

AANA Journal Course No. 28

Examination Information Update for Nurse Anesthetists

You are required to complete ALL the information on the AANA Journal Course Examination and Evaluation forms in order for your examination to be processed and for you to receive continuing education credits. The information is required to meet the criteria of the American Nurses Credentialing Center Commission on Accreditation.

With this issue, the *AANA Journal's* 28th course has been completed. The course consisted of a 6-part series, beginning with the April 2008 issue and concluding in the February 2009 issue. The series was published as follows:

Part 1 (April 2008) – Toward Reducing Perioperative Transfusions

Part 2 (June 2008) – Evidence-Based Anesthesia: Fever of Unknown Origin in Parturients and Neuraxial Anesthesia

Part 3 (August 2008) – An Emerging Clinical Paradigm: The Cuffed Pediatric Endotracheal Tube

Part 4 (October 2008) – Gender Differences in Pain: Does X = Y?

Part 5 (December 2008) – Implications of Immune Function to Anesthesia Care

Part 6 (February 2009) – Should I Continue or Discontinue That Medication?

Each article included objectives for the reader and sources for reference and study.

The examination printed in this issue incorporates material from all 6 articles. The examination consists of 60 multiple choice questions, 10 questions from each article. The examination is clearly marked as to which questions refer to which article. Remember, as you are taking the examination, you are free to refer to the original articles. Note also that there is but 1 correct answer to be marked for each question.

About your continuing education credit

To ensure that a certain level of knowledge has been attained, a minimum of 80% correct answers (48 out of 60) must be achieved. A total of 6 hours of continuing education (CE) credit will be awarded for the successful completion of the examination; partial CE credit will not be awarded.

AANA members will automatically have their 6 CE credits recorded for them. Individuals with record-keeping contracts through the AANA also will have the credits recorded for them.

The correct answers to the examination will appear in the August 2009 issue of the *AANA Journal*. By keeping a copy of your answers, you will automatically be able to see how you scored.

Answer sheet and evaluation form

It is recommended that you first mark your answers on the examination itself (so that you have your own record). Then, transfer your answers to the answer sheet, which appears on the adjacent page. Be sure to include your name, address, and AANA identification number. You are required to fill out an evaluation of the course, which includes the time required for reading and comprehension of each part. The evaluation is printed on the reverse side of the answer sheet. (Non-AANA members should include a \$30 processing fee—payable to the *AANA Journal* Course—along with the examination answer sheet and evaluation form.)

Important deadline

The examination answers must be postmarked by July 31, 2009. Adequate time must be allowed for the examination to be processed to ensure that all CE credits are recorded before the end of the CE year. Mail your answer sheet to:

AANA Continuing Education Department
222 S. Prospect Ave.
Park Ridge, IL 60068-4001
Attn: AANA Journal Course

Much success

We hope that you have found this 28th *AANA Journal* course to be of value. We wish you well in its successful completion.

AANA Journal Course No. 28 Examination Update for Nurse Anesthetists

(Issued April 2009. Examination and Evaluation No. 28 can be completed online.)

Please **PRINT**.

Name: _____
(last) (first) (middle)

Address: _____
(street)

(city) (state) (zip code)

AANA Membership ID Number:

To ensure that your examination will be processed, you must complete every section of the evaluation and mail it with this examination answer sheet to: AANA Continuing Education Department, 222 S. Prospect Ave., Park Ridge, IL 60068-4001. Attn: AANA Journal Course

If you are not an AANA member, check here. Be sure to enclose your \$30 processing fee payable to AANA.

Please circle one response for each question. For example, 36. 1 2 **3** 4 would indicate that the third alternative was chosen in response to question 36. Please erase completely any changed responses.

	Circle one response (1-4) for each question				Chapter objective reference		Circle one response (1-4) for each question				Chapter objective reference
1.	1	2	3	4	1.1	31.	1	2	3	4	4.1
2.	1	2	3	4	1.1	32.	1	2	3	4	4.1
3.	1	2	3	4	1.2	33.	1	2	3	4	4.2
4.	1	2	3	4	1.2	34.	1	2	3	4	4.2
5.	1	2	3	4	1.3	35.	1	2	3	4	4.3
6.	1	2	3	4	1.4	36.	1	2	3	4	4.3
7.	1	2	3	4	1.3	37.	1	2	3	4	4.4
8.	1	2	3	4	1.4	38.	1	2	3	4	4.4
9.	1	2	3	4	1.5	39.	1	2	3	4	4.5
10.	1	2	3	4	1.5	40.	1	2	3	4	4.5
11.	1	2	3	4	2.5	41.	1	2	3	4	5.1
12.	1	2	3	4	2.1	42.	1	2	3	4	5.1
13.	1	2	3	4	2.2	43.	1	2	3	4	5.2
14.	1	2	3	4	2.3	44.	1	2	3	4	5.2
15.	1	2	3	4	2.3	45.	1	2	3	4	5.3
16.	1	2	3	4	2.4	46.	1	2	3	4	5.3
17.	1	2	3	4	2.2	47.	1	2	3	4	5.4
18.	1	2	3	4	2.5	48.	1	2	3	4	5.4
19.	1	2	3	4	2.2	49.	1	2	3	4	5.5
20.	1	2	3	4	2.2	50.	1	2	3	4	5.5
21.	1	2	3	4	3.1	51.	1	2	3	4	6.1
22.	1	2	3	4	3.1	52.	1	2	3	4	6.1
23.	1	2	3	4	3.2	53.	1	2	3	4	6.4
24.	1	2	3	4	3.2	54.	1	2	3	4	6.4
25.	1	2	3	4	3.3	55.	1	2	3	4	6.5
26.	1	2	3	4	3.3	56.	1	2	3	4	6.5
27.	1	2	3	4	3.4	57.	1	2	3	4	6.2
28.	1	2	3	4	3.4	58.	1	2	3	4	6.2
29.	1	2	3	4	3.5	59.	1	2	3	4	6.3
30.	1	2	3	4	3.5	60.	1	2	3	4	6.3

AANA Code No.: 30391; Expiration date: July 31, 2009

Time required to complete this answer sheet - check ONE box below.

0-60 minutes 61-90 minutes 91-120 minutes 121-150 minutes 151-180 minutes

For your examination to be processed, you must complete every section in this evaluation including time required for reading and comprehension and mail it with the examination to the AANA.

AANA Journal Course No. 28-2009

Evaluation Form

Please evaluate the *AANA Journal* Course in each of the categories listed below. Circle the number that corresponds with the rating scale for the overall course evaluation, as well as for each part.

1 = Poor 2 = Fair 3 = Average 4 = Very Good 5 = Excellent

Part 1: *Toward Reducing Perioperative Transfusions*

JOSEPH A. JOYCE, CRNA, BS

- 1. Content related to objectives.....1 2 3 4 5
- 2. Content organized and easy to follow.....1 2 3 4 5
- 3. Content relevant and current.....1 2 3 4 5

Objectives

	Objectives				
	Not met	Met	Met	Met	Met
1.1 State the 2 primary reasons patients cite for refusing blood product transfusions	1	2	3	4	5
1.2 Define transfusion triggers.....	1	2	3	4	5
1.3 List 3 types of interventions to reduce blood product transfusions.....	1	2	3	4	5
1.4 List 3 drugs that may be administered to help reduce the need for blood product transfusions.....	1	2	3	4	5
1.5 List 3 ways anesthetists may affect the need for blood product transfusions.....	1	2	3	4	5

Time required for reading and comprehension of Part 1 of Journal course text: _____ minutes

Part 2: *Evidence-Based Anesthesia: Fever of Unknown Origin in Parturients and Neuraxial Anesthesia*

CDR LISA OSBORNE, CRNA, PhD, NC, USN
LT MICHELLE SNYDER, CRNA, MSN, NC, USN
LT DANTE VILLECCO, CRNA, MSN, NC, USN
LT AARON JACOB, CRNA, MSN, NC, USN
LT SHAWN PYLE, CRNA, MSN, NC, USN
NANCY CRUM-CIANFLONE, MD, MPH

- 1. Content related to objectives.....1 2 3 4 5
- 2. Content organized and easy to follow.....1 2 3 4 5
- 3. Content relevant and current.....1 2 3 4 5

Objectives

	Objectives				
	Not met	Met	Met	Met	Met
2.1 Describe the anesthesia implications of chorioamnionitis.....	1	2	3	4	5
2.2 Discuss the risk of complications of neuraxial anesthesia.....	1	2	3	4	5
2.3 Discuss the weight of evidence for regional anesthesia in a febrile patient.....	1	2	3	4	5
2.4 Describe antibiotic management for suspected chorioamnionitis.....	1	2	3	4	5
2.5 Understand the recommendations for caring for an obstetric patient with suspected chorioamnionitis.....	1	2	3	4	5

Time required for reading and comprehension of Part 2 of Journal course text: _____ minutes

continued next page

Part 3: An Emerging Clinical Paradigm: The Cuffed Pediatric Endotracheal Tube

JOHN AKER, CRNA, MS

- 1. Content related to objectives1 2 3 4 5
- 2. Content organized and easy to follow.....1 2 3 4 5
- 3. Content relevant and current.....1 2 3 4 5

Objectives

Objectives	
Not met	Met

- 3.1 Describe historical experiences in the respiratory management of pediatric patients1 2 3 4 5
- 3.2 Detail the current understanding of pediatric laryngeal structure1 2 3 4 5
- 3.3 Discuss the advantages and disadvantages of cuffed and uncuffed endotracheal tubes1 2 3 4 5
- 3.4 Demonstrate an understanding of clinical approaches for the determination of a properly fitting endotracheal tube in pediatric patients.....1 2 3 4 5
- 3.5 Identify limitations of the currently available, manufactured, cuffed endotracheal tubes for pediatric patients1 2 3 4 5

Time required for reading and comprehension of Part 3 of Journal course text: _____ minutes 

Part 4: Gender Differences in Pain: Does X = Y?

MATTHEW TOOMEY, CRNA, MSNA

- 1. Content related to objectives1 2 3 4 5
- 2. Content organized and easy to follow.....1 2 3 4 5
- 3. Content relevant and current.....1 2 3 4 5

Objectives

Objectives	
Not met	Met

- 4.1 Describe psychological factors that influence pain between genders.....1 2 3 4 5
- 4.2 Understand the influential role that sex hormones have on pain1 2 3 4 5
- 4.3 Describe factors that may alter pain during pregnancy1 2 3 4 5
- 4.4 Elucidate gender differences in postoperative pain1 2 3 4 5
- 4.5 Understand anesthetic implications and the influence of sex hormones on minimum alveolar concentration of the inhaled anesthetics.....1 2 3 4 5

Time required for reading and comprehension of Part 4 of Journal course text: _____ minutes 

Part 5: Implications of Immune Function to Anesthesia Care

CHARLES A. GRIFFIS, CRNA, PhD

GAYLE PAGE, DNSc

MICHAEL KREMER, CRNA, PhD, FAAN

STEVEN YERMAL, CRNA, PhD

- 1. Content related to objectives1 2 3 4 5
- 2. Content organized and easy to follow.....1 2 3 4 5
- 3. Content relevant and current.....1 2 3 4 5

Objectives

Objectives	
Not met	Met

- 5.1. Discuss basic immune function as it relates to perianesthesia care.....1 2 3 4 5
- 5.2 Describe potential sources of perioperative immune stress.....1 2 3 4 5
- 5.3 Discuss the effect of perianesthesia drug therapy on immune function.....1 2 3 4 5

5.4 List patient-specific and procedure-specific measures anesthesia providers may take to support postoperative immune function	1	2	3	4	5
5.5 Identify patient populations at risk for serious immune suppression in the perioperative period	1	2	3	4	5

Time required for reading and comprehension of Part 5 of Journal course text: _____ minutes 

Part 6: *Should I Continue or Discontinue That Medication?*

JOHN NAGELHOUT, CRNA, PhD, FAAN

SASS ELISHA, CRNA, EdD

EDWARD WATERS, CRNA, MN

1. Content related to objectives	1	2	3	4	5
2. Content organized and easy to follow.....	1	2	3	4	5
3. Content relevant and current.....	1	2	3	4	5

Objectives	Objectives				
	Not met				Met
6.1 Describe the current practice guidelines regarding the perioperative use of beta-blocking medications.....	1	2	3	4	5
6.2 Appropriately apply pharmacokinetic and pharmacodynamic principles of antidiabetic agents to the preoperative care of patients.....	1	2	3	4	5
6.3 Plan proper management of anticoagulant and antiplatelet agents during the perioperative period.....	1	2	3	4	5
6.4 Summarize the physiologic effects of corticosteroids.....	1	2	3	4	5
6.5 Discuss the anesthetic concerns associated when patients are prescribed medications used to treat psychological disorders.....	1	2	3	4	5

Time required for reading and comprehension of Part 6 of Journal course text: _____ minutes 

Overall Course Evaluation

A. Content (Parts 1-6)

1. Relates to objectives and overall purpose/goals	1	2	3	4	5
2. Based on current professional information	1	2	3	4	5
3. Level appropriate for identified intended audience	1	2	3	4	5
4. Corresponds with learner objectives identified at beginning of each part.....	1	2	3	4	5

B. Teaching Methods (Parts 1-6)

1. Self-test questions facilitated the learning process	1	2	3	4	5
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C. Relevancy to Practice (Parts 1-6)

1. Information presented can be applied to my practice	1	2	3	4	5
2. Information provided is helpful in achieving my professional goals	1	2	3	4	5

AANA Journal Course No. 28 Examination

Update for Nurse Anesthetists

Please circle 1 response for each question.

After you have marked your answers on this examination, transfer them to the answer sheet provided. Examination and Evaluation No. 28 also is available online.

Mail your answer sheet and evaluation form to:

AANA Continuing Education Department
222 S. Prospect Ave.
Park Ridge, IL 60068-4001
Attn: AANA Journal Course

The examination and evaluation must be postmarked by July 31, 2009.

Toward Reducing Perioperative Transfusions

- 1. Which of the following is NOT a primary reason patients cite when refusing blood product transfusions?**
 1. disease transmission
 2. religious tenets
 3. financial concerns
 4. none of the above
- 2. Which of the following blood transfusion risks has the greatest frequency?**
 1. hepatitis C
 2. bacterial infection
 3. human immunodeficiency virus
 4. hepatitis B
- 3. A "transfusion trigger" is:**
 1. a scientifically objective indicator of the need for blood product transfusion
 2. the only indicator of the need for blood product transfusion
 3. based solely on the hematocrit value
 4. a subjective interpretation of the need for blood product transfusion
- 4. The long adhered to "transfusion triggers" first proposed in 1942 were:**
 1. hemoglobin less than or equal to 6 g/dL and hematocrit less than or equal to 20%
 2. hemoglobin less than or equal to 8 g/dL and hematocrit less than or equal to 27%
 3. hemoglobin less than or equal to 10 g/dL and hematocrit less than or equal to 30%
 4. hemoglobin less than or equal to 12 g/dL and hematocrit less than or equal to 30%
- 5. Interventions to reduce the rate of blood product transfusions are classified as:**
 1. intraoperative
 2. postoperative
 3. preoperative
 4. all of the above
- 6. Which antifibrinolytic medication has been withdrawn from the market?**
 1. tranexamic acid
 2. aprotinin
 3. aminocaproic acid
 4. vasopressin
- 7. Which of the following are known to prolong coagulation?**
 1. certain prescribed medications, such as clopidogrel
 2. some over-the-counter medications, such as ibuprofen
 3. some herbal supplements, such as chamomile
 4. all of the above
- 8. Serious side effects that may result from administration of erythropoietin-stimulating agents include all of the following EXCEPT:**
 1. severe hypertension
 2. myocardial infarction
 3. immunogenicity
 4. none of the above
- 9. Which of the following interventions by the anesthetist can help reduce intraoperative blood loss?**
 1. general anesthesia with positive pressure ventilation
 2. maintaining an elevated blood pressure
 3. maintaining normothermia
 4. hypocapnia
- 10. What is the simplest intervention to reduce the potential for blood product transfusion?**
 1. preoperative autologous donation
 2. accept lower hemoglobin and/or hematocrit values
 3. acute normovolemic hemodilution
 4. administration of desmopressin acetate

Evidence-Based Anesthesia: Fever of Unknown Origin in Parturients and Neuraxial Anesthesia

11. Chorioamnionitis is definitely diagnosed by:

1. fever greater than 102°F
2. foul smelling amniotic fluid
3. abdominal pain or tenderness
4. histological evidence from the placenta

12. Which of the following is/are true regarding the anesthesia implications of chorioamnionitis?

1. chorioamnionitis increases the risk of cesarean delivery to 30% to 40%
2. chorioamnionitis results in less pain during labor
3. chorioamnionitis does nothing to the labor pattern
4. all of the above

13. In the United States, the incidence of deep epidural infection was calculated by Ruppen et al to be _____ per year.

1. 13
2. 22
3. 59
4. 603

14. The decision to proceed with neuraxial anesthesia in the febrile parturient should be based on:

1. a careful evaluation of the risk/benefit ratio of general anesthesia
2. the temperature obtained from an oral thermometer
3. the theoretical risk of neuraxial infection
4. blood culture result

15. The literature review regarding chorioamnionitis may be limited by the fact that:

1. few of the articles come out of the United States
2. most of the literature is from before 1990
3. the studies cited are not large enough to convey statistical strength
4. none of the above

16. Which of the following is/are true regarding the antibiotic treatment for chorioamnionitis?

1. intrapartum therapy is associated with improved outcomes for mother and baby
2. antibiotic therapy should be guided by treatment of the most likely causative organism
3. antibiotic therapy should be guided by the treatment that is able to traverse the placenta barrier to reach the fetus
4. all of the above

17. Postneuraxial infections are most likely related to:

1. a specific organism
2. a break in sterile technique
3. chorioamnionitis
4. difficulty in placement of block

18. Management of the patient with chorioamnionitis receiving a neuraxial anesthetic requires:

1. no antibiotic therapy
2. beta blockade therapy
3. postpartum surveillance for epidural abscess
4. a temperature of less than 98°F before proceeding

19. Which of the following is true regarding neuraxial infection rates?

1. the risk of infection is greater after a spinal anesthetic
2. the risk of infection is greater after an epidural anesthetic
3. reports on the risk of infection comparing spinal vs epidural anesthesia have been mixed
4. there is an increased incidence of neuraxial infection in the obstetrical population

20. The weight of evidence for this topic is limited by:

1. the incidence of neuraxial complications is low
2. insufficient interest in the topic
3. poorly designed randomized trials
4. poorly written case reports

An Emerging Clinical Paradigm: The Cuffed Pediatric Endotracheal Tube

21. In the 1960s, the technological leap that prompted the dramatic change in the ventilatory management of the pediatric patient was the:

1. use of tracheostomy for long-term ventilatory management
2. use of red rubber endotracheal tubes (ETs)
3. development of soft, pliable polyvinyl chloride ETs
4. use of cuffed ETs

22. The development of acquired laryngotracheal stenosis was first reported following:

1. long-term tracheostomy
2. the use of oversized uncuffed ETs
3. the use of cuffed ETs
4. the short-term use of uncuffed ETs

23. The transverse dimension of the pediatric larynx is:

1. elliptical in shape
2. cylindrical in shape
3. cylindrical at the level of the cricoid cartilage
4. round at the level of the cricoid cartilage

24. The tracheal mucosal perfusion pressure in the infant and child is:

1. greater than 18 mm Hg
2. 18 to 22 cm H₂O
3. 25 to 30 mm Hg
4. Unknown

25. Which of the following is a clinical advantage when employing a cuffed ET?

1. decreased inspired gas flow

2. precise determination of end-tidal carbon dioxide
3. avoidance of repeat laryngoscopy
4. all of the above

26. An accurate determination of ET cuff pressure is best accomplished with which of the following?

1. manometer
2. palpation of pilot balloon
3. inflation of cuff to minimal leak
4. use of a low-volume, high-pressure cuff

27. Which of the following variables will NOT influence the identified audible leak when using the leak test to determine ET fit?

1. skeletal muscle relaxation
2. head position
3. depth of anesthesia
4. length of breathing circuit

28. Pediatric ETs are sized according to:

1. outer diameter
2. length
3. internal diameter
4. cuff length

29. Which of the following formulas would be appropriate to select a cuffed ET for a 5 year-old child?

1. (age)/4 + 4
2. (age)/4 + 3
3. 16 + (age)/4
4. 4 + (age)/3

30. Which of the following is correct regarding the use of a cuffed ET in the pediatric patient?

1. there is a body of evidence that cuffed tubes are more dangerous than uncuffed tubes
2. the ET tube should have a high-pressure, low-volume cuff
3. the risk of endobronchial intubation is decreased with the use of a cuffed ET
4. changes in head and neck position increase the risk of endobronchial intubation

Gender Differences in Pain: Does X = Y?

31. Which of the following may account for greater sensitivity to pain in females?

1. greater hypervigilance
2. greater body-monitoring
3. higher prevalence of anxiety and depression
4. all of the above

32. Choose the correct statement regarding the psychological factors influencing pain:

1. males always have higher anxiety that correlates with more pain

2. differences in pain occur at the level of the autonomic nervous system
3. males are more sensitive to pain because of exposure to biologic events
4. females are generally more stoic and do not express pain openly

33. Which pain condition has been found to parallel hormonal changes during the menstrual cycle?

1. migraines
2. temporomandibular joint pain
3. tension headache
4. all of the above

34. Choose the correct statement regarding hormone fluctuations and pain:

1. with low levels of estrogen, progesterone is pronociceptive
2. pain thresholds are increased during the midluteal phase
3. with elevated levels of progesterone, there is an antinociceptive response
4. estrogen and progesterone have no effect on pain threshold

35. What nerve innervates the uterus and augments the analgesia of pregnancy?

1. vagus
2. pudendal
3. hypogastric
4. splanchnic

36. Which of the following may explain the increased tolerance to pain seen during pregnancy?

1. elevated blood volume
2. direct activation of cerebellar receptors by estrogen
3. decreased PaCO₂ due to higher minute ventilation
4. interaction of hormones on spinal alpha₂-adrenergic receptors

37. In the immediate postoperative period:

1. males require larger narcotic doses to achieve similar pain relief
2. females experience lower thresholds and greater intensity of pain
3. females experience higher thresholds and lower intensity of pain
4. males experience lower thresholds and equal intensity of pain

38. How much morphine do females require in the postoperative area to achieve similar analgesia to males?

1. comparable amounts are found between genders
2. 30% more than males
3. 50% more than males
4. 70% more than males

39. Progesterone:

1. alters the plasticity of the GABA_A receptor complex
2. interacts with nicotinic postjunctional receptors prolonging the duration of muscle relaxants
3. inhibits adenosine triphosphatase (ATPase) that may decrease minimum alveolar concentration (MAC) requirements
4. increases MAC requirements by an unknown mechanism during pregnancy

40. Choose the correct statement:

1. pregnancy increases the MAC of inhaled anesthetics
2. estrogen is the hormone of pregnancy that likely decreases MAC values
3. progesterone can induce sleep in humans
4. female sex hormones have no effect on MAC values

Implications of Immune Function to Anesthesia Care

41. Increased capillary permeability and local vasodilation are attributes of a process mediated by which branch of the immune system?

1. adaptive
2. specific
3. innate
4. lymphocytic

42. The primary function of T-helper or CD4 cells is to assist which types of immune response?

1. cellular and humoral
2. lymphocytic and myelocytic
3. innate and reticuloendothelial
4. nonspecific and lymphatic

43. Which product of the metabolic stress response to surgery is globally immunosuppressive?

1. vasopressin
2. cortisol
3. human growth hormone
4. prolactin

44. The effect of surgery-related tissue damage on adaptive immune cell function is largely mediated by which molecule?

1. norepinephrine
2. prostaglandin E₂
3. arginine vasopressin
4. glucagon

45. Which of the following statements best describes the relationship between perioperative opioid drug therapy and immune function?

1. there is no effect of any kind
2. opioid molecules exert no direct effect on immune cells but depress immune function by stimulating release of cortisol
3. immune function is generally enhanced with opioid administration

4. immune-depressant effects of opioid drugs are likely outweighed by their propensity to decrease the stress response

46. The effect of an anesthetic agent on immune function is characterized by:

1. no obvious depression of function
2. significant depression of function by all anesthetic drugs
3. interaction with surgical stress and the perianesthetic environment determines effect
4. enhancement of immune system function

47. The favorable effect of regional anesthetic techniques on the surgical stress response and immune function is predicated on:

1. local anesthetic drug choice
2. age of the patient
3. surgery location
4. parenteral opioid use

48. In a cachectic patient with metastatic bowel cancer, scheduled for cholecystectomy for gallstones, which of the following is true?

1. this patient is not at risk for increased morbidity due to postoperative immune depression
2. liberal use of opioids will prevent any surgery-related immune effects
3. the postoperative immune function will have no impact on the patient's cancer prognosis
4. postoperative immune function will benefit from a laparoscopic cholecystectomy

49. During the postoperative period in patients with preexisting immune dysfunction:

1. there is mild immune depression of little clinical consequence
2. perioperative immune suppression may cause significant morbidity
3. immune activation affords additional protection from infection
4. adaptive immune function is preserved due to decreased inflammation

50. During emergency resection of an aortic aneurysm in a patient with a recent pancreas/kidney transplant, which condition should be avoided in order to support postoperative immune function?

1. hyperglycemia
2. elevated PaO₂
3. normothermia
4. diuresis

Should I Continue or Discontinue That Medication?

51. Abrupt withdrawal of beta-blocking medications should be avoided because:

1. decreased platelet aggregation can result in intraoperative bleeding

2. down regulation of cardiac beta receptors occurs with preoperative therapy
 3. increased sympathetic nervous system activity will result in cardiac morbidity
 4. of a higher incidence of bronchospasm
- 52. The American College of Cardiology recommends that beta-blocking medications should be administered to high risk patients having:**
1. intrathoracic surgery
 2. orthopedic surgery
 3. urologic surgery
 4. vascular surgery
- 53. The degree of hypothalamic pituitary adrenal suppression is dependent on the:**
1. amount of adrenocorticotrophic hormones produced
 2. degree of physiologic stress during the perioperative period
 3. dose and duration of therapy
 4. number of pathophysiologic disease states
- 54. The glucocorticoid potency of dexamethasone as compared to cortisol is:**
1. 5 times greater
 2. 5 times lesser
 3. 25 times greater
 4. 25 times lesser
- 55. The vasopressor of choice used to treat hypotension for patients taking tricyclic antidepressants is:**
1. dopamine
 2. ephedrine
 3. epinephrine
 4. phenylephrine
- 56. Which sign is associated with monoamine oxidase inhibitor therapy?**
1. adrenal insufficiency
 2. anticoagulation
 3. hyperglycemia
 4. hypertension
- 57. Insulin glargine's pharmacokinetic properties include:**
1. absence of a peak in activity
 2. low bioavailability
 3. rapid onset
 4. short duration of activity
- 58. Perioperative use of metformin is associated with increased risk of:**
1. hypoglycemia
 2. myocardial ischemia
 3. lactic acidosis
 4. renal failure
- 59. In emergency situations, what can be administered to reduce bleeding associated with anti-platelet drugs?**
1. aminocaproic acid, fresh frozen plasma, platelets
 2. fresh frozen plasma, vitamin K, platelets
 3. platelets, corticosteroids, fresh frozen plasma
 4. protamine, corticosteroids, platelets
- 60. When preparing a patient with a drug-eluting stent for surgery, low-dose aspirin administration should be:**
1. administered at a reduced dose
 2. continued throughout the perioperative period
 3. discontinued 1 week before surgery
 4. held on the morning of surgery