



## *CE Credit Package 13*

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## ORIF: PIP Fracture and Dislocation of the Fingers

- Which surgical discipline was not included in Dr. Bunnell's ideal combination for hand surgery?**
  - Orthopedic
  - Plastic
  - ENT
  - Neuro
- Dr. Bunnell believed that improper \_\_\_ contributed to the less-than-complete restorations of function that he observed.**
  - Splinting
  - Traction
  - Skin grafting
  - All of the above
- The \_\_\_ is the primary ligament in the PIP joint.**
  - Volar plate
  - Metacarpophalangeal
  - Interphalangeal
  - None of the above
- One of the most common injuries to the PIP joint is a \_\_\_.**
  - Fracture
  - Sprain
  - Dislocation
  - rupture
- X-rays are used \_\_\_ to determine if there is an avulsion fracture to the joint.**
  - Preoperatively
  - Intraoperatively
  - Postoperatively
  - All of the above
- Most PIP injuries are treated \_\_\_.**
  - Surgically
  - Using the "shotgun" technique
  - Nonsurgically
  - Using ORIF
- Cefazol is administered preoperatively as a/an \_\_\_.**
  - Anti-inflammatory
  - Antibiotic
  - Nerve block
  - None of the above
- The articular surface of the joint is exposed using the \_\_\_.**
  - Shot gun technique
  - Bruner incision
  - Bunnell incision
  - Volar approach
- Postsurgical physical therapy begins \_\_\_.**
  - The day of surgery
  - Within a month
  - Within a week
  - As soon as tolerable
- \_\_\_ are required elements to an ORIF modular hand set.**
  - Screwdriver blades
  - Plate-and screw-holding forceps
  - Depth gauges
  - All of the above

## Microbiology Review: Pathogens and Disease

- 1. Biological classification as we currently know it was developed by \_\_\_\_.**
  - a. Charles Darwin
  - b. Carl Linnaeus
  - c. The Human Genome Project
  - d. None of the above
- 2. The components of a cell do not include \_\_\_\_.**
  - a. Nucleus
  - b. Plasma membrane
  - c. Cytoplasm
  - d. Organisms
- 3. The liquid portion of the cell is called \_\_\_\_.**
  - a. Cytoplasm
  - b. Protoplasm
  - c. Fat droplets
  - d. Vacuole
- 4. Cristae occur in the \_\_\_\_ of the cell.**
  - a. Vacuole
  - b. Storage granules
  - c. Mitochondria
  - d. All of the above
- 5. There are \_\_\_\_ types of RNA**
  - a. 2
  - b. 3
  - c. 4
  - d. 5
- 6. In \_\_\_\_, the centromere splits and the duplicated chromosomes separate.**
  - a. Prophase
  - b. Metaphase
  - c. Anaphase
  - d. Telophase
- 7. The resting/functional phase between cell divisions is called \_\_\_\_.**
  - a. Prophase
  - b. Metaphase
  - c. Anaphase
  - d. None of the above
- 8. Diffusion, osmosis and filtration are examples of \_\_\_\_.**
  - a. Passive transport
  - b. Active transport
  - c. Exocytosis
  - d. None of the above
- 9. There are \_\_\_\_ types of microorganisms that can cause disease in humans.**
  - a. 2
  - b. 3
  - c. 4
  - d. 5
- 10. \_\_\_\_ are susceptible to antibiotics.**
  - a. Viruses
  - b. Fungi
  - c. Bacteria
  - d. All of the above

## Microbiology Review: Pathogens and Disease – questions cont.

11. \_\_\_ must be within a living cell to replicate.
- Viruses
  - Fungi
  - Bacteria
  - Protozoa
12. \_\_\_ are spread by fecal-oral contamination and vectors, like mosquitos.
- Viruses
  - Fungi
  - Bacteria
  - Protozoa
13. \_\_\_ do not contain genetic material.
- Fungi
  - Protozoa
  - Prions
  - None of the above
14. Communicable diseases are classified as \_\_\_.
- Epidemic
  - Endemic
  - Pandemic
  - All of the above
15. Skin, body secretions and body reflexes are examples of \_\_\_.
- Nonspecific defenses
  - Specific defenses
  - Immunization
  - Acquired immunity
16. An animal's inability to contract the measles is a result of \_\_\_.
- Naturally acquired immunity
  - Inborn immunity
  - Acquired immunity
  - Antibodies
17. \_\_\_ contain acids, enzymes or chemicals to destroy potential invaders.
- Saliva
  - Tears
  - Sweat
  - All of the above
18. The "first line of defense" in the body's immune system is \_\_\_.
- Reflexes
  - Skin
  - Inborn immunity
  - Acquired immunity
19. A genome represents \_\_\_.
- Linnaean categorization
  - All DNA in an organism
  - The genes of a given organism
  - A social project
20. Potential applications for the Human Genome Project include \_\_\_.
- Molecular medicine
  - DNA forensics
  - Energy sources
  - All of the above

# Transmission-Based Isolation Precautions in the OR: Critical Practices to Prevent the Spread of Infectious Diseases in the Operative Setting

1. HAIs cost American hospitals \_\_\_ per year.
  - a. \$15-25 million
  - b. \$28-45 million
  - c. \$10-15 billion
  - d. \$28-45 billion
2. All infectious diseases are caused by a \_\_\_\_\_.
  - a. Port of entry
  - b. Microorganism
  - c. Chain of infection
  - d. Vector
3. According to published estimates, \_\_\_ or HAIs may be preventable.
  - a. 70
  - b. 50
  - c. 90
  - d. 30
4. Infectious diseases are spread \_\_\_ by methods.
  - a. Airborne
  - b. Direct contact
  - c. Vector
  - d. All of the above
5. Current illness and lack of vaccination increase \_\_\_ of/to disease.
  - a. Susceptibility
  - b. Indicators
  - c. Methods
  - d. None of the above
6. Infectious agents do not include \_\_\_\_\_.
  - a. Fungi
  - b. Bacteria
  - c. Infected individuals
  - d. Protozoa
7. Breaking the “Mode of Transmission” link involves all but \_\_\_\_\_.
  - a. Airflow control
  - b. Isolation precautions
  - c. Sterilization
  - d. Aseptic technique
8. \_\_\_ is not an airborne infectious agent.
  - a. HIV
  - b. Bioaerosols
  - c. Varicella virus
  - d. None of the above
9. Microorganisms on or within body sites without infection is/are called \_\_\_\_\_.
  - a. Fungal spores
  - b. Colonization
  - c. Respiratory droplets
  - d. Multi-drug-resistant organisms
10. Infections directly related to receiving medical care are called \_\_\_\_\_.
  - a. Health care-associated
  - b. Nosocomial
  - c. Opportunistic
  - d. Viral

# Transmission-Based Isolation Precautions in the OR: Critical Practices to Prevent the Spread of Infectious Diseases in the Operative Setting- questions cont.

11. AIDS is an example of a/an \_\_\_\_ infection.
- HAI
  - Nosocomial
  - Opportunistic
  - Bacterial
12. Blood-borne pathogens include \_\_\_\_.
- HCV
  - HIV
  - HBV
  - All of the above
13. PPE is not associated with \_\_\_\_.
- Barrier precautions
  - Contact precautions
  - Droplet precautions
  - Engineering controls
14. Respirators are required PPE when dealing with airborne infectious agents \_\_\_\_.
- Less than five microns in size
  - Less than seven microns in size
  - More than five microns in size
  - All of the above
15. \_\_\_\_ are worn in general patient care situations.
- Respirators
  - Procedure masks
  - Surgical masks
  - Eye protection
16. Respirators are required when handling patients with \_\_\_\_.
17. Containing ones own airborne droplets is a part of \_\_\_\_.
- Respiratory hygiene
  - Hand hygiene
  - Cough etiquette
  - A & C
18. Organisms that live in or on another and take advantage of the host are \_\_\_\_.
- Viruses
  - Parasites
  - Protozoa
  - Prions
19. MRSA and Vancomycin-resistant enterococci (VRE) are examples of \_\_\_\_.
- Airborne infectious agents
  - Prions
  - Multidrug Resistant Organisms
  - All of the above
20. Those who contract VRE typically have \_\_\_\_.
- Recently had surgery
  - Weakened immune systems
  - Chronic illnesses
  - All of the above

# Malignant Hyperthermia Crisis

1. **The malignant Hyperthermia Association of the United States (MHAUS) recognizes which of the following areas as having a high level of malignant hyperthermia susceptible individuals?**
  - a. Maine
  - b. California
  - c. West Virginia
  - d. Texas
  
2. **The most common initial sign of a malignant hyperthermia crisis is:**
  - a. Masseter muscle rigidity
  - b. Elevated temperature
  - c. Tachycardia
  - d. Hypertension
  
3. **Vials of dantrolene sodium are reconstituted with water because:**
  - a. malignant hyperthermia already causes an increase in sodium in the vascular spaces.
  - b. the vials also contain enough electrolytes to maintain an isotonic solution.
  - c. using sodium chloride would cause renal failure due to the increase in vascular volume
  - d. the reconstitution should be a slow process and saline works too quickly.
  
4. **Which of the following medications should be included in a malignant hyperthermia cart?**
  1. furosemide
  2. diltiazem
  3. insulin
  4. sodium bicarbonate
  - a. 1 & 2
  - b. 1, 3 and 4
  - c. 1, 2, 3 and 4
  - d. 2, 3 and 4
  
5. **You are providing a tour of the operating room to some surgical technology students. One asks why the malignant hyperthermia cart is located in the PACU. You respond:**
  - a. "Patients have been known to have an MH crisis after the surgery is completed."
  - b. "This location helps us to distinguish between the regular crash cart and the malignant hyperthermia cart."
  - c. "It is normally stored in the pharmacy; there must be a patient with high potential for a crisis scheduled."
  - d. "The PACU area has a warmer ambient temperature and it prevents deterioration of the medication."
  
6. **Your next surgical patient is known to have a parent who demonstrated a high fever after surgery. Which statement indicates an appropriate set-up of the operating room for this patient?"**
  - a. The temperature in the room is decreased to 65° Fahrenheit.
  - b. The anesthesia machine is prepared with fresh soda lime.
  - c. Anesthesia has succinylcholine prepared for rapid sequence intubation.
  - d. The malignant hyperthermia cart is stocked and placed in the PACU.
  
7. **The surgeon complains that the patient's abdominal muscles are "tight" and that the patient is getting too little anesthesia. The patient's skin is bright red and the end-tidal carbon dioxide level has risen sharply in the last few minutes. Anesthesia personnel should:**
  - a. Provide more inhalation agent to deepen the patient's anesthesia level.
  - b. Apply a bispectral monitor to determine if the patient is too light.
  - c. Discontinue the inhalation anesthetic and call for the MH cart.
  - d. Administer another dose of succinylcholine to cause the muscles to relax.



## **Malignant Hyperthermia Crisis – questions cont.**

8. Patient's suffering an MH crisis in the intraoperative setting should be monitored postoperatively for:
- 1) respiratory difficulties
  - 2) renal failure
  - 3) cardiac arrhythmias
  - 4) recurrence of MH
- a. 1 and 2 only
  - b. 3 and 4 only
  - c. 1,2 and 4
  - d. 1, 2, 3 and 4
9. Your next patient states that his mother had an MH crisis during surgery. However, the patient had genetic testing which showed no mutations of the RyR1 gene. Which statement best describes his risk for developing a crisis.
- a. Low risk: genetic testing is the standard test for measuring MH susceptibility.
  - b. High risk: family history is more important than genetic testing or contracture tests for determining susceptibility.
  - c. High risk: muscle biopsy contracture tests are the best method of determining MH susceptibility.
  - d. Low risk: transmission of the mutation is linked to paternal genes, not maternal.
10. Which of the following are considered "late signs of a malignant hyperthermia crisis?"
- 1) unexplained tachycardia
  - 2) oliguria
  - 3) increased temperature
  - 4) prolonged bleeding
- a. 1, 2, and 3
  - b. 2, 3 and 4
  - c. 1, 3 and 4
  - d. 1, 2 and 4

## Surgery for Space Exploration

- \_\_\_ is the study of the effects of space on the human body.**
  - Space medicine
  - Aerospace physiology
  - Spaceflight deconditioning
  - Long-term exposure
- \_\_\_ are among the most common changes the body experiences during space flight.**
  - Neurovestibular deficiencies
  - Musculoskeletal deficiencies
  - Immune deficiencies
  - All of the above
- Hypervolemia causes all but \_\_\_.**
  - Decrease in plasma volume
  - Increase in red blood cells
  - Reduced cardiac volumes
  - Increased risk for arrhythmias
- Light-headedness and fainting are associated with landing day due to \_\_\_.**
  - Orthostatic stress
  - Immune deficiencies
  - Spaceflight deconditioning
  - Body fluid redistribution
- The most common medical condition experienced by astronauts is \_\_\_.**
  - Spaceflight deconditioning
  - Facial pallor
  - Space motion sickness
  - None of the above
- Spending two weeks in space can diminish a person's muscle mass by \_\_\_.**
  - 5%
  - 10%
  - 15%
  - 20%
- Muscle loss can be mitigated with \_\_\_.**
  - Preflight exercise
  - Exercise during flight
  - Nutritional supplementation
  - All of the above
- Blunt and penetrating trauma requiring surgery is unlikely to occur during \_\_\_.**
  - Launch procedures
  - Space walks
  - Vehicle docking
  - Servicing payloads
- The physical risk of \_\_\_ injuries is increased in space.**
  - Dental
  - Psychological
  - Orthopedic
  - Minor
- Obstacles for performing space surgery include limited \_\_\_.**
  - Water**
  - Physical space on board**
  - Disinfectants**
  - Oxygen**
  - 2 and 3 only
  - 1 and 2 only
  - 1, 2 and 3 only
  - All of the above

## Surgery for Space Exploration – questions cont.

11. \_\_\_ is preferred anesthetic for use in space.
1. Local
  2. Inhalational
  3. Spinal
  4. Intravenous
- a. 1 and 4 only  
b. 1 and 2 only  
c. 2 and 3 only  
d. 1, 3 and 4 only
12. Challenges facing space surgery patients include \_\_\_.
- a. Decreased wound healing
  - b. Radiation
  - c. Anemia
  - d. All of the above
13. Konstantin Tsiolkovsky is considered the \_\_\_.
- a. Father of space surgery
  - b. Father of Cosmonautics
  - c. First space surgery patient
  - d. First astronaut
14. There is no gravity in space.
- a. True
  - b. False
15. The mass of objects affected by microgravity \_\_\_.
- a. Increases
  - b. Decreases
  - c. Remains the same
  - d. Fluctuates
16. Protein loss in space can be \_\_\_ that of people on bed rest on Earth.
- a. Three times
  - b. Equivalent to
  - c. Less than
  - d. None of the above
17. Acute radiation syndrome is not caused by \_\_\_.
- a. Large solar particle events
  - b. High levels of solar activity
  - c. Exposure to high doses of solar radiation
  - d. High risk of hemorrhaging or death
18. When something “floats” in space, it is due to \_\_\_.
- a. Microgravity
  - b. Optical illusion
  - c. Zero gravity
  - d. All of the above
19. Resistance exercise and vitamins D and K are recommended during flight to combat \_\_\_.
- a. Muscle atrophy
  - b. Bone demineralization
  - c. Immune dysregulation
  - d. All of the above
20. NASA technology has been used on Earth to \_\_\_.
- a. Clean arteries nonsurgically
  - b. Manipulate voice-controlled wheelchairs
  - c. Create portable X-ray devices
  - d. All of the above

## Cannulated Retinal Surgery

- The \_\_\_ is a layer of blood vessels and connective tissue that supplies nutrients to the inner eye.**
  - Sclera
  - Conjunctiva
  - Choroid
  - Uvea
- The uveal tract does not include the \_\_\_.**
  - Cornea
  - Ciliary body
  - Iris
  - Choroid
- The \_\_\_ helps maintain the global structure of the eye.**
  - Vitreous
  - Ciliary body
  - Endothelium
  - Bowman's membrane
- Sharp images and color recognition are determined by the \_\_\_.**
  - Rods
  - Cones
  - Ganglion cells
  - Retina
- A pars plana vitrectomy removes \_\_\_\_.**
  - Scar tissue
  - Traction
  - Membranes
  - All of the above
- \_\_\_ drops are administered to the operative eye prior to injection prep.**
  - Lidocaine
  - Bupivacaine
  - Proparacaine
  - None of the above
- The infusion line \_\_\_\_.**
  - Maintains pressure in the globe
  - Provides a port of entry for illumination
  - Prevents leakage
  - All of the above
- A/an \_\_\_ should be worn while sleeping for at least one week postoperatively.**
  - Eye patch
  - Pair of glasses
  - Eye shield
  - Sleep mask
- Exogenous endophthalmitis results from \_\_\_\_.**
  - Complications of ocular surgery
  - Penetrating ocular trauma
  - Blunt ocular trauma
  - All of the above
- The three points of insertion are not used for \_\_\_\_.**
  - Infusion
  - Insertion of vitrector
  - Pressure relief
  - Insertion of light source

# Innovations in Endoscopic Sinus Surgery

1. **The OR must be equipped with these devices \_\_\_ for an endoscopic sinus surgery.**
  - a. Video monitor display system
  - b. High-definition camera
  - c. Light source
  - d. All of the above
2. **Balloon sinuplasty is a minimally invasive procedure performed during sinus surgery where a \_\_\_ is guided into the sinus then inflated.**
  - a. Microdebrider
  - b. Suction
  - c. Sinus balloon catheter
  - d. Sinuscope
3. **The goal of an ESS is to \_\_\_\_.**
  - a. Ensure ventilation
  - b. Restore mucociliary clearance
  - c. Prevent sinus infection
  - d. All of the above
4. **The nasal sinuses are comprised of \_\_\_\_.**
  - a. Frontal and sphenoid sinuses
  - b. Ethmoid and maxillary sinuses
  - c. None of the above
  - d. A and B
5. **Where did endoscopic surgery procedures originate?**
  - a. United States
  - b. Germany and Austria
  - c. The Netherlands
  - d. Australia
6. **Approximately how many Americans suffer from sinusitis yearly?**
  - a. 37,000
  - b. 37 million
  - c. 31 million
  - d. None of the above
7. **Symptoms of chronic sinusitis may include \_\_\_\_.**
  - a. Headaches, facial pain, nasal drainage
  - b. Nasal obstruction, halitosis
  - c. Fatigue
  - d. All of the above
8. **The nasal cavity is divided midline by the \_\_\_\_.**
  - a. Nasal septum
  - b. Turbinate bones
  - c. Maxillary sinus
  - d. Superior meatus
9. **Nasal polypectomy is the removal of \_\_\_ from the nasal cavity.**
  - a. Mucous membrane
  - b. Connective tissue
  - c. Middle turbinate
  - d. Polyps
10. **Although uncommon, what complications can arise from ESS?**
  - a. Synechia
  - b. Cerebral spinal fluid leakage
  - c. Orbital hematomas
  - d. All of the above

# Automated Anesthesia and Natural Orifice Transluminal Endoscopic Surgery

- 1. McSleepy is a \_\_\_\_.**
  - a. Car
  - b. Robotic system
  - c. Computer
  - d. None of the above
- 2. Closed-loop anesthesia systems utilize complex \_\_\_\_ based on patient data.**
  - a. Algorithms
  - b. Pharmacokinetics
  - c. Biological factors
  - d. Computer systems
- 3. McSleepy is commonly referred to as an \_\_\_\_ robot.**
  - a. Surgery
  - b. Anesthesiologist
  - c. Anesthesia
  - d. Excellent
- 4. McSleepy lends itself to revolutionizing patient care by \_\_\_\_.**
  - a. Improving patient care
  - b. Giving more accurate dosing
  - c. None of the above
  - d. Both a and b
- 5. Natural orifice transluminal endoscopic surgery shows potential to further alter the state of \_\_\_\_ and treatment.**
  - a. Surgeries
  - b. Disease diagnosis
  - c. Recovery
  - d. Internal complications
- 6. NOTES has greatly enhanced recovery of the surgical patient while simultaneously decreasing \_\_\_\_.**
  - a. Morbidity
  - b. Postoperative pain
  - c. Healing time
  - d. All of the above
- 7. The McSleepy anesthesia robot was combined with the DaVinci surgical robot to perform the world's first \_\_\_\_.**
  - a. Total-robotic operation
  - b. Heart surgery
  - c. Knee replacement
  - d. All of the above
- 8. Natural orifice transluminal endoscopic surgery is a \_\_\_\_.**
  - a. Large-scale procedure
  - b. Minimally-invasive operation
  - c. Laparoscopic procedure
  - d. Both b and c
- 9. NOTES utilizes the body's natural \_\_\_\_ to access internal abdominal organs and structures without leaving an external scar.**
  - a. Fluids
  - b. Clock
  - c. Orifices
  - d. Organs
- 10. Five approaches to NOTES peritoneal access have been identified. They include \_\_\_\_.**
  - a. Transcolonic
  - b. Transgastric
  - c. Transvesical
  - d. All of the above

# Automated Anesthesia and Natural Orifice Transluminal Endoscopic Surgery

11. **NOTES is a scarless procedure that is a combination of \_\_\_ techniques.**
  - a. Endoscopic
  - b. Laparoscopic
  - c. Both a and c
  - d. None of the above
12. **One critical drawback to NOTES is the lack of adequate surgical instrumentation and equipment needed to facilitate \_\_\_ procedures on humans.**
  - a. Fully transluminal
  - b. Laparoscopic
  - c. Internal
  - d. External
13. **As new NOTES technologies are developed they will lead us to \_\_\_.**
  - a. No-scar surgery
  - b. Minimal complications
  - c. Both a and b
  - d. None of the above
14. **Advancements in NOTES procedures will help with \_\_\_\_.**
  - a. Time needed to administer anesthesia
  - b. Dissection
  - c. Decreases in tissue trauma
  - d. Elimination of muscle mass
15. **\_\_\_ may very well revolutionize the healthcare industry.**
  - a. Automated, closed-loop anesthesia systems
  - b. NOTES
  - c. McSleepy
  - d. All of the above
16. **McSleepy monitors the patient's level of \_\_\_\_.**
  - a. Pain
  - b. Consciousness
  - c. Muscle movements
  - d. All of the above
17. **The natural orifice approach holds potential to \_\_\_ patient complications and \_\_\_ postoperative recovery time.**
  - a. Increase, reduce
  - b. Reduce, improve
  - c. Raise, lower
  - d. Reduce, increase
18. **Experimenters such as Reginald Bickford used \_\_\_ to monitor amounts of anesthetic administered to the patient.**
  - a. EEG
  - b. BIS
  - c. Both A and B
  - d. None of the above
19. **McSleepy was successfully tested during a \_\_\_ procedure.**
  - a. Anesthesia environment
  - b. Partial nephrectomy
  - c. Elbow replacement
  - d. Open heart surgery
20. **Hemmerling described McSleepy as a \_\_\_\_.**
  - a. Advanced robot
  - b. Humanoid anesthesiologist
  - c. Human counterpart
  - d. Human competitor

# Minimally Invasive Posterior Spinal Fusion

- The CD Horizon® Sextant™ procedure is a new advancement in the treatment of \_\_\_\_.**
  - Degenerative disc disease
  - Spinal instabilities
  - Heart transplants
  - Both a and b
- This minimally invasive procedure requires patients to have single to multi-level \_\_\_\_.**
  - Fusions
  - Weak screws
  - Degenerations
  - Bone slips
- Once the tissues are dilated and retracted, a sharp, cannulated tap is placed over the \_\_\_\_ to prepare the pedicle for screw insertion.**
  - Infuser
  - Guidewire
  - Mayo stand
  - Screwdriver
- During the procedure, the surgeon inserts a mixture of \_\_\_\_ and bone chips along the lateral gutters of the posterior spinous process.**
  - Lidocaine
  - Epinephrine
  - Osteogenerative protein
  - Tissue
- Using a(n) \_\_\_\_, the surgeon removes small portions of bone from the lamina to gain entrance to the spinal canal.**
  - Neuro-simulator
  - Angled curette
  - Guidewire
  - All of the above
- Within \_\_\_\_ hours after the procedure, the patient is encouraged to ambulate to aid in the recovery process.**
  - 6 to 12
  - 1 to 2
  - 24 to 48
  - 3 to 4
- The most common complication of minimally invasive spinal fusions is a \_\_\_\_.**
  - Dural tear
  - Bleeding
  - Discharge
  - Posterior discomfort
- This minimally invasive approach is more attractive to patients who are candidates for spinal fusion because there is less \_\_\_\_.**
  - Blood loss
  - Postoperative pain
  - Recovery time
  - All of the above
- Using a(n) \_\_\_\_ on a bayoneted handle, the surgeon makes an incision into the annulus of the disc.**
  - Screwdriver
  - 11 blade knife
  - 15 blade knife
  - Neuro-simulator
- The fluoroscopy machines image the \_\_\_\_ and the \_\_\_\_.**
  - Lateral lumbar spine and the stab incisions
  - Anterior/posterior lumbar spine and the annulus
  - Lateral lumbar spine and anterior/posterior lumbar spine
  - None of the above



## Exploring the Penile Prosthesis Procedure

- 1. The most common reason for men receiving a penile implant is \_\_\_\_.**
  - a. Erectile Dysfunction
  - b. STDs
  - c. Diabetes
  - d. None of the above
- 2. The two most popular types of implants are \_\_\_\_.**
  - a. Semi-rigid
  - b. Inflatable
  - c. Rigid
  - d. Both a & b
- 3. A two-piece inflatable penile implant requires more extensive surgery than a \_\_\_\_.**
  - a. Rigid implant
  - b. Semi-rigid implant
  - c. Limp implant
  - d. Three-piece implant
- 4. Diabetes can damage the \_\_\_\_ in the penis causing erectile dysfunction.**
  - a. Nerves
  - b. Dorsal arteries
  - c. Small blood vessels
  - d. Both a & c
- 5. The inflatable prosthesis has two silicone rods that are placed inside both sides of the \_\_\_\_.**
  - a. Reservoir
  - b. Sartorius muscle
  - c. Corpus cavernosum
  - d. Adductor magnus muscle
- 6. Complications that can occur with an inflatable penile prosthesis are \_\_\_\_.**
  - a. Tubing kinks
  - b. Aneurysm
  - c. Silicone spillage
  - d. All of the above
- 7. The patient was positioned in the \_\_\_\_ position for the procedure.**
  - a. Supine
  - b. Lateral
  - c. Distal
  - d. Medial
- 8. The prep for the penile procedure extended up to the patient's \_\_\_\_.**
  - a. Umbilicus
  - b. Mid thighs
  - c. Anus
  - d. Scrotum
- 9. A(n) \_\_\_\_ was applied to the patient's legs to help prevent emboli and thrombi.**
  - a. Compression Device
  - b. Sequential Compression Device
  - c. Cold wrap
  - d. Ice pack
- 10. A \_\_\_\_ was needed to measure the diameter and the length of the corpus cavernosum.**
  - a. Dura Hooks
  - b. Debakey Forceps
  - c. Caliper
  - d. Allis clamps

## Exploring the Penile Prosthesis Procedure – questions cont.

11. The local anesthetic was a mixture of \_\_\_ and epinephrine.
  - a. Vicryl
  - b. Saline
  - c. Bupivacaine Hydrochloride
  - d. Kanamycin
  
12. During the procedure, the surgeon started with a \_\_\_ Heagar dilator.
  - a. 13/14
  - b. 15/16
  - c. 1/2
  - d. 11/12
  
13. After the stay sutures were placed, the surgeon irrigated the \_\_\_ in order to prevent infection.
  - a. Wound
  - b. Penis
  - c. Sutures
  - d. Foreskin
  
14. A surgical site infection occurs in about \_\_\_ of patients who undergo a penile implant for the first time.
  - a. 10 percent
  - b. 24 percent
  - c. 5.5 percent
  - d. 5 percent
  
15. If the patient is replacing a previous implant, the surgical site infection risk can \_\_\_.
  - a. Triple
  - b. Double
  - c. Stay the same
  - d. None of the above
  
16. Other options are available for treating erectile dysfunction. They include
  - a. Medication
  - b. Pumps
  - c. Hormone treatments
  - d. All of the above
  
17. The tunica vaginalis covers the \_\_\_ and the \_\_\_.
  - a. Tunica albuginea and testicular vein
  - b. Testicular vein and anus
  - c. Seminiferous tubules and epididymis
  - d. Tunica albuginea and spermatic cord
  
18. Possible complications with insertion of a penile implant can include \_\_\_.
  - a. Hemorrhaging
  - b. Vomiting
  - c. Dizziness
  - d. Limited mobility
  
19. The surgical team dipped their hands in a basin filled with \_\_\_\_\_.
  - a. Epinephrine
  - b. Hydrochloride
  - c. Isopropyl alcohol
  - d. Water
  
20. A penile implant can malfunction over time with \_\_\_ still working at 10 years.
  - a. 78 percent
  - b. 67 percent
  - c. 55 percent
  - d. 12 percent

# Mass Casualty on Deck

- 1. What part of the jet continued to stretch, causing the mass casualty on deck?**
  - a. Tip of the wire
  - b. Wire
  - c. Wings
  - d. None of the above
- 2. What type of emergency amputation had to be performed?**
  - a. Below the knee
  - b. Above the knee
  - c. Complete limb removal
  - d. Foot only
- 3. The patient was covered with a \_\_\_ after he was taken to the OR?**
  - a. Gurney
  - b. Gown
  - c. Warm blankets
  - d. Prep sheet
- 4. If a power saw fails, what type of tool needs to be available for the procedure?**
  - a. Gigli Saw
  - b. Satterlee Bone Saw
  - c. Both a and b
  - d. Neither a nor b
- 5. A \_\_\_ needs to be applied to the affected limb to reduce blood loss during surgery.**
  - a. Pneumatic tourniquet
  - b. Clamps
  - c. Surgical gown
  - d. Forced-Air warming blankets
- 6. The U-drape is draped \_\_\_ to the thigh.**
  - a. Supine
  - b. Anterior
  - c. Proximally
  - d. Inferior
- 7. The surgeon used a #10 knife blade to make a \_\_\_ incision above the distal femur.**
  - a. Diamond-shaped
  - b. U-shaped
  - c. Lateral
  - d. V-shaped
- 8. The \_\_\_ muscle compartments are identified to create flaps for coverage of the femoral stump.**
  - a. Posterior and anterior
  - b. Posterior and inferior
  - c. Lateral, inferior and posterior
  - d. Posterior, lateral and anterior
- 9. A drainage system prevents which condition from forming within the surgical wound.**
  - a. Edema
  - b. Infection
  - c. Phantom pain
  - d. Loss of blood
- 10. Which condition is not listed as a complication of an amputation?**
  - a. Pneumonia
  - b. Heart failure
  - c. Infection
  - d. Dizziness
- 11. Patients caring for the stump need to check for signs of infection that include \_\_\_.**
  - a. Discharge
  - b. Swelling
  - c. Tender skin
  - d. All of the above
- 12. What was applied to the skin on the unaffected thigh?**
  - a. Electrosurgical Unit
  - b. Saline
  - c. Dispersive electrode
  - d. Tourniquet
- 13. For a lower extremity, inflation time on a tourniquet at 300-350 mmHg should not exceed \_\_\_?**
  - a. An hour
  - b. One and a half hours
  - c. Fifteen minutes
  - d. Two hours
- 14. The patient was placed in the \_\_\_ position for the procedure.**
  - a. Supine
  - b. Lateral
  - c. Inferior
  - d. Medial
- 15. \_\_\_ may play a large part in the sense of phantom pain.**
  - a. Neuroplastic changes
  - b. Magnetoencephalographic techniques
  - c. Cerebral reorganization
  - d. Existing medical issues

## Increasing Airflow: The Process of Inferior Turbinate Reduction

- 1. The primary symptom of turbinate hypertrophy is \_\_\_\_.**
  - a. Congested breathing
  - b. Infection
  - c. Headaches
  - d. Nose bleeds
- 2. Turbinates are long, narrow, spongy bone shelves that protrude into the \_\_\_\_.**
  - a. Throat
  - b. Tongue
  - c. Nasal cavity
  - d. None of the above
- 3. Empty nose syndrome is when too much of the \_\_\_\_ is removed.**
  - a. Receptor tissue
  - b. Nose hair
  - c. Nasal cavity
  - d. Skin
- 4. The turbinates are vascular structures; therefore, the primary contraindication for turbinate reduction surgery is \_\_\_\_.**
  - a. Coagulopathy
  - b. Turbinectomies
  - c. Therapy
  - d. Sinus infections
- 5. Surgeons preferring radio frequency coblation will prime the coblation \_\_\_\_ with a layer of saline gel.**
  - a. Forceps
  - b. Wand
  - c. Scissors
  - d. Blade
- 6. The turbinate should not be reduced more than \_\_\_\_ to ensure it does not interfere with receptor feedback.**
  - a. 30 percent
  - b. 27 percent
  - c. 55 percent
  - d. 25 percent
- 7. The \_\_\_\_ may be introduced to irrigate and debride the turbinate.**
  - a. Cottonoids
  - b. Suction tubes
  - c. Microdebrider
  - d. All of the above
- 8. A surgeon performing an extramural excision will require an \_\_\_\_ to remove turbinate tissue.**
  - a. Forceps
  - b. Endoscopicbiter
  - c. Coblation wand
  - d. Suction tubing
- 9. Which turbinate acts as a buffer to protect the sinuses from direct nasal airflow?**
  - a. Superior
  - b. Inferior
  - c. Middle
  - d. Left
- 10. The patient may experience \_\_\_\_ for approximately seven to 14 days postoperatively.**
  - a. Nasal drainage
  - b. Swelling
  - c. Dryness
  - d. All of the above

# Answers CE CREDIT PKG 13: 17.5 CONTINUING EDUCATION CREDITS

Certified Member

AST Member No: \_\_\_\_\_

Name: \_\_\_\_\_

Certification No: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

## CE Credit PKG 13: 17.5 CONTINUING EDUCATION CREDITS

The fee is \$29. This package is only available to AST & ASA members.

Check Enclosed Yes, I want to pay by Credit Card:  Visa  MasterCard  AmEx

a	b	c	d	a	b	c	d		
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Mark one box next to each number. Only one correct or best answer will be selected for each question.

## Microbiology Review: Pathogens and Disease

a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d				
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Mark one box next to each number. Only one correct or best answer will be selected for each question.

## Transmission-Based Isolation Precautions in the OR

a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d				
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Mark one box next to each number. Only one correct or best answer will be selected for each question.

### Malignant Hyperthermia Crisis

a	b	c	d	a	b	c	d			Mark one box next to each number. Only one correct or best answer will be selected for each question.	
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3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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### Surgery for Space Exploration

a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	Mark one box next to each number. Only one correct or best answer will be selected for each question.					
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
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### Cannulated Retinal Surgery

a	b	c	d	a	b	c	d			Mark one box next to each number. Only one correct or best answer will be selected for each question.	
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### Innovations in Endoscopic Sinus Surgery

a	b	c	d	a	b	c	d			Mark one box next to each number. Only one correct or best answer will be selected for each question.	
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2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							

### Automated Anesthesia and Natural Orifice Transluminal Endoscopic Surgery

a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	Mark one box next to each number. Only one correct or best answer will be selected for each question.					
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
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5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>							

## Minimally Invasive Posterior Spinal Fusion

a	b	c	d	a	b	c	d		
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Mark one box next to each number. Only one correct or best answer will be selected for each question.

## Exploring the Penile Prosthesis Procedure

a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d				
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Mark one box next to each number. Only one correct or best answer will be selected for each question.

## Mass Casualty on Deck

a	b	c	d	a	b	c	d	a	b	c	d			
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Mark one box next to each number. Only one correct or best answer will be selected for each question.

## Increasing Airflow: The Process of Inferior Turbinate Reduction

a	b	c	d	a	b	c	d		
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Mark one box next to each number. Only one correct or best answer will be selected for each question.