

Airway Ventilation and Respiration

1. Overventilation = decreased preload & decreased BP

Blood return to the heart is dependent on the alternating positive and negative pressures in the chest cavity. Over ventilating with positive pressure ventilations can cause decreased preload (blood returning to the heart) and subsequent decreased BP.

2. The indication for oxygen is hypoxia.

Oxygen isn't the wonder drug. It can be harmful. If you've been taught everyone gets oxygen, that is WRONG! Give oxygen based on SpO2 readings and physical signs of distress or hypoxia.

3. Differentiate respiratory failure from respiratory distress

Respiratory failure is caused by inadequate rate, inadequate depth, or both. It is accompanied by an altered mental status (from anxiety to unresponsiveness). In test questions you may see words like "shallow" "slow" or "very rapid" to describe it. Remember that occasional "gaspings" respirations are different. This is agonal breathing and is treated like respiratory arrest.

4. Respiratory rates matter!

Pay attention to respiratory rates. They mean something. Rapid, deep respirations are Kussmaul's breathing and may mean acidosis (e.g. DKA). Rapid breathing may also be seen in shock and sepsis.

5. How long do you suction for?

There is no set time for suction. Suction as quickly and efficiently as you can to clear the airway and resume ventilation if required.

ALS TIP

When do you do advanced airways?

Don't rush to intubate if BVM ventilations are going well. Coach your ventilator for slow ventilations just until the chest rises. This can take you a long way and let you stay focused on CPR and the code overall.

Medical and Obstetric Emergencies

6. Three stages of labor.

There are three stages of labor: 1 – from onset of contractions until full dilation of the cervix (we don't check for this), 2 – from dilation of the cervix to delivery of the baby, 3 – after delivery of the baby until delivery of the placenta.

7. Two delivery complications can't be delivered in the field.

You can't deliver prolapsed cord (cord is the presenting part) and limb presentation (one arm or one leg presenting). Elevate the mom's pelvis and transport emergently.

8. Pay attention to mental status.

There is no such thing as a little altered mental status. Acute presentation of AMS usually indicates the brain isn't getting the oxygen or glucose it needs.

9. Medications treat medical emergencies.

Medical emergencies can be treated with medications (this applies to all levels). Be sure to consider this in treatment of patients. Trauma emergencies don't have this option in most cases.

10. Naloxone is used to reverse respiratory failure.

Naloxone is designed to reverse respiratory failure—not to wake the patient up. Remember two things: if they are breathing adequately, there is no need for naloxone. You can also use a BVM to treat respiratory failure or arrest.

ALS TIP

Naloxone isn't used in codes.

Continuing the naloxone topic, run a code like any other code remembering that your ventilations are treating the respiratory issue. Naloxone administration isn't part of a code per the AHA.

Cardiology and Resuscitation

11. Defibrillate first.

Early defibrillation is the key to survival. This is generally considered the first step when a defibrillator is or becomes available.

12. Administer aspirin early.

Aspirin should be administered early to patients who have suspected cardiac chest pain and in the absence of contraindications. You don't need vital signs first when administering aspirin.

13. Maintain compression fraction.

Compression fraction is the amount of time in a code you are doing compressions expressed as a percentage. The AHA recommends at least 80% of the code be spent doing compressions.

14. ABC vs. CAB

CAB is used for patients who appear lifeless (not breathing or moving). Everyone else gets an ABC approach.

15. Nitroglycerin. The good, the bad, and the ugly.

Nitroglycerin causes vasodilation which reduces preload and work the heart has to do. That is the good part. Dilation of vessels can cause risks in hypotensive patients and those who have taken ED meds. Use caution with tachycardia that may be compensation for a low BP.

ALS TIP

Do BLS first.

Great CPR and early defibrillation have the best chance of bringing the patient back. Don't rush to ALS if good BLS isn't being done. This is true for the street and the NREMT.

Trauma Emergencies

16. Know vital signs patterns in shock.

Pulse and respirations increase in shock. The pulse pressure may narrow during compensation and can be an earlier indication of shock. Blood pressure drops as a late sign. Cool, clammy skin and anxiety are also signs of shock.

17. Obstructive shock happens in trauma.

Obstructive shock occurs in tension pneumothorax and cardiac tamponade. Check for distended neck veins. (Right heart failure can cause JVD too.)

18. Bleeding control rules.

Bleeding from an artery can be rapidly fatal. Direct pressure should be used initially. Don't delay a tourniquet in an extremity if bleeding doesn't stop. Femoral artery bleeds can be fatal in 2 minutes. Hemostatic agents and junctional tourniquets are options in other areas of the body.

19. Spinal immobilization is no more. Spinal motion restriction is the new kid in town.

Spine boards cause pain and don't offer benefits over the stretcher. Spinal motion restriction is the theory for protecting the spine.

20. Straighten angulated long bones.

Make an attempt to straighten an angulated long bone fracture. This can reduce pain and bleeding as well as make splinting more manageable.

ALS TIP

Rule of 9s and resuscitation

The Advanced Burn Life Support course says we tend to underestimate burn BSA but over-resuscitate burn patients with fluid. Know the rule of 9s. It is a nook and cranny that could serve you well.

Operations

21. Triage. Shock and altered mental status are bad no matter what system you use.

There are basic principles of triage that most systems use. Patients who have signs of shock or altered mental status are red. Walking wounded are green. Most others fall into yellow. Don't overcomplicate it. There is no resuscitation in triage. These patients are tagged black.

22. Use due regard for others when operating an emergency vehicle...

Due regard when driving is an important concept. Drive with red lights and siren only when necessary. These warning devices don't guarantee safety or that people will see you or do the right thing.

23. ...and stop at red lights and intersections.

Come to a full stop at red lights and intersections. Period.

24. Lifting and moving is also a treatment.

Lifting and moving isn't just mechanics. Positioning is important. Patients with difficulty breathing usually want to sit up. Patients in shock should be flat when possible.

25. There is no "always" in regard to the NREMT.

If anyone has given you NREMT exam advice with the word "always" in it, ignore that advice. Read each question and make the best choice based on what is given to you. There is no "always" in patient care or the NREMT. Test taking "rules" don't work.

ALS TIP

Operations is pretty similar to what you learned in BLS. But that doesn't mean it is easy.

Operations is similar for ALS and BLS levels—but don't underestimate it! It includes material from the beginning and end of course—and not just the technical stuff (MCI, Haz-Mat, ICS, driving) at the end.



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