Acute Respiratory Care of the Neonate, 3rd Edition—Course 2

Test Directions

- 1. Please fill out the answer form and include all requested information. We are unable to issue a certificate without complete information.
- 2. All questions and answers are developed from the information provided in the book. Select the one best answer and fill in the corresponding circle on the answer form.
- 3. Mail the answer form to NICU INK, 1425 N. McDowell Blvd., Ste. 105, Petaluma, CA 94954-6513 with a check for \$25.00 (processing fee) made payable to NICU INK. This fee is non-refundable.
- 4. You will be notified of your test results within 6 weeks. Please retain the test for your records.
- 5. An answer key is available upon request with completion of the exam.
- 6. A total of 6.8 contact hours* for the course (including .82 hours of pharmacology credit) may be earned as CNE credit for reading the material and for completing a posttest and evaluation. To be successful the learner must obtain a grade of at least 80% on the test.
- 7. No relevant financial interest or affiliation with any commercial interests was disclosed by members of the activity test panel. No commercial support/sponsorship was provided for this education activity. The Academy of Neonatal Nursing (ANN)/American Nurses Credentialing Center (ANCC) does not endorse any commercial products discussed in conjunction with this educational activity.

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* Contact hours based on a 60-minute hour.

Course Objectives

After reading the book and taking the test, the participant will be able to:

1. Discuss lung mechanics in the premature infant.

1. Which of the following congenital anomalies usually

- 2. Describe the pathophysiology of common lung diseases.
- 3. Summarize the pathophysiology of the three types of apnea.
- 4. Outline the nursing care of the infant in acute respiratory distress.

	a. congenital cystic adenomatoid malformation b. congenital diaphragmatic hernia		a. columnar c. squamous b. cuboidal
	c. tracheoesophageal fistula	6	The presence of which of the following in the amniotic
2.	In a term infant, what percentage of alveoli normally develops after birth?	0.	fluid is a marker of lung maturity? a. dipalmitoylphosphatidylcholine
	a. 55 c. 95 b. 75		b. phosphatidylcholine c. phosphatidylglycerol
3.	Fetal hypoxia results in a decreased secretion of which of	7.	Glucocorticoids affect surfactant synthesis by increasing

- Fetal hypoxia results in a decreased secretion of which of the following?
 - a. cortisol
 - b. insulin-like growth factor 1

occurs in the embryonic stage?

- c. surfactant protein A
- 4. Preacinar veins are present by week _____ of gestation.
 - a. 16
- c. 24
- b. 20

to affect:
a. absorption of lung fluid

c. Type I cell development

a. glycogen depletion

b. pulmonary artery maturation

the rate of:

which type of cell?

- 1 1 11 1:00
- b. lung cell differentiation
- c. maturation of surfactant-producing cells

8. Movement of the diaphragm in utero has been shown

5. Ninety-five percent of each alveolus is made up of

9.	What percentage of fetal cardiac output is directed to the lungs? a. 5–10 b. 10–15	20.	Infection with Ureaplasma developing: a. chronic lung disease b. early-onset pneumonia c. pneumothorax	increases the infant's risk of
10.	Which of the forces opposing the first breath is hardest to overcome? a. surface tension c. viscosity of the lung fluid b. tissue resistive forces	21.	In diagnosing congenital pr are most accurate when obt hours.	neumonia, tracheal aspirates ained in the first
11.	In the first 24 hours after birth, lung compliance increases times. a. 2–3 c. 6–7	22.	a. 12 b. 18 Ganciclovir is used to treat	
	b. 4–5		a. cytomegalovirus b. herpes	c. toxoplasmosis
12.	A time constant is a measure of the time needed to fill an alveolus to percent of its capacity. a. 41	23.	Meconium production beging gestation? a. 4 b. 5	ns in what month of
13.	Premature infants have a low functional residual capacity because of: a. increased compliance c. pliable chest wall b. small airways	24.	Persistent pulmonary hyper (PPHN) is characterized by	
14.	The neonatal diaphragm contains what percentage of fatigue-resistant fibers? a. 20 c. 60 b. 40	25.	In PPHN, x-ray findings in	clude: c. lobar consolidation
15.	Identified benefits of antenatal steroid administration include a: a. decreased incidence of necrotizing enterocolitis b. improved feeding tolerance c. increased cardiovascular stability	26.	The primary goal in the tree a. correct metabolic acidosis b. reverse right-to-left shunt c. treat hypercarbia	
16.	In infants with respiratory distress syndrome, erosion of the bronchiolar epithelium occurs as a result of: a. acidosis c. hypoxia	27.	Apnea is considered patholomany seconds? a. 10 b. 20	ogic when it exceeds how
17.	b. cyclic fluid shifts Which of the following factors predisposes a neonate to developing transient tachypnea of the newborn (TTN)? a. breech delivery c. postterm delivery b. maternal hypovolemia	28.	Mixed apnea is usually seen infants? Those that: a. are full term b. are small and preterm	in which of the following
18.	Findings of TTN include a chest that is: a. asymmetric c. under-expanded b. barrel-shaped	29.		
19.	The mortality rate for infants with perinatally acquired pneumonia is percent. a. 20 c. 40 b. 30	30.	b. hypercapnia Central chemoreceptors are a. brain stem b. cerebral cortex	located in the: c. spinal cord

c. right mainstem intubation

31.	Which of the following decreases in response to lung distention? a. inspiratory time c. respiratory rate b. expiratory time	42.	Wheezes on auscultation would be an expected finding in infants with: a. bronchopulmonary dysplasia b. pneumonia c. TTN			
32.	Mechanisms responsible for increased apnea during rapid eye movement sleep include: a. closure of airway during expiration b. intercostal muscle inactivation c. triggering of the larynx adductor muscles	43.	2,3-diphasphoglycerate acts to enhance the: a. oxygen carrying capacity in the blood b. release of oxygen from hemoglobin c. uptake of oxygen by hemoglobin			
33.	In older infants, severe apnea is a common presentation in: a. congenital heart disease b. hypoglycemia c. respiratory syncytial virus infection	44.	Fetal hemoglobin levels fall to 5–10 percent by months of life. a. 2 c. 4 b. 3			
34.	In newborns, small-airway closure can be triggered by: a. activation of the diving reflex b. hyperthermia c. inflammation	45.	Lancets used for capillary blood gas sampling should be £ millimeters. a. 1 c. 3 b. 2			
35.	Strategies to prevent apnea in very low birth weight infants include: a. keeping oxygen saturations above 90 percent b. maintaining temperature at the upper end of normal	46.	In a newborn infant, a normal cardiothoracic ratio does not exceed: a. 0.55 c. 0.65 b. 0.6			
36.	c. prone positioning Side effects of xanthines include: a. cardiac dysrhythmias c. hyperglycemia b. constipation	47.	On x-ray, a displaced mediastinum is a feature of: a. congenital heart disease b. pneumomediastinum c. pneumothorax			
37.	The newborn's primary method of heat production is through: a. chemical thermogenesis b. muscle activity	48.	An expected finding in an infant with a vascular ring would be an x-ray that appears: a. bubbly c. overaerated b. hazy			
38.	c. shivering Stores of brown fat in the newborn can be found in which of the following locations? a. diaphragm c. liver b. mediastinum	49.	For most term infants, consistent growth is achieved with a caloric intake of kcal/kg/day. a. 90–100 c. 130–140 b. 110–120			
39.	Hypothermia increases the risk of an infant developing: a. hypotension c. tissue hypoxia b. respiratory alkalosis					
40.	The range of accuracy for a gestational age assessment is plus or minus how many weeks? a. 1					
41.	On auscultation, a shift in the point of maximal impulse should cause the examiner to suspect: a. lobar consolidation b. pneumothorax					

ANSWER FORM: Acute Respiratory Care of the Neonate, 3rd Edition—Course 2
Please completely fill in the circle of the one best answer using a dark pen.

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	lijestions	are	numbered	vertically	17
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Evaluation Directions

3

4

5

Thank you for taking the time to assist us in evaluating the effectiveness of this course. Using the scale below, darken the circles corresponding to your responses. If an item is not applicable, leave it blank.

2

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Object I am able t						
1. Discu	ss lung mechanics in the	premature infan	t.		1)(2345
2. Descr	ibe the pathophysiology	of common lung	diseases.		1)(2345
3. Sumn	narize the pathophysiolog	gy of the three ty	pes of apnea.		1)(2345
4. Outli	ne the nursing care of the	e infant in acute i	respiratory distress.		1)(2345
Preser	ntation					
1. The n	naterial presented is relev	ant to my practic	ce.		1)(2345
2. The c	ontent of this activity is	likely to engende	r a change in my cli	nical practice.	1)(2345
3. The q	uestions on the test refle	cted the content	of the book.		1)(2345
4. The b	ook content was compre	hensive.			1)(2345
5. The to	est directions were clear.				1)(2 3 4 5
6. The C	CNE activity was free of	commercial bias.			1)(2345
7. I wou	ld recommend this CNF	activity to collea	gues.		1)(2345
	eive the education level of asic; 2 = Intermediate; 3		e:		1)(23
9. How !	long did it take you to co	omplete the cours	re?		hours	_ minutes
10. In wh	at level unit do you prac	tice?			I II_	III
I am a	staff nurse NNI	nurse mar	nager		_ other (please state)	
What sub	jects would you like to	see offered for C	EE courses?			
Additiona	al comments:					