

## Parkinson's Disease

1 . Parkinson disease (PD) was first described by James Parkinson in

- A) 1634.
- B) 1817.
- C) 1901.
- D) 1959.

2 . Sporadic (idiopathic) PD

- A) affects 100,000 Americans.
- B) occurs mainly in younger individuals.
- C) is more common in women than in men.
- D) is the second most frequent neurodegenerative disorder

3 . Of the following, the demographic group with greatest incidence of PD is

- A) black men 60 years of age or older.
- B) white men 60 years of age or older.
- C) Hispanic men 60 years of age or older.
- D) white women younger than 60 years of age.

4 . All of the following are suggested as neuroprotective against developing PD, EXCEPT:

- A) Coffee ingestion
- B) Cigarette smoking
- C) Liquor consumption
- D) Higher circulating uric acid levels

5 . In patients with PD, motor features begin appearing when what proportion of substantia nigra dopamine neurons are lost?

- A) 10% to 20%
- B) 40% to 50%
- C) 60% to 80%
- D) 95% to 100%

6 . Evidence indicates substantial contribution to neurodegenerative processes in PD from

- A) oxidative stress.
- B) neuroinflammation.
- C) mitochondrial dysfunction.

D) All of the above

7 . Which of the following statements regarding later-stage PD is TRUE?

- A) Most patients die directly from PD.
- B) Most patients die of indirect causes, such as aspiration pneumonia.
- C) Newly released pharmacologic agents may reverse end-stage decline.
- D) Patients diagnosed in their forties have the most rapid progression to end-stage PD.

8 . Perhaps the most robust predictor of eventually developing PD is

- A) constipation.
- B) olfactory dysfunction.
- C) excessive daytime sleepiness.
- D) rapid eye movement (REM) sleep behavioral disorder.

9 . Which of the following cardinal motor features is usually absent in early PD?

- A) Rigidity
- B) Akinesia
- C) Tremor at rest
- D) Postural instability

10 . In patients with PD, the frequency of the rest tremor is

- A) 1–3 Hz.
- B) 4–6 Hz.
- C) 8–12 Hz.
- D) 10–13 Hz.

11 . Which of the following statements regarding non-motor symptoms of PD is TRUE?

- A) They rarely appear before formal diagnosis.
- B) They become less dominant as motor symptoms worsen.
- C) Around 60% of patients with PD report troubling non-motor symptoms.
- D) They substantially contribute to impaired quality of life and disease burden when unaddressed.

12 . Idiopathic PD is diagnosed by

- A) patient history and physical examination.
- B) diagnosing parkinsonism and excluding Alzheimer disease.
- C) diagnosing parkinsonism, always using imaging exams to rule out other cause.
- D) interview and physical examination, confirmed by one or more imaging exam.

13 . The 2015 MDS criteria for PD differs from earlier diagnostic systems by

- A) the inclusion of pre-motor features.
- B) a new requirement for dopaminergic functional imaging.
- C) return to a diagnostic emphasis to focus on motor features.
- D) an emphasis on postural instability as a feature of parkinsonism.

14 . Which of the following is an absolute exclusion criterion according to the MDS clinical diagnostic criteria for PD?

- A) Rest tremor of a limb
- B) Unequivocal cerebellar abnormalities
- C) Presence of levodopa-induced dyskinesia
- D) Recurrent falls from impaired balance within three years of onset

15 . Of the following, drug-related parkinsonism is most likely to develop from use of

- A) lithium.
- B) verapamil.
- C) quetiapine.
- D) haloperidol.

16 . All of the following neurodegenerative syndromes can resemble PD, EXCEPT:

- A) Prion disease
- B) Multisystem atrophy
- C) Dementia with Lewy bodies
- D) Progressive supranuclear palsy

17 . Which imaging test is recommended to differentiate essential tremor from PD?

- A) Autonomic function testing
- B) Dopamine transporter scan
- C) Magnetic resonance imaging
- D) Positron emission tomography (PET)

18 . All of the following statements regarding medication non-adherence in patients with PD are true, EXCEPT:

- A) Non-adherence rates may be as high as 67%.
- B) Non-adherence is unrelated to number of daily medication doses.
- C) Reliance on clinical judgment to identify non-adherence is inaccurate.
- D) Timing non-adherence is common and contributes to earlier onset of motor fluctuations.

19 . Which of the following statements regarding levodopa pharmacology is TRUE?

- A) Levodopa half-life is roughly six hours. ✗
- B) Levodopa does not cross the blood-brain barrier ✗
- C) Levodopa is absorbed in the proximal small intestine.
- D) Approximately 80% of dopamine metabolized from levodopa reaches circulation.

20 . Which drug group may be added to levodopa to increase dopamine when motor complications appear, but lacks intrinsic dopaminergic activity?

- A) COMT inhibitors
- B) MAO-B inhibitors
- C) Dopamine agonists
- D) Anticholinergic agents

21 . What is the only agent demonstrated to suppress levodopa-induced dyskinesias without worsening parkinsonism?

- A) Selegiline
- B) Amantadine
- C) Rivastigmine
- D) Apomorphine

22 . What is the only drug approved for the treatment of mild-to-moderate PD dementia?

- A) Carbidopa
- B) Tolcapone
- C) Rivastigmine
- D) Bromocriptine

23 . Which of the following is TRUE regarding the selection of initial therapy for PD?

- A) Dopamine agonists are preferred in older patients.
- B) Controlled-release levodopa delays the onset of motor complications.
- C) Levodopa is the most effective option for improving motor disability.
- D) Motor complications are minimized by keeping the levodopa dose greater than 600 mg/day.

24 . A primary target of deep brain stimulation in patients with PD is the

- A) basal ganglia.
- B) substantia nigra.

- C) subthalamic nucleus.
- D) pedunculopontine nucleus.

25 . The body of research on deep brain stimulation generally shows that motor symptoms and daily activities improve by an average of

- A) 5%.
- B) 25%.
- C) 50%.
- D) 75%.

26 . Deep brain stimulation is proposed for earlier use than advanced stage PD because

- A) older patients are more likely to develop complications.
- B) stimulation in advanced disease does not improve functional decline from non-motor features.
- C) PD features unresponsive to deep brain stimulation predominate advanced stage disease.
- D) All of the above

27 . All of the following are TRUE regarding psychosis in PD, EXCEPT:

- A) Antipsychotic agents can exacerbate motor symptoms.
- B) Psychosis in PD develops in as many as 60% of patients.
- C) Dopaminergic agents can exacerbate psychotic symptoms.
- D) First-generation antipsychotics (e.g., haloperidol) are standard treatment.

28 . Which of the following statements regarding the development of impulse control disorders in patients with PD is FALSE?

- A) Personal or family history of addictive disorders is a risk factor.
- B) Impulse control disorders are strongly linked to initiation of apomorphine.
- C) Impulse control disorders may present as hypersexuality or compulsive eating.
- D) Impulse control disorders often develop during normal-range medication dosing.

**29 . In patients with PD experiencing moderate-to-severe chronic pain, which of the following analgesics is beneficial for pain without inducing constipation?**

- A) Morphine
- B) Oxymorphone
- C) Codeine combined with naloxone
- D) Oxycodone combined with naloxone**

**30 . For patients with PD, medication safety is improved by avoiding**

- A) "drug holidays."
- B) medication adjustments by non-PD specialists.
- C) abruptly withdrawing dopaminergic medication.
- D) All of the above**