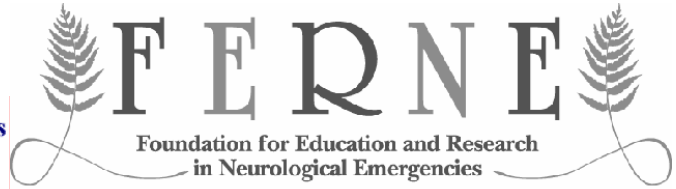




The University of Illinois  
at Chicago



## FERNE On-Line CME Program

# “Optimal Blood Pressure Management in Emergency Department Patients With Hypertensive Emergencies and Stroke Syndromes”

*Please circle the correct answer on the answer sheet.*

### Questions

1. The definition of a **hypertensive urgency** includes which of the following:
  - a. Elevation of blood pressure without acute end organ damage.
  - b. Elevation of blood pressure without irreversible end organ damage.
  - c. Elevation of blood pressure without end organ damage to the cardiovascular or CNS organ systems.
  - d. Elevation of blood pressure that is able to be treated and reduced in the acute setting.
  - e. Elevation of blood pressure that can be treated with one or fewer antihypertensive therapies.
  
2. The definition of a **hypertensive emergency** includes which of the following:
  - a. Severe elevation of blood pressure without end organ damage.
  - b. Elevation of blood pressure with irreversible end organ damage.
  - c. Elevation of blood pressure with acute end organ damage.
  - d. Elevation of blood pressure that cannot be reduced in the acute setting.
  - e. Elevation of blood pressure so severe that it requires more than one antihypertensive therapy in order to be treated successfully.
  
3. What **blood pressure reading** is commonly associated with hypertensive urgency and emergency patients?
  - a. Systolic blood pressure greater than 240 mm Hg
  - b. Systolic blood pressure greater than 200 mm Hg.
  - c. Diastolic blood pressure greater than 140 mm Hg.
  - d. Diastolic blood pressure greater than 120 mm Hg.
  - e. Mean arterial pressure greater than 100 mm Hg.

4. All of the following are true regarding the **demographics of hypertensive patients** and ongoing risk **EXCEPT**:

- a. Up to 25% of the US population is hypertensive.
- b. Up to 30% of hypertensive patients are not aware of their diagnosis, and less than 50% successfully manage the hypertension.
- c. It is suggested that age > 50 years and SBP > 140 mm Hg create as much cardiovascular risk as does DBP elevation > 90 mm Hg
- d. An increase in cardiovascular risk starts at a BP of 140/90.
- e. Cardiovascular risk doubles as blood pressure each increment of BP elevation of 20/10 mm Hg.

5. All are true of the **pathophysiology of hypertension and hypertensive emergencies EXCEPT**:

- a. In hypertensive emergency situations, there most often is an abrupt increase in systemic vascular resistance
- b. In hypertensive emergency situations, normal autoregulation is lost completely.
- c. In hypertensive emergency situations, there is often endovascular injury, with platelet deposition and vasoactive substance release.
- d. The goal of acute therapy is to mitigate the damage to whatever organ is manifesting the most illness and disruption of normal function.
- e. Hypoperfusion as a result of acute therapy can occur when blood pressure is reduced more than 20-25% of the prevailing BP.

6. All of the following are true regarding the **follow-up of asymptomatic hypertension patients EXCEPT**:

- a. The initial ED evaluation of hypertensive patients can include an EKG, UA, serum electrolytes, BUN, creatinine, and CBC.
- b. Asymptomatic patients with a BP less than 160/100 do not require immediate follow-up after ED discharge.
- c. Asymptomatic patients with a BP that approaches 180/110 will most often require treatment within one month of ED discharge.
- d. Asymptomatic patients with a BP that approaches 210/120 require immediate evaluation and treatment in the Emergency Department.
- e. Asymptomatic patients with a BP greater than 210/120 require immediate evaluation and treatment in the Emergency Department.

7. Which of the following are modalities for the **correction of hypertension** in hypertensive emergency patients:

- a. Nitrates: nitroglycerine, sodium nitroprusside.
- b. Beta-blockers: labetalol, esmolol.
- c. Calcium channel blockers: nicardipine.
- d. ACE inhibitors: enalaprilat.
- e. Systemic vascular resistance modulators: fenoldopam, hydralazine, phentolamine.
- f. All of the above.

8. All of the following are true regarding the **2006 ACEP Clinical Policy** on Hypertensive Emergency Patient Management **EXCEPT**:

- a. Patients with an ED BP > 140/90 need referral for a reexamination for possible hypertension diagnosis and management.
- b. Hypertensive patients may not need to have their blood pressure managed acutely in the ED if follow-up is scheduled.
- c. Rapid lowering of blood pressure in the ED may not be indicated, and it may, in fact, cause patient harm.
- d. If ED treatment is initiated, a gradual lowering of blood pressure should be expected, and it may not occur in the ED.
- e. Patients with detected hypertension cannot leave the Emergency Department unless their blood pressure is below 140/90.

9. All of the following are true regarding the **2007 ASA policy** on the management of hypertension in **acute ischemic stroke** patients **EXCEPT**:

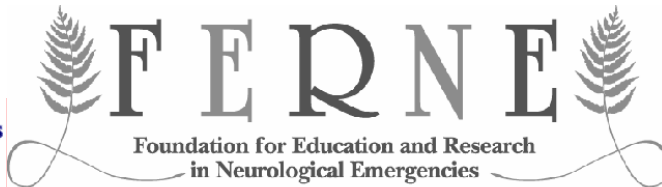
- a. Blood pressures greater than 185/110 should be treated in the setting of ischemic stroke
- b. Blood pressure should be returned to the normal range acutely for all ischemic stroke patients.
- c. Labetalol 10-20 mg IVP can be used and repeated at least one time if there is hypertension.
- d. Nitropaste, 1-2 inches, can be utilized in order to lower blood pressure in ischemic stroke patients.
- e. Continuous infusions of nicardipine and sodium nitroprusside can also be considered for acute lowering of hypertension in ischemic stroke patients.

10. All of the following are true regarding the **2007 ASA policy** on the management of hypertension in **intracerebral hemorrhage** patients **EXCEPT**:

- a. In general, it is necessary to be more aggressive with hypertension management in the setting of ICH than with ischemic stroke patients.
- b. Blood pressure needs to be reduced in order to reduce the risk of ongoing intracerebral hemorrhage.
- c. If there is a history of hypertension, then MAP readings can be expected to be greater than 130 mm Hg, even with treatment.
- d. When blood pressures exceed 180-230 systolic or 105-140 diastolic, start labetalol, esmolol, or enalaprilat.
- e. Nitroprusside is not recommended; even with blood pressures that exceed 230/140.



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Foundation for Education and Research  
in Neurological Emergencies

**2007 EMA Emergency & Acute Care Conference  
FERNE Case Conference and Panel Discussion**

**“Optimal Blood Pressure Management in Emergency Department  
Patients with Hypertensive Emergencies and Stroke Syndromes”  
Presented in Atlantic City, NJ on September 24, 2007**

Test answer Sheet. Please record your answers here by circling the appropriate letter.

1. a b c d e	5. a b c d e	9. a b c d e
2. a b c d e	6. a b c d e	10. a b c d e
3. a b c d e	7. a b c d e f	
4. a b c d e	8. a b c d e	

# of CME Requested Each physician should claim only those credits actually spent in the activity.  
>>>>>>>>>>>>>> \_\_\_\_\_ of 2.0 hours

**PLEASE PRINT and PROVIDE LEGIBLE & ACCURATE INFORMATION  
FOR THE MAILING OF THE CME CERTIFICATES, OTHERWISE IT MAY NOT BE  
POSSIBLE TO DELIVER THE CME CERTIFICATE TO REQUESTER.**

Name \_\_\_\_\_

Title \_\_\_\_\_

Institution \_\_\_\_\_

Address \_\_\_\_\_

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This activity has been planned and implemented in accordance with the Essentials Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the University of Illinois College of Medicine and FERNE. The University of Illinois at Chicago (UIC) College of Medicine is accredited by the ACCME to provide continuing medical education for physicians. The University of Illinois at Chicago (UIC) College of Medicine designates this education 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 the activity.

**2007 EMA Emergency & Acute Care Conference  
FERNE Case Conference and Panel Discussion  
“Optimal Blood Pressure Management in Emergency Department  
Patients with Hypertensive Emergencies and Stroke Syndromes”**

Atlantic City, NJ

September 24, 2007

Your frank and considered evaluation will be helpful in improving future programs. We ask you to complete this questionnaire at the conclusion of the course. Your assistance is greatly appreciated. Thank you in advance.

**Speakers are required to disclose whether or not they have financial interests which may bias their presentations. Was such disclosure made? Yes  No**

1) How did you find the overall course content?

Excellent  Good  Satisfactory  Unsatisfactory

2) Did you have adequate opportunity to receive answers to your questions?

Yes  No

3) What did you learn today that will have an impact your clinical practice?

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4) Were any portions of the course unsatisfactory or inappropriate? If so, which?

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5) Do you have any suggestions for future topics or speakers?

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6) If this course was to be offered again, what modifications would you make to its format or structure?

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7) How would you rate the faculty of this program as a whole?

Excellent  Good  Satisfactory  Unsatisfactory

8) Did you find this program to be free of commercial bias for or against any product?

Yes  No

9) How did you learn of this course?

Mailing  Email  Poster  Program Brochure  Other  \_\_\_\_\_

Comments: \_\_\_\_\_

**2 sided form**

**2 sided form**

**2 sided form**

## Panelists and Lecturers Evaluation

Please rate each speaker in the five areas indicated using the following grading scale:  
4 = Excellent, 3 = Good, 2 = Fair, 1 = Poor

Speaker	Ability to communicate	How well topic was discussed	Opportunity for Q&A discussions	Objectivity, Balance & Scientific Rigor	Relevance to your work
William Dalsey, MD					
William Felegi, DO					
Michael Gerardi, MD					
Robert Giles MD					
Richard Shih, MD					
Edward Sloan, MD, MPH					
Brian Walsh, MD					

***How appropriate were the teaching methods at achieving the stated learning objectives?***  
Please check the appropriate box.

At the end of the session, I am able to:	Completely Met	Mostly Met	Minimally Met	Unmet
Determine the definition of hypertensive emergencies, and discuss their epidemiology and pathophysiology in ED patients with stroke syndromes.				
Identify what therapies are available for the treatment of ED patients with hypertensive emergencies and stroke syndromes.				
Discuss the clinically relevant endpoints for the evaluation and management of ED patients with hypertensive emergencies.				
Understand what guidelines and recommendations assist emergency care providers in optimally treating ED patients with hypertensive emergencies and stroke syndromes.				

DATE / TIME: \_\_\_\_\_

TO: \_\_\_\_\_ FERNE \_\_\_\_\_

REGARDING: \_\_\_\_\_ Hypertension CME PROJECT \_\_\_\_\_

PHONE #: \_\_\_\_\_ 312-355-1651 \_\_\_\_\_

FAX #: \_\_\_\_\_ **312-355-1269** \_\_\_\_\_

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FROM: \_\_\_\_\_

PHONE #: \_\_\_\_\_

FAX#: \_\_\_\_\_

EMAIL: \_\_\_\_\_

COMMENTS: ~ CME REQUEST FORM Includes:

- Completed Test
- CME Request Form
- Completed Evaluation

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*NUMBER OF PAGES INCLUDING COVER SHEET* \_\_\_\_\_