

NRP Review Questions

Lesson I - Overview and Principles of Resuscitation

1. About _____% of newborns will require some assistance to begin regular breathing.
2. About _____% of newborns will require extensive resuscitation to survive.
3. True or False: Careful identification of risk factors during pregnancy and labor can identify all babies who will require resuscitation.
4. Chest compressions and medications are _____needed when resuscitating newborns.
5. Before the birth, the alveoli in a baby's lungs are _____and filled with _____.
6. The air that fills the baby's lungs during normal transition contains _____% of oxygen.
7. The air in the baby's lungs causes the pulmonary arterioles to _____so that the oxygen can be absorbed from alveoli and distributed to all organs.
8. If baby does not begin breathing in response to stimulation, you should assume she is in _____apnea and you should provide _____.
9. If the baby enters the stage of secondary apnea, her heart rate will _____and her BP will _____.
10. Restoration of adequate ventilation usually will result in a _____improvement of heart rate.
11. Resuscitation _____ be delayed until the 1-minute Apgar score is available.
12. Premature babies have unique challenges during resuscitation because of
 - a. fragile brain capillaries that may bleed
 - b. lungs deficient in surfactant
 - c. poor temperature control
 - d. higher likelihood of infection
 - e. all of the above
13. Apnea or heart rate below 100 Provide _____ and apply _____. Heart rate then drops to 60 take _____. If the heart rate continues below 60 start chest compressions and insert an _____ and give _____.
14. Every delivery should be attended with at least _____ skilled persons.
15. At least _____skilled persons should be present with high risk delivery
16. Equipment _____be unpacked if a newborn is anticipated to be depressed.
17. Since the baby required continuous supplemental oxygen, she should receive _____care.
18. When twins are expected, there should be _____people present the delivery room to form the resuscitation team prepared to resuscitate.

Lesson II – Initial Steps of Resuscitation

1. A newborn who is born at term, has no meconium in the amniotic fluid or on the skin, is breathing well, and has good muscle tone _____ need resuscitation.

2. A newborn with meconium fluid who is not vigorous _____ need to have his trachea suctioned via an endotracheal tube. A newborn with meconium in the amniotic fluid who is vigorous _____ need to have his trachea suctioned via an endotracheal tube.
3. When deciding which babies need tracheal suctioning, the term “vigorous” is defined by what 3 characteristics? _____, _____, _____.
4. When a suction catheter is used to clear the oropharynx of meconium before inserting an endotracheal tube, the appropriate size is _____ or _____.
5. The position of the head prior to suctioning is the _____ position.
6. A newborn is covered with meconium, is breathing well, has normal muscle tone, has a heart rate of 120 bpm, and is pink. The correct action is to _____ or _____.
7. In suctioning a baby’s nose and mouth, the rule is to first suction the _____ and then the _____.
8. The correct way to stimulate a newborn is _____ and _____.
9. If the baby is in secondary apnea, stimulation of the baby _____ stimulate breathing.
10. A newborn is still not breathing after a few seconds of stimulation. The next step should be to administer _____.
11. A newborn has poor muscle tone, labored breathing, and cyanosis. Your initial steps are: _____, _____, _____, _____, _____.
12. There are three ways to give free-flow oxygen. _____, _____, _____.
13. Oxygen saturation should be expected to be only _____% by 2 minutes of life.
14. If you need to give supplemental oxygen for longer than a few minutes, the oxygen should be _____ and _____.
15. You have stimulated a newborn and suctioned her mouth. It is now 30 seconds after birth, and he is still apneic and pale. His heart rate is 80 beats per minute. Your next action is to _____.
16. You count a newborn’s heart rate for 6 seconds and count 6 beats. The heart rate is _____ bpm.
17. An oximeter will show both SPO2 and _____.

Lesson III – Use of Resuscitation Devices for Positive Pressure Ventilation

1. Flow-inflating bags _____ work without a compressed gas source.
2. A baby is born apneic and cyanotic. You clear her airway and stimulate her. Thirty seconds after birth, she has not improved. The next step is to _____.
3. The single most important and most effective step in neonatal resuscitation is _____.
4. Identify the flow-inflating bag by a _____. Identify the self-inflating bag by an _____. Identify the T-piece resuscitator by _____.

5. Masks of different sizes _____ need to be available at every delivery.
6. Self-inflating bags require the attachment of a(n) _____ to deliver a high concentration of oxygen.
7. A T-piece resuscitator _____ work without a gas source.
8. Neonatal bags are _____ than adult bags.
9. The safety feature of a self-inflating bag is the _____ and the _____. The safety feature of the flow-inflating bag is the _____. The safety feature of the T-piece resuscitator is the _____ and the _____.
10. Free-flow oxygen can be delivered reliably through the mask attached to the _____ and _____.
11. When giving free-flow oxygen with a flow-inflating bag and mask, it is necessary to place the mask _____ on the baby's face to allow some gas to escape around the edges of the mask.
12. Before an anticipated resuscitation, the ventilation device should be connected to a _____ which enables you to provide oxygen in any concentration from room air up to 100% oxygen.
13. Resuscitation of the term newborn may begin with _____ % oxygen. The inspired oxygen concentration used during resuscitation is guided by the use of _____ which measures oxygen saturation.
14. The proper position for PPV is the _____.
15. The correct positions to assist in PPV are _____ or _____ to use a resuscitation device effectively
16. You must hold the resuscitative device so that you can see newborn's _____ and _____.
17. An anatomically shaped mask should be positioned with the _____ end over the newborn's nose.
18. If you notice that the baby's chest looks as if he is taking a deep breath, you are _____ the lungs and it is possible that a pneumothorax may occur.
19. When ventilating a baby, you should provide positive pressure ventilation at a rate of _____ to _____ breaths per minute.
20. Begin positive pressure ventilations with an initial inspiratory pressure of _____ cm H₂O.
21. MR SOPA stands for:
 - a. M _____
 - b. R _____
 - c. S _____
 - d. O _____
 - e. P _____
 - f. A _____

22. Your assistant assesses effectiveness of positive-pressure by first assessing the _____ and _____ and listening for _____. If these signs are not acceptable, you should look for _____.
23. A properly fitting mask fits over the _____ and the _____ with the _____.
24. You have started positive-pressure ventilation on an apneic newborn. The heart rate is not rising, oxygen saturation is not improving, and your assistant does not hear bilateral breath sounds. List three possibilities of what may be wrong.
- _____
 - _____
 - _____
25. If, after performing the ventilation corrective sequence and making appropriate adjustments, you are unable to obtain a rising heart rate or bilateral breath sound or see chest movement with PPV, you usually will have to insert an _____ or a _____.
26. You have administered PPV with bilateral breath sounds and chest movement for 30 seconds. What do you do if the baby's heart rate is below 60 bpm? _____
 What do you do if the heart rate is more than 60 bpm and less than 100 bpm but steadily improving with effective PPV? _____. What do you do if the heart rate is more than 60 bpm and less than 100 bpm and not improving with effective PPV? _____.
27. Assisted ventilation may be discontinued when _____ and _____.
28. If you must continue with PPV with a mask for more than several minutes, an _____ should be inserted to act as a vent for the gas in the stomach during the remainder of the resuscitation.
29. The orogastric tube needs to be inserted _____.

Lesson IV - Chest Compressions

1. A newborn is apneic and bradycardic. Her airway is cleared and she is stimulated. At 30 seconds, PPV is begun. At 60 seconds her heart rate is 80 bpm. Chest compressions _____ be started. PPV ventilations _____ continued.
2. A newborn is apneic and bradycardic. She remains apneic, despite having her airway cleared, being stimulated, receiving 30 seconds of PPV, and ensuring that all ventilation techniques are optimal. Nevertheless, her heart rate is only 40 bpm. Chest compressions _____ started. PPV _____ continued.
3. The heart rate is 40 bpm as determined by auscultation, and the oximeter has stopped working. Chest compressions have begun, but the baby is still receiving room air oxygen. What should be done about oxygen delivery? _____.

4. During the compression phase of chest compressions, the sternum compresses the heart, which causes blood to be pumped from the heart and into the _____. In the release phase, blood enters the heart from the _____.
5. Chest compressions should be _____.
6. The preferred method of delivering chest compressions is _____ technique.
7. If you anticipate that the baby will need medication by the umbilical route, you can continue chest compressions by one of the following actions _____ or the _____.
8. The correct depth of chest compressions is approximately _____.
9. The correct method of release of chest compressions is _____.
10. What phrase is used to time and coordinate chest compressions and ventilations? _____
11. The ratio of chest compressions to ventilations is _____ to _____.
12. During PPV without chest compressions the rate of breaths per minute is _____ to _____ bpm.
13. During PPV and chest compressions, the rate of "events" per minute is _____ "events."
14. The count of "One-and-Two-and-Three-and-Breath" should take about _____ seconds.
15. A baby has required ventilations and chest compressions. After 30 seconds of chest compressions, you stop and count 8 heartbeats in 6 seconds. The baby's heart rate is now _____ bpm. You should _____ chest compressions.
16. A baby has required chest compressions and is being ventilated with bag and mask. The chest is not moving well. You stop and count 4 heartbeats in 6 seconds. The baby's heart rate is now _____ bpm. You may want to consider _____, _____ and _____ and _____.

Lesson V – Endotracheal Intubation and Laryngeal Mask Airway Insertion

1. A newborn with meconium and depressed respirations _____ require suctioning via an endotracheal tube before other resuscitation measures are started.
2. A newborn receiving ventilations by mask is not improving after 2 minutes of apparently good technique. Despite ventilation corrective steps, the heart rate is not rising and there is poor chest movement. Endotracheal intubation _____ considered.
3. For babies weighing less than 1,000 grams the inside of the diameter of the endotracheal tube should be _____.
4. The preferred blade size for use in term newborns is No. _____. The preferred blade size for use in preterm newborns is No. _____ and for extremely newborns is No. _____.
5. When viewing the oral cavity prior to intubation you must be able to visualize the _____ and the _____.

6. Both right – and left-handed people should hold the laryngoscope in the _____ hand.
7. You should try to take no longer than _____ seconds to complete endotracheal intubation.
8. If you have not completed endotracheal intubation within the time limit, what should you do? _____.
9. The correct way to lift the laryngoscope to expose the pharyngeal area is _____.
10. You have the glottis in view, but the vocal cords are closed. You _____ wait until they are open to insert the tube.
11. What 2 guidelines are helpful for determining the depth that the endotracheal tube be insert into the baby's trachea? _____, _____.
12. For a one kg infant the ET tube is inserted to 7 cm mark on the tube For a two kg infant the ET tube is inserted to _____ cm mark on the tube. For a three kg infant the ET tube is inserted to the _____ cm mark on the tube.
13. True or False: You have inserted an endotracheal tube and are giving PPV through it. When you check with a stethoscope and you hear bilateral breath sounds on both sides of the baby's chest, with equal intensity on each side and no air entering the stomach. The tube is correctly placed.
14. X-ray tube place will show the ET tip to be in the trachea midway between the vocal cords and the carina. On the x-ray, the tip should be visible at the level of the _____, or slightly lower.
15. You have inserted an endotracheal tube and giving PPV through it. When you check with your stethoscope you hear no breath sounds on either side of the chest and you hear air entering the stomach. The tube is placed the _____.
16. You have inserted an endotracheal tube and giving PPV through it. When you check with your stethoscope you hear breath sounds over the right side, but not the left. When you check the tip-to-lip measurement, the first number seen at the lip is higher than expected; you should _____ the tube slightly and listen with the stethoscope again.
17. A baby is born at term following abruption of the placenta and is not improving despite PPV by mask. You have tried intubating the trachea but have not been successful Help has not arrived. A reasonable next step would be to insert a _____.
18. True or False: An extremely low birth weight baby is born and requires assisted ventilation. Insertion of an LMA would be a reasonable alternative to intubation. An LMA is too large for an extremely low birth weight baby.

Lesson VI - Medications

1. Fewer than _____% of babies requiring resuscitation will need epinephrine to stimulate their hearts.
2. As soon as you suspect that medications may be needed during a resuscitation, one member of the team should begin to insert a _____ to deliver drugs.

3. Effective ventilation and coordinated chest compressions have been performed for 45-60 seconds, the trachea has been intubated, and the baby's heart rate is below 60 bpm. You should give _____ while continuing chest compressions and _____.
4. What is the potential problem with administer epinephrine through the tube?
_____.
5. You should follow in intravenous dose with a flush of _____ to ensure that most of the drug is delivered to the baby and not left in the catheter.
6. Epinephrine _____ the blood pressure and strength of cardiac contractions and _____ rate of cardiac contractions.
7. The recommended concentration of epinephrine for newborns is _____.
8. The recommended dose of epinephrine for newborns is _____ to _____ if given intravenously of a 1:10,000 solution. The recommended dose of epinephrine if give endotracheally is _____ to _____ of a 1, 10,000 solution.
9. Epinephrine should be given _____.
10. What should you do approximately 1 minute after giving epinephrine?
_____.
11. If the heart rate is below 60 beats per minute, you can repeat the epinephrine every _____ to _____.
12. If the baby's heart rate remains below 60 bpm after you have given epinephrine you should also make sure that ventilation is producing an adequate lung inflation and _____ are done correctly.
13. If the baby appears to be in shock, there is evidence of blood loss, and resuscitation is not resulting in improvement, you should consider giving _____ of a _____ by what route? _____.

Lesson VII – Special Considerations

1. Choanal atresia can be ruled out by what procedure? _____
2. Babies with Robin Syndrome and airway obstruction may be helped by placing a _____ and positioning them _____. Endotracheal intubation of such babies is _____.
3. A pneumothorax or a congenital diaphragmatic hernia should be considered if breath sounds are _____ on both sides of the chest.
4. You should suspect a congenital diaphragmatic hernia if the abdomen is _____. Such babies should not be resuscitated with _____.
5. Persistent bradycardia and low SpO₂ during neonatal resuscitation most likely are caused by _____.

6. Babies who do not have spontaneous respirations and whose mothers have been given a narcotic drug should receive _____ and then if spontaneous respirations do not begin, may be given _____ to confirm the cause of their respiratory depression.
7. After a resuscitation of a term or near term newborn, vascular resistance in the pulmonary circuit is likely to be _____. Adequate oxygenation is likely to cause the pulmonary blood flow _____
8. If a meconium stained baby has been resuscitated and then develops acute respiratory depression a _____ should be suspected.
9. A baby who required resuscitation still has low blood pressure and poor perfusion after having been given a blood transfusion for suspected perinatal blood loss. He may require an infusion of _____ to improve his cardiac output and vascular tone.
10. Babies who have been resuscitated may have kidney damage and are likely to need _____ fluids after resuscitation.
11. Because energy stores are consumed faster in the absence of oxygen, blood _____ levels may be low following resuscitation
12. List three causes of seizures following resuscitation?
- a. _____
 - b. _____
 - c. _____
13. A baby with a seizure 10 hours after being resuscitated has a normal blood glucose and serum electrolyte. What class of drug should be used to treat her seizures?
- a. _____
14. You will likely to have _____ difficulty controlling body temperature of babies requiring resuscitation beyond the immediate newborn period, since they usually will not be wet.
15. The priority of resuscitating babies beyond the immediate newborn period should be to:

16. If vacuum suction is not available to clear the airway, 2 alternative methods are
- a. _____
 - b. _____
17. If a 15-day old baby requiring resuscitation had blood loss, vascular access routes include:
_____ and _____
18. A baby was delivered at term by emergency C-section for persistent fetal bradycardia lasting 30 minutes. He required chest compression and now is profoundly obtunded, with absent deep tendon reflexes. What procedure may decrease the subsequent severity of hypoxic-ischemic encephalopathy, if instituted before 6 hours following birth?
- a. _____

Lesson VIII – Resuscitation of Babies Born Preterm

1. List five factors that increase the likelihood of needing resuscitation with preterm babies
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
2. A baby is about to be born at 30 week gestation. What additional resources should you assemble?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
3. You have turned on the radiant warmer in anticipation of the birth of a 27 week's gestation. What else might you consider to help you maintain the baby's temperature?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
4. A baby is delivered at 30 weeks gestation. She requires PPV for an initial heart rate of 80 bpm despite tactile stimulation. She responds quickly with rising heart rate and spontaneous respirations. At 2 minutes of life she is breathing, has a heart rate of 140 bpm and is receiving and continuous CPAP with a flow-inflating bag and 50% oxygen. You have attached an oximeter and it now reading 95% and is increasing.
You should _____.
5. CPAP may be given with a:
 - a. _____
 - b. _____
 - c. _____
6. To decrease the chance of brain hemorrhage, the best position is _____.
7. Intravenous fluids should be given _____ to preterm infants.
8. List three precautions that should be taken when managing a preterm baby who has required resuscitation?
 - a. _____
 - b. _____
 - c. _____

Lesson IX – Ethics and Care at the End of Life

1. Name the four common principles of medical ethics:
 - a. _____
 - b. _____
 - c. _____
 - d. _____
2. True or False: Generally, the parents are considered to be the best “surrogate” decision makers for their own newborn?
3. The parents of a baby about to be born at 23 weeks’ gestation have requested that, if there is any possible brain damage, they do not want any attempt made to resuscitate their baby. What should your reply be? _____
4. You have been asked to be present of an impending birth of a baby known from prenatal ultrasound and laboratory assessments to have major congenital malformations. List four issues that should be covered when you meet the parents.
 - a. _____
 - b. _____
 - c. _____
 - d. _____
5. A mother enters the delivery suite in active labor at 34 weeks’ gestation after having no prenatal care. She proceeds to deliver a live-born baby with major malformations that appear to be consistent with trisome 18 syndrome. An attempt to resuscitate the baby in the adjacent room is unsuccessful. The following action is the most appropriate.

6. The following two replies are appropriate to say to parents that have newborns that have just died after unsuccessful resuscitation:
 - a. _____
 - b. _____

Lesson I Answers:

1. 10%
2. 1%
3. False
4. Rarely
5. Collapsed, fluid
6. 21%
7. Relax
8. Secondary, PPV
9. Fall, fall
10. Rapid
11. Should not
12. All of the above
13. Oxygen, oximeter probe, corrective measures
– MR SOPA, IV or UVC, epinephrine
14. 1
15. 2
16. Should
17. Post resuscitation
18. 4

Lesson II Answers:

1. Does not
2. Will, Will not

Lesson II Answers (Cont.)

3. HR>100 bpm, Strong respiratory effort, Good muscle tone
4. 12F, 14F
5. Sniffing
6. Suction the mouth and nose with a bulb syringe, suction catheter
7. Mouth, Nose
8. rub the back gently, slap the sole of the feet
9. Will not
10. PPV
11. place the infant on a radiant warmer, remove all wet linens, suction the mouth and nose, consider CPAP or free-flow O₂, apply a pulse oximeter probe, dry and stimulate.
12. Holding the oxygen tubing cupped closely over the infants mouth and nose, Closely hold the mask of a flow-inflating bag or T-piece resuscitator held over the infant's mouth and nose, Holding an oxygen mask firmly over the infant's face.
13. >65%
14. Heated, humidified
15. Provide PPV
16. 60
17. Heart rate

Lesson III Answers:

1. Will not
2. Begin PPV
3. Ventilating the lungs
4. Deflated balloon-like appearance, oxygen reservoir, the pressure gauges
5. Do
6. Oxygen reservoir
7. Will not
8. Much smaller
9. Pop-off valve, pressure gauge, pressure gauge, pressure relief control valve, pressure gauge.
10. Flow inflating bag, the T-piece resuscitator
11. Loosely
12. Blender
13. 21%, oximeter
14. Sniffing position
15. At the side, at the head
16. Chest, abdomen.
17. Pointed
18. Overinflating
19. 40,60

20. 20

21. Mask adjustment, Reposition the airway, Suction the mouth and nose, Open the mouth, Pressure increase, Airway alternative.
22. Heart rate, oximetry, breath sounds, chest movement
23. Nose, Mouth
24. There may be an inadequate seal, the head may need to be repositioned, and secretions may need to be suctioned.
25. ET tube, LMA.
26. Begin chest compression and consider intubation, adjust oxygen, gradually, decrease pressure as heart rate improves, insert orogastric tube, continue monitoring, repeat MR SOPA and consider intubation.
27. Heart rate is above 100 bpm, the baby is breathing
28. Orogastric tube
29. The distance from the bridge of nose to the ear and then to half way between the umbilicus and the xyphoid process.

Lesson IV Answers:

1. Should not, Should be.
2. Should be, Should be.
3. Increase oxygen concentration to 100%
4. Arteries, Veins.
5. Applied to the lower third of the sternum, which lies between the xyphoid and a line drawn between the nipples
6. The thumb.
7. The thumb technique, two finger technique.
8. One third the anterior to posterior diameter of the chest.
9. Fingers remaining in contact with the chest.
10. One-and-Two-and-Three-and-Breath.
11. 3,1
12. 40,60
13. 120
14. 2
15. 80,Stop
16. 40, UVC insertion, ET tube, administer epinephrine

Lesson V Answers:

1. Will
2. Should be
3. 2.5
4. 1, 0,00
5. the glottis – “the hole”, vocal cords
6. Left
7. 20
8. Remove the laryngoscope, ventilate with PPV by mask, and try again.
9. Lift in the direction of the handle rather than rocking.
10. Should

11. To I tip to lip 1-2-3 7-8-9, Level of the vocal cord guide.
12. 8, 9
13. True (Likely)

Lesson V Answers (Cont):

14. Clavicles
15. Esophagus
16. Withdraw
17. LMA
18. False

Lesson VI Answers:

1. 1%
2. UVC
3. Epinephrine, Ventilations
4. Epinephrine is not reliably absorbed in the lungs when given by the ET route
5. Normal saline
6. Increases, increases
7. 1:10,000
8. 0.1, 0.3 ml/kg, 0.5, 1 ml/kg
9. As quickly as possible
10. Check HR
11. 3, 5 min, chest compressions
12. Chest compressions
13. 10 ml/kg, volume expander, IV or UVC

Lesson VII Answers:

1. Inserting an NPA
2. Nasopharyngeal tube, on their abdomen or prone, difficult
3. Unequal
4. Scaphoid, PPV
5. Inadequate ventilation
6. PPV, Naloxone (Narcan)
7. High, increase
8. Pneumothorax
9. Dopamine
10. Less
11. Glucose
12. Hypoxic ischemic encephalopathy, metabolic disturbances (hypoglycemia), and electrolyte abnormality (hyponatremia or hypocalcemia)
13. Anticonvulsants
14. Less
15. Establish effective ventilation
16. Bulb suction or wiping away with a clean cloth
17. Peripheral and Intraosseous (IO)
18. Therapeutic hypothermia

Lesson VIII Review Answers:

1. List five factors:
 - a. Tissues is easily damaged from excess oxygen
 - b. Lose heat easily
 - c. Weak muscles, making it difficult to breathe
 - d. Lungs deficient in surfactant

- e. Immature immune system
- f. Fragile capillaries in the brain
- g. Small blood volume
2. Additional resources should you assemble
 - a. Additional personnel
 - b. Additional means to control temperature
 - c. Compressed gas source
 - d. Oxygen blender
 - e. Oximeter
3. To help you maintain the baby's temperature:
 - a. Increase the temperature of the delivery room
 - b. Activate a chemical heating pad
 - c. Prepare a plastic bag or wrap
 - d. Prepare a transport incubator
4. Decrease the oxygen concentration
5. CPAP may be given with a:
 - a. flow-inflating bag
 - b. T-piece resuscitator
 - c. NOT a self-inflating bag
6. Table flat
7. Slowly
8. Three precautions that should be taken when managing a preterm baby who has required resuscitation:
 - a. Check blood glucose
 - b. Monitor for apnea and bradycardia
 - c. Control oxygenation
 - d. Consider delaying feedings
 - e. Increase suspicion for infection

Lesson IX Review Answers.

1. The four common principles of medical ethics
 - a. Autonomy – the right of freedom to make choice
 - b. Beneficence – the act to benefit others
 - c. Nonmaleficence – avoid harm
 - d. Justice – treat people truthfully
2. True
3. Tell them you will try to support their decision, but must wait until you examine the baby after birth to determine what you will do.
4. List four issues that should be covered when you meet the parents
 - a. Review the current obstetric plans and expectations
 - b. Explain who will be present and their respective roles
 - c. Explain the statistics and your assessment of the infant's chances for survival and possible disability.
 - d. Determine the parents' wishes and expectations.
5. Inform the parents that decisions may need to be modified after you examine the infant.
6. Explain the situation to the parents and ask them if they would like to hold the baby.

7. "I'm sorry, we tried to resuscitate your baby, but the resuscitation was unsuccessful and your baby died," or "I'm sorry your baby died. She is a beautiful baby."

