

## Implications of Early Treatment for Parkinson's Disease

### Instructions

After reading "Implications of Early Treatment for Parkinson's Disease," complete the program evaluation and select the 1 best answer to each of the following questions.

A statement of continuing education hours will be provided to those physicians and pharmacists who successfully complete and return the answer form and program evaluation and receive a passing grade of 70% or higher.

### Physician Continuing Medical Education

#### Accreditation Statement


This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the University of Cincinnati. The University of Cincinnati is accredited by the ACCME to provide continuing medical education for physicians.

#### Credit Designation

The University of Cincinnati designates this educational activity for a maximum of 2.5 AMA PRA Category 1 Credit(s)<sup>™</sup>. Physicians should only claim credit commensurate with the extent of their participation in the activity.

### Pharmacist Continuing Education

#### Accreditation Statement

Pharmacy Times Office of Continuing Professional Education is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education.  This program is approved for 2.5 contact hours (0.25 CEUs) under the ACPE universal program number of 0290-9999-10-009-H01-P. This program is available for CE credit through March 31, 2011.

Type of CE Activity: Knowledge-based

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### Posttest Questions

1. Annual direct medical costs (per patient) for Parkinson's disease (PD) may be as high as:
  - a. \$9467
  - b. \$12,491
  - c. \$15,751
  - d. \$22,345
2. Which of the following is not representative of a prodromal stage of PD?
  - a. Tremor
  - b. Hyposmia (reduced sense of smell)
  - c. Constipation
  - d. Sleep disturbances

3. Premotor symptoms of PD may occur up to \_\_\_\_ years before the classic movement-related symptoms of PD.
  - a. 10
  - b. 15
  - c. 20
  - d. 25
4. Neuronal changes in PD are limited to the substantia nigra.
  - a. True
  - b. False
5. A major component of PD-related medical costs is:
  - a. Pathologic gambling
  - b. Gastrointestinal disturbances
  - c. Levodopa-related dyskinesia
  - d. Bradykinesia
6. Current practice is to begin drug treatment in PD patients:
  - a. Upon diagnosis
  - b. One year post diagnosis
  - c. Upon imaging evidence of Lewy bodies
  - d. When patients experience functional impairment
7. The \_\_\_\_\_ trial evaluated rasagiline as a disease-modifying compound in early PD.
  - a. ADAGIO
  - b. PROUD
  - c. DATATOP
  - d. REAL-PET
8. According to study data, what is the greatest degree of diagnostic accuracy possible when applying only clinical features to diagnosis?
  - a. 90%
  - b. 82%
  - c. 87%
  - d. 95%
9. Which condition is associated with the highest risk for orthostatic hypotension?
  - a. Parkinson's disease
  - b. Multiple system atrophy
  - c. Progressive supranuclear palsy
  - d. None of the above
10. Which of the following is not a positive criterion for PD diagnosis according to the United Kingdom Parkinson's Disease Society Brain Bank clinical diagnostic criteria?
  - a. Positive response to levodopa
  - b. History of repeated head injury
  - c. Unilateral onset
  - d. Rest tremor
11. Disease progression is faster in PD than in other parkinsonian disorders.
  - a. True
  - b. False
12. Which of the following is not exclusionary for PD diagnosis according to the United Kingdom Parkinson's Disease Society Brain Bank clinical diagnostic criteria?
  - a. Early severe autonomic involvement
  - b. Babinski sign
  - c. Strictly unilateral features after 3 years
  - d. Persistent asymmetry affecting side of onset most
13. Olfactory testing is not effective in distinguishing PD from which of the following conditions?
  - a. Multiple system atrophy
  - b. Progressive supranuclear palsy
  - c. Corticobasal degeneration
  - d. None of the above

(continued)

14. The SIGN guidelines state that MRI is a useful means of distinguishing which of the following?
  - a. Antipsychotic-induced PD from dopaminergic deficiency
  - b. Idiopathic PD from vascular parkinsonism
  - c. Essential tremor from dopaminergic deficiency
  - d. All of the above
15. Primary care physicians are more likely than nurse practitioners or physicians' assistants to refer a patient to a movement specialist for confirmation of a PD diagnosis.
  - a. True
  - b. False
16. Which of the following statements about levodopa is not true?
  - a. It is associated with more motor symptoms than dopamine agonists
  - b. It has more robust data supporting its effect on clinical symptoms than either dopamine agonists or monoamine oxidase type B inhibitors
  - c. It is more likely to cause edema than a dopamine agonist
  - d. It is less likely to result in discontinuation than a dopamine agonist
17.  $\beta$ -CIT (2beta-carbomethoxy-3beta-(4-[125I]iodophenyl)tropane) uptake is measured in PD clinical trials because it is a possible biomarker for what?
  - a. Dopamine neuronal status
  - b. Symptom improvement
  - c. Neuroprotection
  - d. Motor impairment
18. In the ADAGIO trial, which dose(s) of rasagiline met all 3 primary end points?
  - a. 1 mg/day
  - b. 2 mg/day
  - c. Neither a or b
  - d. Both a and b
19. In the REAL-PET study, which of the following occurred?
  - a. The dopamine agonist ropinirole was associated with worse UPDRS scores at year 2 than levodopa
  - b. Ropinirole was less likely at year 2 to produce dyskinesia than levodopa
  - c. Neither a or b
  - d. Both a and b
20. The AAN Practice Parameters recommend levodopa for which of the following conditions?
  - a. Motor disability
  - b. Dyskinesia
  - c. Motor fluctuations
  - d. Motor complications

## Physician Credits

(PLEASE PRINT CLEARLY)

Name/Degree \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State/Zip \_\_\_\_\_

Daytime Phone \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

**Sponsored by the University of Cincinnati for  
2.5 hours of Category 1 CME credit.**

Release Date: **March 15, 2010**

Expiration Date: **March 31, 2011**

**CME Test Form  
Implications of Early Treatment  
for Parkinson's Disease**

1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
4.	a	b		
5.	a	b	c	d
6.	a	b	c	d
7.	a	b	c	d
8.	a	b	c	d
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10.	a	b	c	d
11.	a	b		
12.	a	b	c	d
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15.	a	b		
16.	a	b	c	d
17.	a	b	c	d
18.	a	b	c	d
19.	a	b	c	d
20.	a	b	c	d

### Answer Form Instructions: Testing and Grading Procedures

1. Each participant achieving a passing grade of 70% or higher on any examination will receive an official computer form stating the number of CME credits earned. This form should be safeguarded and may be used as documentation of credits earned.
2. Participants receiving a failing grade on any exam will be notified and permitted to take 1 reexamination at no cost.
3. All answers should be recorded on the answer form.
4. To receive credit certification electronically, please provide your e-mail address. Detach and mail or fax the test portion of this page to:  
University of Cincinnati, Office of CME, PO Box 670556, Cincinnati, OH 45267-0567; phone: 513-558-7277; fax: 513-558-1708.  
Please print clearly to ensure receipt of CME credit.
5. To receive credit and an immediate certificate, register at **[http://webcentral.uc.edu/cpd\\_online2/](http://webcentral.uc.edu/cpd_online2/)** and complete the test or reader survey. If you have previously registered, enter your user name and password to log in. Otherwise, click ***New User? Register!*** and complete the registration process (user ID and password will be e-mailed to you immediately). Once you log in, click ***CME Text*** and scroll down through the course listings to locate this supplement. A280

### CME Activity Evaluation

How long did it take you to complete this activity?

\_\_\_\_\_ minutes

How well did this activity achieve its educational objectives?

Very well     Well     Somewhat     Not at all

What overall grade would you assign this activity?

A     B     C     D

Did this activity exhibit promotional bias for any pharmaceutical agents?

Yes     No

Will you make changes in your practice as a result of information presented in this lesson?

Yes     No

## Pharmacy Credits

### Implications of Early Treatment for Parkinson’s Disease (Test valid through March 31, 2011.)

**No credit will be given after this date.)**

This program is approved for 2.5 contact hours (0.25 CEUs) under the ACPE universal program number of 0290-9999-10-009-H01-P.

1.	a	b	c	d	11.	a	b		
2.	a	b	c	d	12.	a	b	c	d
3.	a	b	c	d	13.	a	b	c	d
4.	a	b			14.	a	b	c	d
5.	a	b	c	d	15.	a	b		
6.	a	b	c	d	16.	a	b	c	d
7.	a	b	c	d	17.	a	b	c	d
8.	a	b	c	d	18.	a	b	c	d
9.	a	b	c	d	19.	a	b	c	d
10.	a	b	c	d	20.	a	b	c	d

- Presently Enrolled in CE Program  
 Nonsubscriber Participant Pharmacist

(PLEASE PRINT CLEARLY)

SSN --

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Daytime Phone \_\_\_\_\_

#### Answer Form Instructions: Testing and Grading Procedures

- Each participant achieving a passing grade of 70% or higher on any examination will receive a statement of credit giving the number of CE credits earned.
- Participants receiving a failing grade on any exam will be notified and permitted to take 1 reexamination at no extra cost.
- All answers should be recorded on the answer form. For each question, decide which choice is the best answer, and circle the letter of the response representing your choice.
- Participants can take the CE online at [www.PharmacyTimes.com](http://www.PharmacyTimes.com) and can receive instant grading and automatic generation of the statement of credit upon passing the course.

Or mail your completed exam form to the following address: *Pharmacy Times*, CE Department, 405 Glenn Drive, Suite 4, Sterling, VA 20164-4432; fax form to 703-404-1801; or phone-in answers to 800-899-6350 (9 AM-5 PM ET, Mon.-Fri.).

Graded exam and statement of credit should be received in approximately 1 week.

This form should be safeguarded and may be used as documentation of credits earned.

A280

### PROGRAM EVALUATION

Please mark your level of agreement with the following statements. (4 = Strongly Agree; 0 = Strongly Disagree)

1) Met its stated objectives

1. Describe the primary rationales for early diagnosis and treatment of Parkinson’s disease (PD) 43210

2. Discuss the appropriate role of levodopa, dopamine agonists, and monoamine oxidase type B inhibitors in the early treatment of PD 43210

3. Explain the importance of treating PD-related comorbidities to improve quality of life and delay functional impairment 43210

4. Describe how appropriate early treatment can delay symptoms and thereby lower long-term costs of treatment 43210

5. Discuss PD risk factors and techniques for differential diagnosis 43210

2) Work of instructor was high-quality

43210

3) Instructional materials were high-quality

43210

4) Case studies aided learning

NA

5) Perceived this activity to be balanced and unbiased

43210

6) Offered information useful in my professional practice

43210

7) Activity was relevant and current to pharmacy practice

43210