

CME/CE QUESTIONS


Fracture Prevention in Osteoporosis

Accreditation:

The University of Cincinnati College of Medicine designates this educational activity for a maximum of two (2) AMA PRA Category 1 CME Credits™. Physicians should only claim credit commensurate with the extent of their participation in this activity.

The University of Cincinnati College of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor medical education for physicians.

The GMR Group-Health Insights is an approved provider of continuing nursing education by the Pennsylvania State Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation and is a provider approved by the California Board of Registered Nursing, **California Provider # CEP 12643**.

 The GMR Group-Health Insights is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education. This program offers a total of 1.75 contact hours or 0.175 CEUs. **ACPE # 404-000-06-001-H01**.

Instructions

After reading "Fracture Prevention in Osteoporosis" please complete the program evaluation and fill out the answer key for each of the following questions.

1. According to the National Osteoporosis Foundation, how many individuals in the United States have, or are at risk for, osteoporosis?

- a) 12 million
- b) 20 million
- c) 34 million
- d) 50 million

2. Osteoporosis has been estimated to result in how many fragility fractures yearly?

- a) 1 million
- b) 1.5 million
- c) 3 million
- d) 5 million

3. The majority of osteoporosis-related fractures are ____.

- a) vertebral
- b) nonvertebral
- c) pelvic
- d) infection related

4. Absent osteoporosis, bone turnover ____.

- a) favors bone deposition
- b) favors bone resorption
- c) remains stable
- d) ceases

5. By 2020, yearly healthcare spending for osteoporotic-related fracture in the United States is expected to reach ____.

- a) \$12 billion to \$20 billion
- b) \$21 billion to \$27 billion
- c) \$31 billion to \$62 billion
- d) \$70 billion to \$81 billion

6. Risk factors for osteoporosis-related fracture include which of the following?

- a) Previous fragility fracture
- b) Low body mass index
- c) Female gender
- d) All of the above

7. Which of the following is a possible physical sign of vertebral fracture?

- a) Height loss
- b) Arm span loss
- c) Fever
- d) Leg length loss

8. Which of the following is a biochemical marker of bone formation?

- a) N-telopeptide
- b) C-telopeptide
- c) Osteocalcin
- d) Deoxypyridinoline

9. The World Health Organization defines the threshold for a diagnosis of osteoporosis as a T-score of less than ____.

- a) 1
- b) -1
- c) -2.5
- d) -3

10. Medicare covers bone mineral density (BMD) testing every 2 years for which of the following groups?

- a) Estrogen-deficient women at a clinical risk for osteoporosis.
- b) Individuals with nonvertebral abnormalities demonstrated by x-ray.
- c) Individuals with primary hypothyroidism.
- d) All of the above

11. In the National Osteoporosis Risk Assessment study, the presence of osteopenia increased the risk for fracture by ____.

- a) 2-fold
- b) 4-fold
- c) 5-fold
- d) 6-fold

CME/CE POST-TEST

12. In the Study of Osteoporotic Fracture trial, the risk for hip fracture in women over the age of 65 years increased ____.

- a) directly as BMD decreased
- b) particularly rapidly in smokers
- c) as risk factors—such as low BMD, previous fracture type, and previous hyperthyroidism—accumulated
- d) as caffeine use decreased

13. The National Osteoporosis Foundation advocates starting pharmacotherapy to reduce fracture risk in which groups of women?

- a) T-score <-2.0 by hip dual-energy x-ray absorptiometry (DXA) with no risk factors.
- b) T-score <-1.5 by hip DXA with 1 or more risk factors.
- c) A prior vertebral or hip fracture.
- d) All of the above

14. Alendronate has been shown to reduce the risk for vertebral and nonvertebral fracture ____.

- a) in women only
- b) in men and women
- c) after 6 months of treatment
- d) in men and women without prior fractures

15. After starting therapy, risedronate reduces the risk for vertebral and nonvertebral fracture within ____.

- a) 2 months
- b) 4 months
- c) 6 months
- d) 12 months

16. In reducing the risk for nonvertebral fracture, calcitonin has been shown to be less effective than either ____.

- a) risedronate or alendronate
- b) alendronate or raloxifene
- c) raloxifene or teriparatide
- d) risedronate or raloxifene

17. A study using “real-world” data from the Protocare Sciences Integrated Medical and Pharmaceutical Claims Database demonstrated that, compared with calcitonin or alendronate treatment, risedronate reduced the adjusted risk for nonvertebral fracture at 6 months by ____.

- a) 26%
- b) 54%
- c) 65%
- d) 71%

18. The results of an observational study using data from the Protocare Sciences Database indicated that the annual nonvertebral fracture-related medical cost in patients treated with risedronate is ____.

- a) \$110
- b) \$210 less than that for alendronate
- c) \$402 less than that for calcitonin
- d) All of the above

19. In the study by Miller, using data from the Protocare Sciences Database, the risk for gastrointestinal (GI) side effects in patients with a history of GI events was ____.

- a) 44% higher with alendronate versus risedronate
- b) 49% higher with alendronate versus risedronate
- c) the same for alendronate and risedronate
- d) 44% lower with alendronate versus risedronate

20. In the observational cost analysis study by Kane, the annual direct medical costs for GI events in patients treated with risedronate were ____.

- a) higher than those in patients treated with alendronate
- b) higher than those in patients treated with calcitonin
- c) about \$45,000 lower than in patients treated with alendronate
- d) about \$4000 lower than in patients treated with alendronate

CME EVALUATION

CME Instructions (for Physicians)

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 one reexamination at no cost.
3. All answers should be recorded on the answer form. Please print clearly to ensure receipt of CME credit.
4. Detach and mail or fax your completed exam form to: University of Cincinnati, Office of CME, P.O. Box 67057, Cincinnati, OH 45267-0567; phone: 513-558-7277; fax: 513-558-1708.

Please photocopy the test form for additional test takers.

Name: _____
First Last Degree(s)

Address: _____
Street City State Zip

Contact information: _____
Business Phone Fax E-mail address

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By signing below, I verify that I have completed and reviewed the program materials and acknowledge that all information given above is accurate based upon my participation in this program.

Signature: _____ Date: _____

GENERAL EVALUATION

1. Please rate this program on the following areas: (1=Poor; 5=Excellent)

	Poor	Fair	Satisfactory	Good	Excellent
Quality of information	1	2	3	4	5
Usefulness to my practice	1	2	3	4	5
Readability and presentation	1	2	3	4	5

2. Additional comments about this program:

POST-TEST ANSWER KEY

A149

A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
1. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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NURSING CE EVALUATION

To receive 0.175 CEUs (1.75 contact hours) of ANCC and California Board of Nursing accredited continuing nursing education for this program, this form must be completed and submitted via mail to **The GMR Group-Health Insights • 755 Business Center Drive, Suite 270 • Horsham, PA 19044** or faxed to **(215) 653-7982**. Your CE statement will be mailed directly to you by The GMR Group-Health Insights at the address you have noted below for a passing grade of 70% or better. Please allow 4-6 weeks for processing. This form must be submitted prior to the expiration date of 05-31-07. There is no fee for this program.

Name: _____
First Last Degree(s)

Address: _____
Street City State Zip

Contact information: _____
Business Phone Fax E-mail address

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CONTINUING EDUCATION

Fracture Prevention in Osteoporosis

GOAL

To enhance understanding of current practices in fracture prevention.

TARGET AUDIENCE

Managed care pharmacy directors, medical directors, and other managed care executives . . .

LEARNING OBJECTIVES

Upon completion of this activity, participants will be able to:

- Define the current management practices for osteoporosis—nonpharmacologic, pharmacologic
- Discuss the value of fracture reduction vs bone mineral density as it relates to outcomes and the impact on the healthcare system
- Define the various drug classes used to prevent/treat osteoporosis and appropriate utilization of these agents
- List the key concerns for managed care that would preclude achieving optimal results in osteoporosis management
- Determine the impact of the Medicare Modernization Act legislation as it relates to osteoporosis management

There is no fee for this program.

Expiration date: 05-31-07

FUNDING

This publication was made possible by funding from **The Alliance for Better Bone Health, P&G/Sanofi-Aventis.**



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