

Sleep Disorders and Excessive Sleepiness:
Impact on Quality of Life

CME Information

Program Overview

Excessive sleepiness is a complaint found in patients who experience sleepiness at unwanted times and adversely affects their functional abilities during waking hours. Excessive sleepiness is commonly due to insufficient sleep, as is often the case for people who work varying shifts in fields such as transportation and healthcare. Some of the most serious and persistent problems shift workers face are frequent sleep disturbance and associated excessive sleepiness. Sleepiness, and subsequently fatigue, in the workplace can lead to poor concentration, absenteeism, accidents, errors, injuries, and fatalities. Other causes of excessive sleepiness may be attributed to narcolepsy, obstructive sleep apnea, insomnia, chronic medical illnesses, and medication side effects.

Continuing Medical Education Accreditation

Postgraduate Institute for Medicine designates each educational activity for a maximum of 2.0 AMA PRA Category 1 Credit(s)[™]. Physicians should only claim credit commensurate with the extent of their participation in each activity.


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 joint sponsorship of Postgraduate Institute for Medicine (PIM) and Ascend Healthcare. PIM is accredited by the ACCME to provide continuing medical education for physicians.

Release Date: November 1, 2007.

Expiration Date: November 30, 2008.

ACPE Information

Continuing Medical Education Accreditation

 Pharmacy Times/Ascend Media is accredited by the Accreditation Council for Continuing Medical 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 290-999-07-020-H01-P.

Release Date: November 1, 2007.

Expiration Date: November 30, 2008.

Instructions:

After reading "Sleep Disorders and Excessive Sleepiness: Impact on Quality of Life," complete the program evaluation and select the 1 best answer to each of the following questions. A statement of continuing education hours will be mailed to those who successfully complete (with a minimum score of 70%) the examination at the conclusion of the program.

1. **Excessive daytime sleepiness:**
 - a. is a diagnosis in itself.
 - b. is inconvenient but poses no real risks.
 - c. should initially be treated with stimulant drugs.
 - d. has physical, mental, social, public health, and safety consequences.
2. **Typically, people need ____ hours of sleep per night to be refreshed and alert on waking.**
 - a. 6
 - b. 8
 - c. 9
 - d. 10
3. **Excessive daytime sleepiness can be caused by:**
 - a. obstructive sleep apnea (OSA).
 - b. insomnia.
 - c. voluntary sleep restriction.
 - d. All of the above
4. **Sufferers of OSA may, in addition to fatigue, experience all of the following *except*:**
 - a. increased libido.
 - b. impotence.
 - c. depression.
 - d. morning headaches.
5. **The circadian clock of the brain resides in the:**
 - a. cerebral cortex.
 - b. substantia nigra.
 - c. suprachiasmatic nucleus.
 - d. reticular activating system.
6. **Fatigue:**
 - a. is a state of tiredness without a drive for sleep.
 - b. is another term for excessive sleepiness.
 - c. occurs in synchrony with the endogenous circadian clock.
 - d. never coexists with excessive sleepiness.
7. **Some of the societal implications of excessive daytime sleepiness are:**
 - a. poor performance at work or school.
 - b. increased probability of traffic accidents.
 - c. impaired family and other social relationships.
 - d. All of the above
8. **Increasing age is associated with which of the following sleep disorders?**
 - a. Apnea
 - b. Narcolepsy
 - c. Periodic limb movements
 - d. Both a and c

9. Chronically sleep-deprived people are at higher risk of developing all of the following *except*:
- hypertension.
 - anorexia.
 - type 2 diabetes.
 - major depression.
10. Which of the following is *not* a sign raising suspicion of OSA?
- Neck circumference >17 inches for males
 - Elevated ferritin saturation
 - Crowded oropharynx
 - Obesity
11. Assessing the impact of disease evaluates a patient's state of health by incorporating:
- symptoms.
 - quality of life.
 - disease severity.
 - All of the above
12. Which of the following statements is *true* regarding narcolepsy?
- Documented narcolepsy is relatively common in the general population.
 - An increase in the neuropeptide hypocretin is usually associated with narcolepsy.
 - Narcolepsy is associated with cataplexy and sleep paralysis.
 - The usual onset of narcolepsy is typically after age 65.
13. What proportion of shift workers are estimated or have shift-work sleep disorder?
- 1%
 - 10%
 - 25%
 - 30%
14. The single greatest risk associated with excessive sleepiness is motor vehicle accidents. Which of the following characteristics is *not* typically related to such a crash?
- It is likely to be serious.
 - It involves a single vehicle.
 - The driver does not attempt to avoid the crash.
 - It involves excessive speed for highway conditions.
15. Good sleep behavior involves:
- a regular time for going to bed.
 - a regular time to get up.
 - adequate time in bed.
 - All of the above
16. Bright light exposure is a treatment for people with circadian rhythm disorders because:
- light helps to synchronize the endogenous circadian clock with the environment.
 - people cannot fall asleep under bright light.
 - light promotes the formation of vitamin D in the skin.
 - the optic chiasm is the location of the circadian clock.
17. OSA has been diagnosed in:
- overweight men.
 - postmenopausal women.
 - elderly patients.
 - All of the above
18. The most commonly used modality to treat OSA is:
- oral and dental devices.
 - uvulopalatopharyngoplasty.
 - continuous positive airway pressure.
 - surgery.
19. Sleep diaries are helpful when evaluating a patient for all of the following *except*:
- insomnia.
 - circadian rhythm disorders.
 - insufficient sleep.
 - OSA.
20. Polysomnography measures all of the following *except*:
- airflow through nose and mouth and respiratory flow and effort.
 - airflow through the nose and mouth.
 - the patient's neck size.
 - respiratory flow and effort.
 - All of the above are correct

CME Evaluation Form

Sleep Disorders and Excessive Sleepiness: Impact on Quality of Life • Project ID: 4906ES13/4925OS13

To assist us in evaluating the effectiveness of this activity and to make recommendations for future educational offerings, please take a few minutes to complete this evaluation form.

You must complete this evaluation form to receive acknowledgment of participation for this activity.

To what extent do you agree with the following statements?

(Please circle the appropriate number on the scale.)

1 = Strongly Disagree 2 = Disagree 3 = Somewhat Disagree 4 = Somewhat Agree 5 = Agree 6 = Strongly Agree

1. Fatigue and sleepiness are distinct complaints that may have separate pathology and etiology.

Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree

2. Insomnia is more prevalent in women, the elderly, and in unemployed or depressed patients.

Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree

3. People who sleep very little, whether from voluntary restriction or other cause, are at increased risk for each of the following conditions: obesity, type 2 diabetes, depression, and cardiovascular disease.

Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree

4. The Epworth Sleepiness Scale is a reliable standardized tool to assess excessive daytime sleepiness.

Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree

5. Patients with a presumptive diagnosis of obstructive sleep apnea should be evaluated using overnight polysomnography before treatment.

Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree

6. I am confident in my ability to conduct a patient interview that will elucidate factors around a complaint of excessive daytime sleepiness.

Strongly Disagree | 1 | 2 | 3 | 4 | 5 | 6 | Strongly Agree

Please answer the following questions by circling the appropriate rating:

1 = Strongly Disagree 2 = Disagree 3 = Somewhat Disagree 4 = Somewhat Agree 5 = Agree 6 = Strongly Agree

Extent to Which Program Activities Met the Identified Objectives

After completing this activity, I am now better able to:

- List methods for identifying patients who experience excessive sleepiness 1 2 3 4 5
- Explain the impact of excessive sleepiness on daily functioning 1 2 3 4 5
- Evaluate nonpharmacologic and pharmacologic treatments 1 2 3 4 5

Overall Effectiveness of the Activity

The content presented:

- Was timely and will influence how I practice 1 2 3 4 5
- Enhanced my current knowledge base 1 2 3 4 5
- Addressed my most pressing questions 1 2 3 4 5
- Provided new ideas or information I expect to use 1 2 3 4 5
- Addressed competencies identified by my specialty 1 2 3 4 5
- Avoided commercial bias or influence 1 2 3 4 5

Impact of the Activity

Name one thing you intend to change in your practice as a result of completing this activity:

Please list any topics you would like to see addressed in future educational activities:

Additional comments about this activity:

Follow-up

As part of our continuous quality improvement effort, we conduct postactivity follow-up surveys to assess the impact of our educational interventions on professional practice. Please indicate if you would be willing to participate in such a survey:

- Yes, I would be interested in participating in a follow-up survey.
- No, I'm not interested in participating in a follow-up survey.

Posttest Answer Key				
1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
4.	a	b	c	d
5.	a	b	c	d
6.	a	b	c	d
7.	a	b	c	d
8.	a	b	c	d
9.	a	b	c	d
10.	a	b	c	d
11.	a	b	c	d
12.	a	b	c	d
13.	a	b	c	d
14.	a	b	c	d
15.	a	b	c	d
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 e

Method of Participation

There are no fees for participating and receiving CME credit for this activity. During the period November 2007 through November 31, 2008, participants must (1) read the learning objectives and faculty disclosures; (2) study the educational activity; (3) complete the posttest by recording the best answer to each question in the answer key on the evaluation form; (4) complete the evaluation form; and (5) mail or fax the evaluation form with answer key to Postgraduate Institute for Medicine.

A statement of credit will be issued only upon receipt of a completed activity evaluation form and a completed posttest with a score of 70% or better. Your statement of credit will be mailed to you within 3 weeks.

If you wish to receive acknowledgment of participation for this activity, please complete the posttest by selecting the best answer to each question, complete this evaluation as verification of participation, and **MAIL** to Postgraduate Institute for Medicine, 367 Iverness Parkway, Engelwood, CO 80112, or **FAX** to: 303-790-4876.

Request for Credit

Name _____ Degree _____

Organization _____ Specialty _____

Address _____

City, State, ZIP _____

Telephone _____ Fax _____

E-Mail _____

Signature _____ Date _____

For Physicians ONLY

I certify my actual time spent to complete this educational activity to be:

- I participated in the entire activity and claim 2.0 credit.
- I participated in only part of the activity and claim _____ credits.

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CE Evaluation Form

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 CE 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. For each question, decide which choice is the best answer and circle the response representing your choice. Please print clearly to ensure receipt of CE credit.
4. To receive credit certification electronically, please provide your e-mail address. Detach and mail completed exam form to *Pharmacy Times*, 405 Glenn Drive, Suite 4, Sterling, VA 20164-4432; or fax to 703-404-1801.
5. Take the test online for FREE at www.pharmacytimes.com and receive immediate grading and CE credits, and download your CE statement of credit.

Please photocopy the test form for additional test takers.

PROGRAM EVALUATION	
Please mark your level of agreement with the following statements. (4 = Strongly Agree; 0 = Strongly Disagree)	
1) Met its stated objectives	4 3 2 1 0
• List methods for identifying patients who experience excessive sleepiness	4 3 2 1 0
• Explain the impact of excessive sleepiness on daily functioning	4 3 2 1 0
• Evaluate nonpharmacologic and pharmacologic treatments	4 3 2 1 0
2) Was well organized	4 3 2 1 0
3) Contributed to my knowledge	4 3 2 1 0
4) Presented current and relevant information	4 3 2 1 0
5) Presented information in a fairly balanced and noncommercial manner	4 3 2 1 0
6) Offered information useful in my professional practice	4 3 2 1 0
7) Provided new insights into contemporary pharmacy practice	4 3 2 1 0

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POSTTEST ANSWER KEY

Please circle your answers:

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

(PLEASE PRINT CLEARLY)

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State/ZIP _____

Daytime Phone _____

Fax _____

E-mail _____

SSN _____ - _____ - _____

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Expiration Date: November 30, 2008.

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