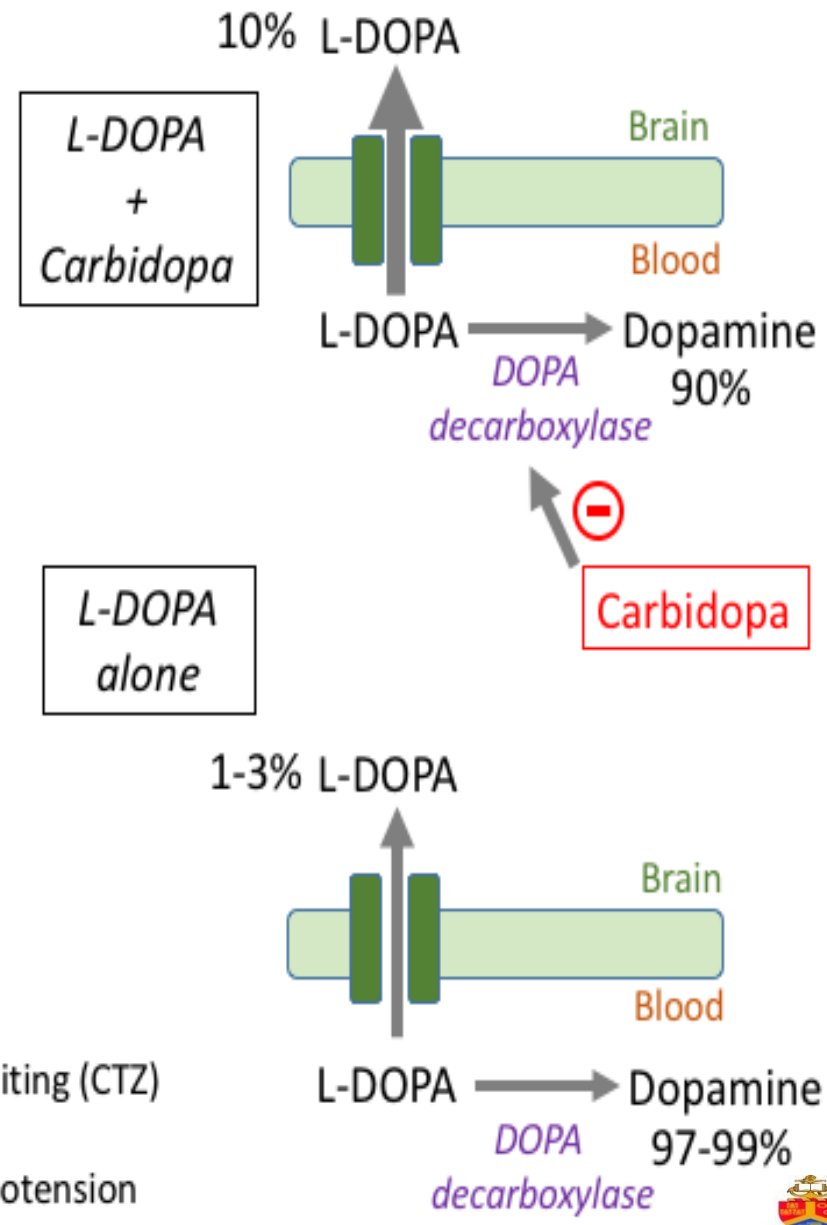
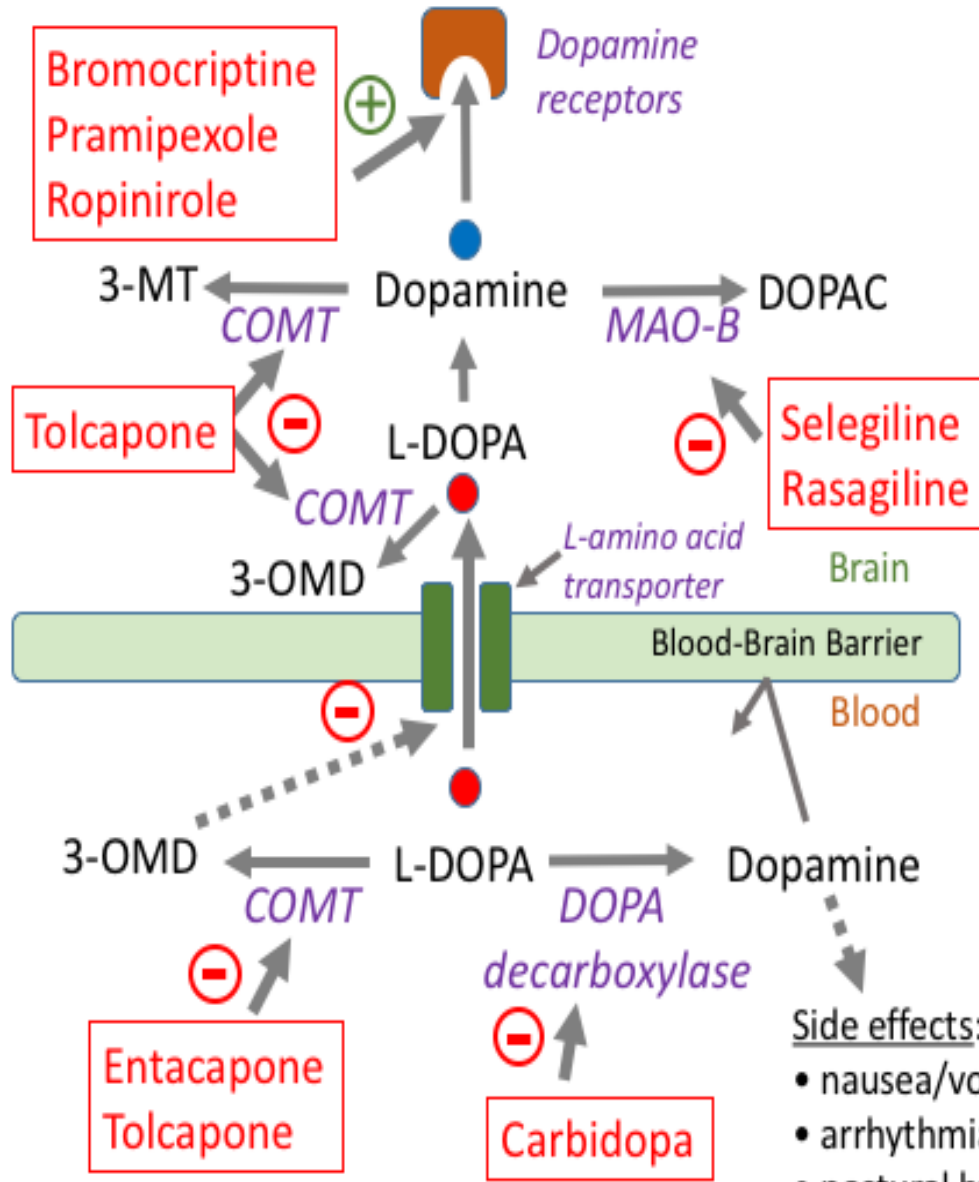
- Dopamine agonists

- o Pramipexole (Level A)
- o Ropinirole (Level A)
- o Bromocriptine

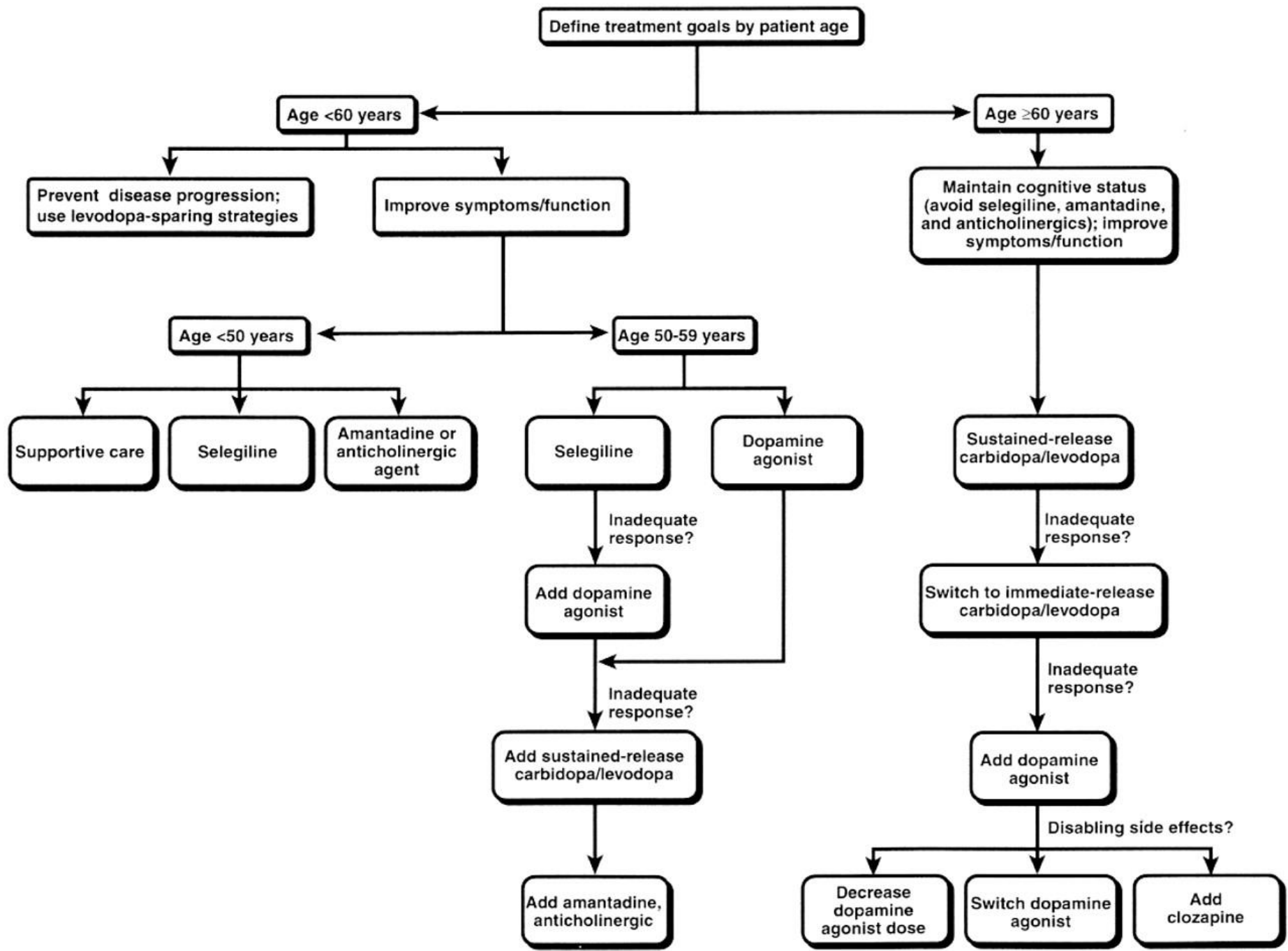
- Amantadine (Level D)

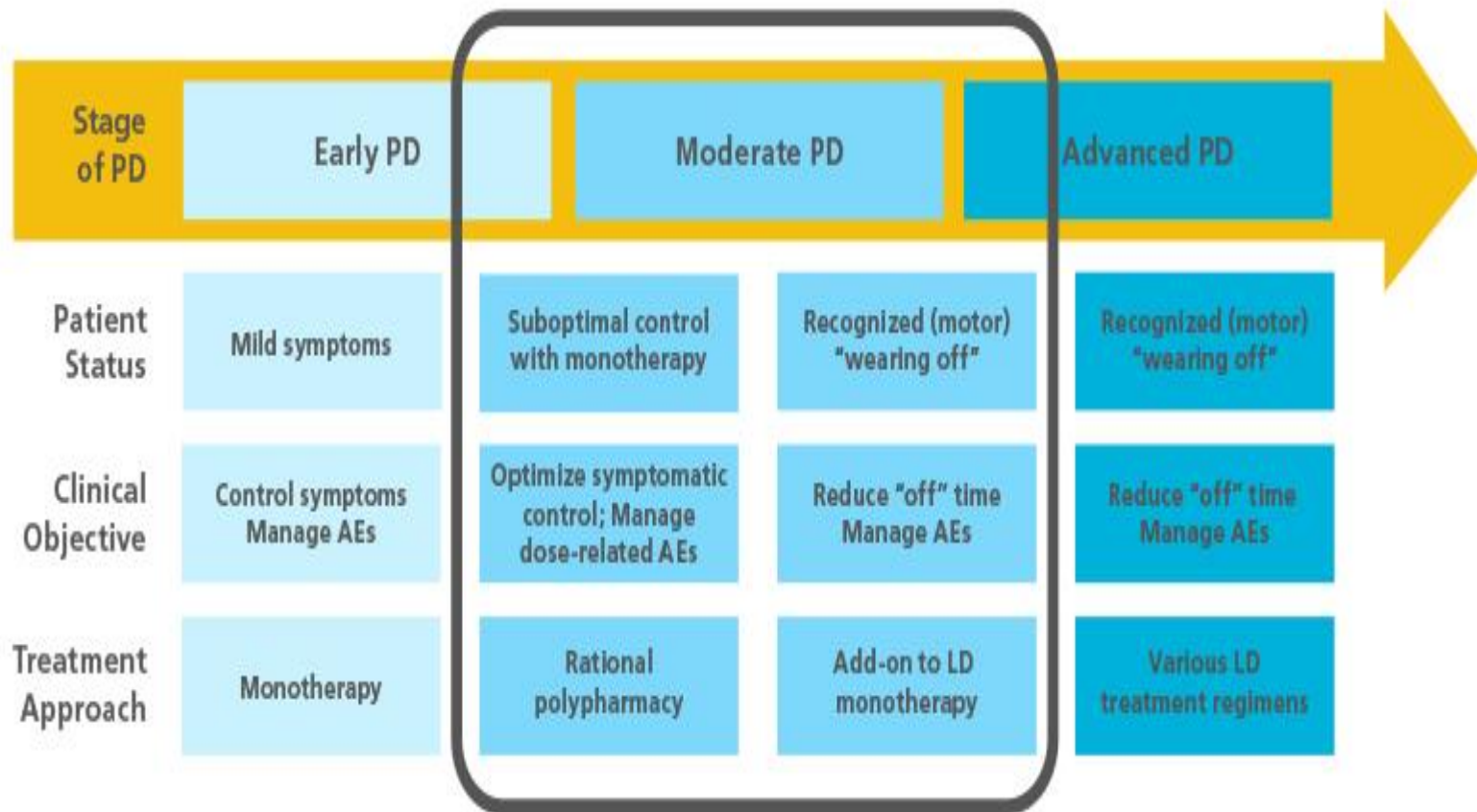
- Anticholinergics (Level B)

- o Benztropine
- o Ethopropazine
- o Procyclidine
- o Trihexyphenidyl



- Side effects:**
- nausea/vomiting (CTZ)
 - arrhythmias
 - postural hypotension





TREATMENT OF NON-MOTOR FEATURES OF PD

- Depression
 - Pramipexole
 - Tricyclic antidepressants
- Psychotic features
 - Quetiapine (AAN Level C)
 - Clozapine (NICE Level B)
- Dementia
 - Donepezil (AAN Level B)
 - Rivastigmine (AAN Level B)
- Sleep Disorders
- Autonomic Disturbances
- Urinary Dysfunction
- Constipation



THANK YOU

