

## SELF ASSESSMENT - MODULE C: ASTHMA

1. When the PFT test is normal but the patient is complaining of symptoms of asthma such as chronic cough, wheezing or difficulty breathing at night, the physician may order further testing. The test used to test for hypersensitive airways is called **BRONCHOPROVOCATION (METHACHOLINE CHALLENGE)**.
2. The drug Methacholine is classified as a:
  - A. Sympathomimetic
  - B.  $\beta_2$  agonist
  - C. Parasympatholytic
  - D. **Parasympathomimetic**
  - E. Anticholinergic
3. Give three dissimilarities between asthma and COPD.
  - A. Asthma has high inspiratory and expiratory resistance; COPD only expiration.
  - B. Asthma patients are generally healthier; no evidence of heart disease.
  - C. There is a reversibility to the asthmatic attack
4. Asthma is a completely reversible condition? **True** False
5. During an asthma attack, the chest x-ray may describe the airtrapping as
  - A. More radiolucent
  - B. Hyperlucent
  - C. Translucent
  - D. **All the above**
6. Which of the following gives the **best** indication of the severity of the asthma attack?
  - A. ABG results
  - B. **Expiratory Flowrates**
  - C. Chest x-ray
  - D. CBC
  - E. Elevated eosinophil counts
7. A FEV<sub>1.0</sub> less than \_\_\_\_\_ L/sec indicates **severe** airflow obstruction
  - A. 5 L/sec
  - B. 4 L/sec
  - C. 3 L/sec
  - D. 2 L/sec
  - E. **1 L/sec**
  - **FEV<sub>1.0</sub> is a measurement of volume, not flow.**

8. Peak Flow Monitoring is recommended for child greater than \_\_\_\_\_ years.
- **I'm not sure where I referenced this from. I'm going to keep investigating. You will not be responsible for it on the test.**
9. What do the following initials stand for?
- N **NATIONAL**  
A **ASTHMA**  
E **EDUCATION**  
P **PREVENTION**  
P **PROGRAM**
10. Describe how you would treat a patient in the ER who has severe asthma.
- OXYGENATION, MONITOR PEFR (FEV<sub>1.0</sub>), AEROSOLIZED SYMPATHOMIMETICS & ANTICHOLINERGICS, IV STEROIDS, ASSESS RESPONSE**
11. All the following protocols *might* be appropriate for the patient with asthma, **EXCEPT** for:
- A. Oxygen therapy
  - B. Bronchial Hygiene
  - C. **Hyperinflation**
  - D. Aerosol Therapy
12. Name three steroids that are used for systemic administration during an acute asthmatic attack
- A. **METHYLPREDNISOLONE (SOLU-MEDROL)**
  - B. **PREDNISONE**
  - C. **PREDNISOLONE**
13. Name the four classifications of asthma.
- A. **MILD INTERMITTENT**
  - B. **MILD PERSISTENT**
  - C. **MODERATE PERSISTENT**
  - D. **SEVERE PERSISTENT**
14. If a child's asthma tends to get worse during the night hours, what suggestions could you give the family to decrease the level of antigens in the bedroom?
- A. **REDUCE EXPOSURE TO IRRITANTS OR ALLERGENS IN THE BEDROOM**
    - i. **RUGS, DRAPES, FURNITURE AND BED LINEN CLEANED AND AIRED FREQUENTLY.**
    - ii. **FOAM RUBBER PILLOWS/ALLERGY PROTECTIVE BEDDING**
    - iii. **WASH BEDDING IN HOT 130 °F WEEKLY**
    - iv. **PETS IN THE BEDROOM**
  - B. **MONITOR NEED FOR MEDICATION BEFORE BEDTIME**
    - i. **EVALUATE NEED FOR LONGER ACTING NOCTURNAL MEDICATION**
  - C. **HEATING SYSTEM DUCTWORK CLEANED ONCE A YEAR. (FURNACES RUN MORE FREQUENTLY AT NIGHT)**
  - D. **EVALUATE FOR GASTROESOPHAGEAL REFLUX**

15. Determine if the following response to a bronchodilator is considered a significant response: The pre FEV<sub>1.0</sub> is 1.45 L and the post FEV<sub>1.0</sub> is 2.36 L
- $$\frac{(2.36 - 1.45)}{1.45} = \frac{0.91}{1.45} = 0.627 \times 100\% = 62.7\%$$
- A. % change = **62.7%**  
 B. Is this a significant response? **YES**
16. Indicate below which drugs are referred to as relievers and which are controllers in treating asthma.
- A. Quick Relief Medications
- FAST ACTING  $\beta_2$  AGONISTS (FIRST LINE DRUGS)**
  - ANTICHOLINERGICS (ADD WITH  $\beta_2$  AGONISTS)**
  - SYSTEMIC CORTICOSTEROIDS (FIRST LINE DRUGS)**
- B. Long Term Controllers
- CORTICOSTEROIDS (SYSTEMIC AND INHALED)**
  - LONG ACTING  $\beta_2$  AGONISTS (SALMETEROL AND ORAL SUSTAINED RELEASE ALBUTEROL)**
17. Which group of medications is considered both quick relief and long term controllers? **CORTICOSTEROIDS**
18. The following ABG would indicate which classification of asthma?  
 pH 7.52 PaCO<sub>2</sub> 25 torr PaO<sub>2</sub> 88 torr HCO<sub>3</sub><sup>-</sup> 22 mEq/L  
**MILD ASTHMA (STAGE 1) (ASSUMES ROOM AIR SAMPLE)**
19. **HOW MANY OF THE 10 COMMANDMENTS FOR COPD CAN YOU REMEMBER?**
- THOU SHALL NOT UNWISELY ADMIT THE PATIENT TO THE FLOOR RATHER THAN THE ICU**
  - THOU SHALL NOT OVEROXYGENATE THY PATIENT**
  - THOU SHALL NOT UNDEROXYGENATE THY PATIENT**
  - THOU SHALL NOT UNDERTREAT THY PATIENT WITH BRONCHODILATORS AND STEROIDS**
  - THOU SHALL NOT SEDATE THY PATIENT**
  - THOU SHALL NOT INTUBATE THE PATIENT NEEDLESSLY**
  - THOU SHALL NOT ALLOW THE PATIENT TO BECOME ALKALEMIC DURING MECHANICAL VENTILATION**
  - THOU SHALL NOT MAKE THE INTUBATED PATIENT STRUGGLE TO BREATHE**
  - THOU SHALL NOT PROLONG THE WEANING PROCESS**
  - THOU SHALL NOT STARVE THE PATIENT**
20. All the following are causes of extrinsic asthma **EXCEPT** for:
- Hay
  - Peanuts
  - Infection**
  - Animal dander
  - Mites

21. Clinically it is impossible to distinguish between intrinsic and extrinsic asthma  
A. **True**  
B. False
22. Which antibody is elevated in asthma  
A. IgG  
B. IgA  
C. IgM  
D. **IgE**  
E. IgD
23. Define pulsus paradoxus  
**DEFINED AS A DECREASE IN SYSTOLIC BP OF 10 MM HG OR MORE DURING INSPIRATION**
24. The chest x-ray in a patient with asthma (or COPD) who is airtrapping will show  
I. Radiopaque  
II. Radiodense  
III. Translucent  
IV. Hyperlucent  
A. I and II only  
B. II and III only  
C. I and III only  
D. I, II and III only  
E. I and IV only  
F. **III and IV (SORRY)**
25. What is the name of the national committee that sets the guidelines for education and treatment of asthma? **NATIONAL ASTHMA EDUCATION PREVENTION PROGRAM**
26. The patient should be instructed to go to the emergency room if they are not responding to their bronchodilator and their peak expiratory flowrate is less than **50%** of their personal best.
27. Describe activities in the home that can lead to an asthmatic attack  
A. **VACUUMING**  
B. **SMOKING**  
C. **COOKING**  
D. **PERFUMES**  
E. **ANIMALS**  
F. **FURNACE WITH DIRTY DUCTWORK**  
G. **DUST**

28. Determine if the following response to a bronchodilator is considered a significant response: The pre FEV<sub>1.0</sub> is 2.43 and the post FEV<sub>1.0</sub> is 2.66.

$$\frac{(2.66 - 2.43)}{2.43} = \frac{0.23}{2.43} = 0.095 \times 100\% = 9.5\%$$

- A. % change = **9.5%**
- B. Is this a significant response? **NO**
29. Which would be better to use during a severe asthmatic attack?
- A. **Systemic steroids**
- B. Aerosol steroids
30. What type of percussion note is heard when a patient with obstructive lung disease is airtrapping? **HYPERRESONANT**
31. An antigen-antibody reaction is associated with
- A. **Extrinsic asthma**
- B. Intrinsic asthma
32. The definition of asthma includes the three clinical syndromes which are
- A. **CHRONIC AIRWAY INFLAMMATION**
- B. **BRONCHOCONSTRICTION**
- C. **HYPERSECRETION OF MUCUS**