CME items

**Question 1.** To diagnose EIB by exercise challenge, which of the following spirometric criteria must be met?

A. 5% or greater decrease in FEV₁  
B. 10% or greater decrease in FEV₁  
C. 15% or greater decrease in FEV₁  
D. 20% or greater decrease in FEV₁

**Question 2.** Which of the following challenges is most effective in identifying EIB in athletes?

A. histamine  
B. methacholine  
C. hypertonic saline  
D. hypotonic saline

**Question 3.** Which of the following is most supportive of a diagnosis of EIB?

A. 10% or greater decrease in FEV₁ with an exercise challenge  
B. self-reported symptoms of cough, wheeze, or chest tightness  
C. patient has a personal history of asthma  
D. patient is an elite athlete

**Question 4.** Approximately what percentage of asthmatics experience EIB?

A. 10%  
B. 50%  
C. 90%  
D. 100%

**Question 5.** Which challenge is currently the International Olympic Committee Medical Commission recommended test to identify EIB among Olympic athletes?

A. eucapnic voluntary hyperpnea (EVH) challenge  
B. inhaled powdered mannitol challenge  
C. exercise challenge  
D. hypertonic saline challenge

**Question 6.** An inhaled powdered mannitol challenge is stopped for all the following reasons except when —

A. a ≥15% fall in FEV₁ from baseline is recorded.  
B. a cumulative dose of 635 mg of mannitol is administered.  
C. a ≥10% fall in FEV₁ between doses occurs.  
D. the patient reaches 85% of predicted maximal heart rate.
**Question 7.** Which of the following conditions is essential for optimal performance of the EVH test?

A. cold temperature  
B. dry air  
C. 1% CO$_2$  
D. a goal maximal voluntary ventilation rate of 10 times baseline FEV$_1$

**Question 8.** Hypertonic saline is an indirect challenge method that leads to inflammatory mediator release by —

A. increasing osmolarity.  
B. directly increasing vagal tone in the airway.  
C. triggering a cough reflex.  
D. drying the air.

**Question 9.** Which of the following is consistent with a diagnosis of EIB?

A. FEV$_1$ falls 7% after EVH.  
B. FEV$_1$ falls 14% after hypertonic saline challenge.  
C. FEV$_1$ falls 12% after exercise challenge.  
D. FEV$_1$ falls 10% after mannitol challenge.

**Question 10.** What is thought to be the main physiologic reason for bronchodilation during exercise?

A. increase in circulating catecholamines  
B. increased sympathetic tone  
C. decrease in vagal tone  
D. lower overall intrathoracic pressures