

NATIONAL BOARD OF PODIATRIC MEDICAL EXAMINERS

PART II Clinical Science Examination

PRACTICE TEST 1

The Part II Practice Tests are representative of the content covered in the Part II Examination. They include question formats found in the actual examination. They also include questions of varying difficulty. A candidate's performance on a Practice Test does not guarantee similar performance on the actual examination.

CLINICAL SCIENCE EXAMINATION
PRACTICE TEST 1

60 questions

Directions for questions 1-56: These questions are followed by four suggested answers. Select the one answer that is best in each case.

NOTE: Throughout this test, the term “medial oblique foot” refers to a nonweightbearing medial oblique position in which the film is flat on the orthoposer, the medial side of the foot is closest to the film and the sole forms a 45° angulation with the film, and the central beam is 90° to the film (the tubehead is angulated 0°). The converse is true for the term “lateral oblique.”

1. A 6-month-old child exhibits a limitation of hip abduction and an increase in thigh folds on the left side. The most likely diagnosis is
 - (A) cerebral palsy
 - (B) transient synovitis of the left hip
 - (C) a congenitally dislocated left hip
 - (D) a fracture of the left femur
2. In a podiatric physician’s office, the best method to prevent HIV infection and/or hepatitis B infection is to use
 - (A) an eyewash station
 - (B) thorough handwashing
 - (C) appropriate handling and disposal of sharps
 - (D) appropriate handling and disposal of waste
3. Following fifth-toe surgery, a patient reports that the toe is unstable and feels “floppy.” X-rays reveal loss of bone mass including the distal two-thirds of the proximal phalanx and most of the middle phalanx. A flail toe condition is diagnosed. The best procedure for this patient would be
 - (A) a distal Syme's amputation
 - (B) amputation of the metatarsophalangeal joint
 - (C) removal of the base of the proximal phalanx
 - (D) surgical syndactylization of the fourth and fifth toes
4. Which of the following is the most appropriate antibiotic therapy for pseudomembranous colitis?
 - (A) Vancomycin
 - (B) Gentamicin
 - (C) Ciprofloxacin
 - (D) Ticarcillin
5. Vertical talus presents with which of the following x-ray changes?
 - (A) Dorsiflexed talus
 - (B) Dislocated navicular
 - (C) Increased first metatarsal declination angle
 - (D) High calcaneal inclination angle
6. Which of the following is a true statement about a fracture of the styloid process of the fifth metatarsal?
 - (A) It is also known as a Jones fracture.
 - (B) The mechanism of injury usually involves a strong force applied by the fibularis (peroneus) brevis.
 - (C) It needs to be treated surgically due to an increased likelihood of nonunion.
 - (D) Treatment may include immobilization, with the foot in an inverted position.
7. The most important factor for the treatment of a navicular stress fracture involves early
 - (A) short leg casting
 - (B) internal fixation
 - (C) nonweightbearing
 - (D) use of electrical stimulation

8. Which of the following is a radiographic hallmark of dominant sagittal plane pronatory compensation?
- (A) Navicular bulge
 - (B) Increased cuboid abduction angle
 - (C) Decreased calcaneal inclination angle
 - (D) Decreased talar declination angle
9. A 4-year-old girl who has asthma presents with a persistent, pruritic, vesiculating, erythematous eruption of both feet. Which of the following is the most likely diagnosis?
- (A) Psoriasis
 - (B) Herpes simplex virus infection
 - (C) Atopic dermatitis
 - (D) Lichen planus
10. All of the following conditions contribute to hallux varus deformity EXCEPT
- (A) a negative intermetatarsal angle
 - (B) excision of the fibular sesamoid
 - (C) aggressive medial capsulorrhaphy
 - (D) lengthening of the extensor tendon
11. The scope of practice of podiatric medicine is primarily determined by
- (A) act of Congress
 - (B) state law
 - (C) the American Podiatric Medical Association
 - (D) the U.S. Department of Health and Human Services
12. Which of the following is the most sensitive blood test for neuromuscular disorders?
- (A) Creatine phosphokinase
 - (B) Lactate dehydrogenase
 - (C) Alkaline phosphatase
 - (D) Acid phosphatase
13. Proprioception and vibratory sensations are mediated by which of the following pathways?
- (A) Posterior column
 - (B) Corticospinal tract
 - (C) Extrapyramidal tract
 - (D) Lateral spinothalamic tract
14. Which of the following impressions from an MRI would be most consistent with a diagnosis of osteomyelitis of the first metatarsal?
- (A) A decreased signal intensity in a T1-weighted image
 - (B) An increased signal intensity in a T2-weighted image
 - (C) A decreased signal intensity in a T2-weighted image
 - (D) A signal void in a T1-weighted image
15. The most common mechanism of ankle fracture is
- (A) supination adduction
 - (B) supination external rotation
 - (C) pronation external rotation
 - (D) pronation abduction
16. A 62-year-old obese patient has been hospitalized for the treatment of an infected foot ulcer. The patient is placed on subcutaneous heparin for prophylaxis against deep vein thrombosis. Which of the following laboratory findings would indicate effective heparin management?
- (A) Prothrombin time (PT) = 14.0 sec
 - (B) Partial thromboplastin time (PTT) = 60.0 sec
 - (C) Bleeding time = 5 min
 - (D) Platelet count = 150,000/cu mm
17. A patient complains of pain in the posterior aspect of the ankle with palpation. Pain is particularly aggravated by dorsiflexion and plantarflexion of the hallux. Which of the following would be the best radiographic view to confirm the diagnosis?
- (A) An anteroposterior view of the affected ankle
 - (B) A medial oblique view of the foot
 - (C) A lateral view of the foot and ankle
 - (D) A Harris-Beath (calcaneal axial) view

18. In the application of a short leg cast, the main advantage of plaster of Paris over synthetic materials is that plaster of Paris is more
- (A) durable
 - (B) moldable
 - (C) porous
 - (D) radiolucent
19. Which of the following is an appropriate cleansing agent for a surgeon who is allergic to iodine?
- (A) Acetic acid
 - (B) Hexachlorophene
 - (C) Dakin's solution
 - (D) Povidone-iodine
20. A doctor may NOT refuse to treat a prospective patient because the patient
- (A) has AIDS
 - (B) is unable to pay the doctor
 - (C) appears to be under the influence of drugs
 - (D) has been a plaintiff in previous malpractice suits
21. An individual with bronchial asthma triggered by an allergic reaction is likely to have elevated
- (A) monocytes in the WBC differential
 - (B) lymphocytes in the WBC differential
 - (C) eosinophils in the WBC differential
 - (D) sodium in the serum chemistry
22. Which of the following is a true statement about rigid forefoot valgus?
- (A) It is the cause of medial ankle sprains.
 - (B) It is compensated for by subtalar joint supination.
 - (C) It is confirmed by a positive anterior drawer sign.
 - (D) It can be identified on a weightbearing x-ray if the talocalcaneal angle is increased.

23.



Initial treatment of the condition shown in this radiograph would most appropriately include

- (A) resection of the spur and plantar fasciotomy
- (B) transcutaneous nerve stimulation
- (C) nonweightbearing casting for 2 weeks
- (D) mechanical support of the plantar fascia

24. Blood pressure may drop when spinal anesthesia is used because

- (A) the patient is recumbent
- (B) sympathectomy may cause vasodilatation
- (C) motor blockade affects the vasoconstrictor muscles
- (D) sensory blockade obviates the need for higher pressure

25. Which of the following casting techniques allows the best visualization of the neutral subtalar joint position and the forefoot-to-rearfoot relationship?

- (A) Prone suspension
- (B) Supine modified Langer
- (C) Biofoam partial weightbearing
- (D) BioVac inshoe vacuum

26. In a medical malpractice action, the plaintiff must prove that the podiatric physician did not meet the standard of care, which is defined as

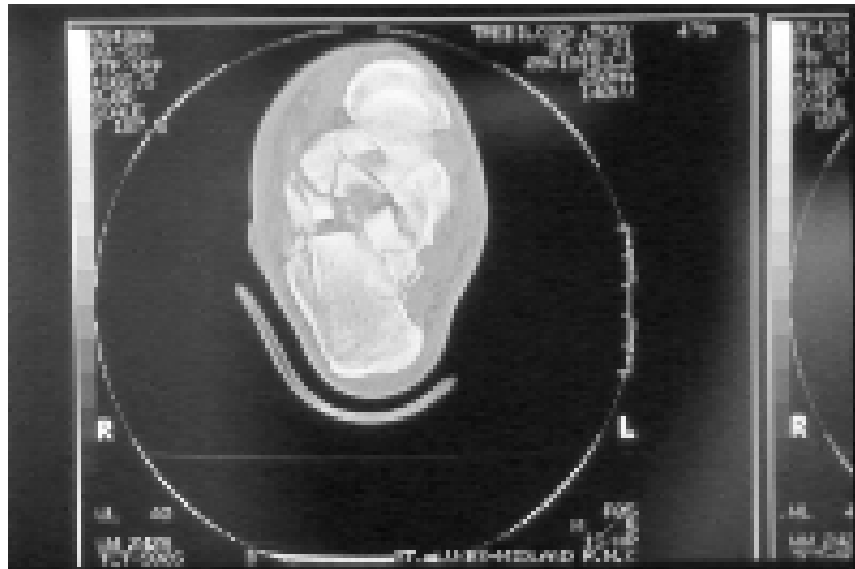
- (A) that care necessary to correct the patient's problem so the patient is cured
- (B) the care a reasonable podiatric physician would provide under the same or similar circumstances
- (C) the care a compassionate podiatric physician would provide under the same or similar circumstances
- (D) the best care that could be provided by any podiatric physician under the same or similar circumstances

27. Arrhythmia may occur from the toxic effects of which of the following medications?
- (A) Hydrochlorothiazide
 - (B) Nifedipine
 - (C) Digitalis
 - (D) Quinine
28. Balancing the heel of a positive cast used to fabricate a functional orthotic in an inverted position effectively decreases
- (A) supination around the subtalar joint axis
 - (B) supination around the midtarsal joint axis
 - (C) pronation around the subtalar joint axis
 - (D) dorsiflexion around the first metatarsophalangeal joint axis
29. The laying down of new bone surrounding an area of infection is referred to as
- (A) a cloaca
 - (B) an involucrum
 - (C) a sequestrum
 - (D) emphysema
30. Wound dehiscence may result from all of the following EXCEPT
- (A) infection
 - (B) hematoma
 - (C) sutures that are too tight
 - (D) everted wound margins
31. A 12-year-old patient who is being evaluated for hip pain of several weeks' duration has other complaints that are more acute. The patient complains of headache and fever, some photophobia, and "just not feeling well." These symptoms began yesterday and appear to be getting worse. The podiatric physician notices that the patient moves slowly and carefully and that the neck is painful and somewhat stiff. Temperature is 103°F. There is no sign of head trauma, and the pupils are equal and reactive. The lungs and heart are normal. There is no skin rash. The left hip is slightly tender over the trochanter but has full range of motion. The patient appears neurologically intact. Which of the following is the most likely diagnosis for these acute symptoms?
- (A) Osteomyelitis
 - (B) Lyme disease
 - (C) Meningitis
 - (D) Viral upper respiratory infection
32. A lateral weightbearing roentgenogram of a flexible flatfoot will demonstrate
- (A) a well-visualized sinus tarsi
 - (B) a plantarflexed attitude of the talus
 - (C) an increased angle of declination of the metatarsals
 - (D) a decrease in the talocalcaneal angle

33. Which of the following intravenous medications is indicated for nausea?
- (A) Midazolam
 - (B) Meperidine
 - (C) Phenobarbital
 - (D) Promethazine
34. Ultrasound therapy is an appropriate treatment for which of the following?
- (A) Arterial insufficiency
 - (B) Enthesopathy
 - (C) Thrombophlebitis
 - (D) A stress fracture
35. Which of the following would be an appropriate cast for a patient who has undergone repair for an Achilles tendon rupture?
- (A) A long leg cast with the ankle plantarflexed 20°
 - (B) A long leg cast with the foot 90° to the leg
 - (C) A short leg cast with the ankle plantarflexed 20°
 - (D) A short leg cast with the foot 90° to the leg
36. The primary function of neutrophils in the body's defense is to
- (A) assist lymphocytes in response to anaphylaxis
 - (B) phagocytize and destroy microorganisms
 - (C) initiate the IgE immunologic response
 - (D) release histamine
37. Which of the following phases of wound healing is characterized by the release of vasoactive amines and initial vasoconstriction?
- (A) Proliferative
 - (B) Inflammatory
 - (C) Maturation
 - (D) Fibroblastic
38. A town has a population of 500,000 in a particular year. During that year there are 500 live births and 500 deaths, 100 of which are of children under 1 year of age. What is the infant mortality rate?
- (A) 1/1,000
 - (B) 5/1,000
 - (C) 200/1,000
 - (D) 500/1,000
39. Which of the following bone tumors is malignant?
- (A) Chondroma
 - (B) Giant cell tumor
 - (C) Ewing's sarcoma
 - (D) Osteoid osteoma
40. A 65-year-old woman has undergone an emergency incision and drainage of a plantar ulcer associated with ascending cellulitis. She has a history of insulin-dependent diabetes, hypertension, and chronic venous insufficiency. On the third postoperative day, the patient complains of severe substernal chest pain radiating to the back. Which of the following is the LEAST likely cause of the pain?
- (A) Costal chondritis
 - (B) Pulmonary embolism
 - (C) Myocardial infarction
 - (D) Dissecting aortic aneurysm
41. After administration of a general anesthesia, a podiatric physician injects 8 cubic centimeters of 2% lidocaine in Mayo fashion into a 42-year-old patient in order to perform a modified McBride procedure. During the prep and drape, the patient experiences increased temperature, arrhythmias, and muscle rigidity. The patient is most likely experiencing
- (A) anaphylaxis
 - (B) malignant hyperthermia
 - (C) a hypertensive crisis
 - (D) a myocardial infarction

42. Performing an inversion stress test with the ankle in a neutral position is useful in the detection of injury to which of the following ligaments?
- (A) Calcaneofibular
 - (B) Posterior talofibular
 - (C) Anterior talofibular
 - (D) Anterior inferior tibiofibular
43. Which of the following nail changes is characteristic of lichen planus?
- (A) Pitting
 - (B) Pterygium
 - (C) Thickening
 - (D) Oil drop staining
44. If all other factors remain unchanged, a blacker radiograph can be produced by
- (A) increasing the source-to-image distance
 - (B) increasing the mA
 - (C) decreasing the kVp
 - (D) decreasing the exposure time
45. An increase in the thickness of the calcaneal fat pad is a cardinal sign of which of the following conditions?
- (A) Hyperparathyroidism
 - (B) Cushing's syndrome
 - (C) Acromegaly
 - (D) Hypervitaminosis A
46. Fever that occurs during the first postoperative day after a general anesthetic has been administered is most likely the result of which of the following?
- (A) Atelectasis
 - (B) Infection
 - (C) Malignant hyperthermia
 - (D) Urinary tract infection
47. Tibial varum should be measured with the rearfoot
- (A) parallel with the leg
 - (B) perpendicular to the ground
 - (C) in the neutral calcaneal stance position
 - (D) in the relaxed calcaneal stance position
48. Which of the following tendons is exposed during neuroma surgery performed on the third interspace through a dorsal approach?
- (A) Plantar interosseous to the third toe
 - (B) Flexor digitorum brevis to the third toe
 - (C) Lumbrical to the fourth toe
 - (D) Dorsal interosseous to the fourth toe

49.



Which type of image is depicted in this slide?

- (A) MRI T1
- (B) MRI T2
- (C) CT scan
- (D) Bone scan

50. A 65-year-old patient presents for a bunionectomy. The patient has been healthy and takes no medications. A reasonable intervention to prevent pulmonary emboli postoperatively would be

- (A) elastic stockings
- (B) warfarin
- (C) subcutaneous heparin
- (D) an inferior vena cava filter

51. All of the following are appropriate drugs for the treatment of rheumatoid arthritis EXCEPT

- (A) penicillamine
- (B) prednisone
- (C) pentoxifylline
- (D) piroxicam

52. After surgery for a dislocated hammer toe, the digit is still slightly dorsiflexed at the metatarsophalangeal joint, despite the fact that a complete sequential reduction was performed. At the time of surgery, the podiatric physician should have done which of the following?

- (A) Performed a flexor tendon lengthening procedure.
- (B) Performed an extensor tendon lengthening procedure.
- (C) Stabilized the digit to the base of the proximal phalanx with a Kirschner wire.
- (D) Stabilized the digit to the base of the proximal phalanx and across the metatarsophalangeal joint with a Kirschner wire.

53. Lidocaine can be used to
- (A) increase cardiac contractility
 - (B) control premature ventricular contractions
 - (C) control atrial flutter
 - (D) control atrial fibrillation

Questions 54-55 refer to the following case.

A 67-year-old woman presents with complaints of a tender, progressively flattening arch on the left foot. She has no pain in the right foot, and modifying her shoe gear to softer, more “comfortable” styles has not helped alleviate her symptoms. Her symptoms began approximately 6 weeks ago when she heard a popping sound in her foot.

54. Which of the following is the most likely diagnosis?
- (A) A Lisfranc’s fracture dislocation
 - (B) A form of arthritis
 - (C) A stress fracture of the fifth metatarsal
 - (D) A ruptured tibialis posterior tendon
55. Which of the following diagnostic modalities would be best for confirming the diagnosis?
- (A) An MRI scan of both feet
 - (B) A CT scan of both feet
 - (C) Multiple x-ray views
 - (D) An arthritis panel to include SMAC-12, ANA, ESR, C-reactive protein, RA, and LE prep

56. Peroneal muscular atrophy is best known as

- (A) Charcot-Marie-Tooth disease
- (B) Refsum’s disease
- (C) Dejerine-Sottas disease
- (D) Guillain-Barré syndrome

57. Which of the following are mandates of state departments of health? Select the two that apply.

- (A) Manage educational services
- (B) Manage environmental services
- (C) Set public health policies and standards
- (D) Collect, analyze, and disseminate health information
- (E) Set drug dispensing standards

58. Which of the following accessory bones are sesamoid bones? Select the two that apply.

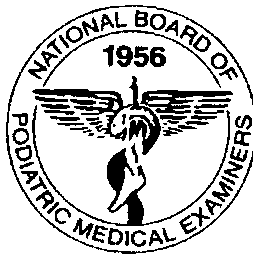
- (A) Os peroneum
- (B) Os trigonum
- (C) Os supra naviculare
- (D) Accessory navicular type I
- (E) Accessory navicular type II

59. Which of the following are potential signs of early sepsis in the elderly? Select the three that apply.

- (A) Agitation
- (B) Respiratory acidosis
- (C) Respiratory rate of 24
- (D) Polyuria
- (E) Nocturnal disorientation (“sundowning”)

-
60. List the following steps in a McBride bunionectomy in the order in which they are performed (from first to last).

- | | |
|---|----------|
| (A) Section of the deep transverse intermetatarsal ligament | 1. _____ |
| (B) Release of the conjoined adductor tendon | 2. _____ |
| (C) Medial capsulotomy | 3. _____ |
| (D) Removal of the fibular sesamoid | 4. _____ |
| (E) Exostectomy | 5. _____ |



NATIONAL BOARD OF PODIATRIC MEDICAL EXAMINERS

PART II Clinical Science Examination

PRACTICE TEST 2

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CLINICAL SCIENCE EXAMINATION
PRACTICE TEST 2

60 questions

Directions for questions 1-56: These questions are followed by four suggested answers. Select the one answer that is best in each case.

NOTE: Throughout this test, the term “medial oblique foot” refers to a nonweightbearing medial oblique position in which the film is flat on the orthoposer, the medial side of the foot is closest to the film and the sole forms a 45° angulation with the film, and the central beam is 90° to the film (the tubehead is angulated 0°). The converse is true for the term “lateral oblique.”

1. Generalized osteopenia is a characteristic feature of
 - (A) osteomyelitis
 - (B) osteosarcoma
 - (C) osteoporosis
 - (D) osteoarthritis
2. Which of the following anesthetics is normally administered intravenously?
 - (A) Thiopental
 - (B) Enflurane
 - (C) Halothane
 - (D) Nitrous oxide
3. A 19-year-old male patient presents with an itchy and burning rash on the bottom of his foot. Physical examination reveals patchy scaling on an erythematous base. The lesions are dry and extend to the sides of the foot in a moccasin distribution. Which of the following would be an appropriate presumptive diagnosis?
 - (A) Psoriasis
 - (B) Tinea pedis
 - (C) Lichen planus
 - (D) Pityriasis rubra pilaris
4. Which of the following is the single most important preventable risk factor for peripheral vascular disease?
 - (A) Stress
 - (B) High fat diet
 - (C) Cigarette smoking
 - (D) Alcohol abuse
5. All of the following conditions may cause pes planus EXCEPT
 - (A) vertical talus
 - (B) gastrocnemius equinus
 - (C) posterior tibial tendon rupture
 - (D) Charcot-Marie-Tooth disease
6. The film/cassette is placed vertically in the orthoposer for which of the following views?
 - (A) Weightbearing lateral
 - (B) Weightbearing dorsoplantar
 - (C) Weightbearing calcaneal axial
 - (D) Nonweightbearing medial oblique
7. Which of the following tests is used in the management of patients on warfarin?
 - (A) Erythrocyte sedimentation rate (ESR)
 - (B) Partial thromboplastin time (PTT)
 - (C) Prothrombin time (PT)
 - (D) Rumpel-Leede test
8. When implant surgery is performed, the most appropriate antibiotic prophylaxis is provided by which of the following?
 - (A) First-generation cephalosporins
 - (B) Third-generation cephalosporins
 - (C) Aminoglycosides
 - (D) Quinoline

9. Which of the following would be most useful in the treatment of a patient with ankle fusion secondary to trauma?
- (A) A stiff sole shoe
 - (B) A rocker-bottom shoe
 - (C) A shoe with a Thomas heel
 - (D) A lateral heel flare
10. A 28-year-old female patient presents with pain in the left forefoot that began after a long hike on a mountainous trail. There is no history of trauma. Physical examination reveals nontender range of motion of the metatarsophalangeal joints. Deep palpation of the intermetatarsal spaces does not reproduce the patient's symptoms; however, palpation along the second metatarsal is painful. Which of the following is the most likely diagnosis?
- (A) Intermetatarsal space neuroma in continuity
 - (B) Capsulitis of the second metatarsophalangeal joint
 - (C) Stress fracture of the second metatarsal
 - (D) Degenerative joint disease of the second metatarsophalangeal joint
11. The radiographic weightbearing lateral view of the foot requires
- (A) placing the film flat on the orthoposer
 - (B) placing the lateral side of the foot against the film
 - (C) directing the central beam at the ankle
 - (D) angling the tubehead 90° from vertical
12. Which of the following findings is most commonly observed in the first phase of neuropathic arthropathy (Charcot's joint)?
- (A) Ankylosis
 - (B) Cyanosis
 - (C) Pain
 - (D) Erythema
13. Ankle stress radiographs of an isolated rupture of the calcaneofibular ligament will reveal a
- (A) positive anterior drawer sign and negative talar tilt
 - (B) positive anterior drawer sign and positive talar tilt
 - (C) negative anterior drawer sign and negative talar tilt
 - (D) negative anterior drawer sign and positive talar tilt
14. A 38-year-old patient with diabetes mellitus is in the preoperative holding area and surgery has been delayed for 2 hours. One-half of the patient's prescribed AM NPH insulin dose was administered at 7:00 AM. It is now 9:30 AM and the patient suddenly becomes disoriented and begins to perspire profusely. Which of the following actions would be most appropriate?
- (A) Obtain an electrocardiogram (EKG).
 - (B) Perform a finger-stick blood glucose evaluation.
 - (C) Administer the remaining half of the patient's prescribed AM NPH insulin.
 - (D) Administer midazolam 2 mg to the patient.
15. All of the following are radiographic features of closed-kinetic-chain subtalar joint pronation EXCEPT an
- (A) increased metatarsus adductus angle
 - (B) increased talar declination angle
 - (C) increased talocalcaneal angle
 - (D) anterior break in the cyma line
16. A podiatric physician who submits a report of child abuse will be
- (A) liable if no abuse in fact occurred
 - (B) liable if the report was true but made with malice
 - (C) immune from liability if there was reasonable cause to suspect abuse
 - (D) immune from liability only if the podiatric physician personally examined the child

17. Which of the following antibiotic combinations, given orally, would offer the best overall coverage for gram-positive, gram-negative, and anaerobic infections?
- (A) Penicillin and ofloxacin
 - (B) Erythromycin and trimethoprim/sulfamethoxazole
 - (C) Clindamycin and ciprofloxacin
 - (D) Metronidazole and oxacillin

Questions 18-19 refer to the following case.

A 12-year-old patient presents with pain on the lateral side of the right ankle when standing. The subtalar joint is restricted in motion, and pain is elicited on palpation of the fibular (peroneal) tendons.

18. A lateral x-ray would most probably demonstrate
- (A) a large os trigonum
 - (B) a posteriorly broken cyma line
 - (C) an increased calcaneal inclination
 - (D) dorsal talar head and neck beaking
19. If the medial oblique view of the foot is negative, which of the following views will probably be positive?
- (A) Harris-Beath (calcaneal axial)
 - (B) Anteroposterior
 - (C) Sesamoidal axial
 - (D) Mortise ankle

-
20. Dual, curvilinear soft tissue calcifications that are parallel to one another and somewhat serpiginous in appearance are radiographic features of
- (A) phleboliths
 - (B) atherosclerosis
 - (C) Mönckeberg's arteriosclerosis
 - (D) tumoral calcinosis

21. Which of the following statements is true concerning therapeutic ultrasound?
- (A) It is best used without a coupling agent.
 - (B) It will dissolve intratendinous calcifications.
 - (C) It can be used to diagnose acute and chronic tendon ruptures.
 - (D) Sonic energy increases the temperature in deep tissues.
22. Decreased metatarsal bone girth is seen in which of the following?
- (A) Osteogenesis imperfecta
 - (B) Thyroid acropachy
 - (C) Acromegaly
 - (D) Paget's disease
23. The most common cell types seen in cases of immediate hypersensitivity are
- (A) lymphocytes and monocytes
 - (B) neutrophils and eosinophils
 - (C) mast cells and basophils
 - (D) band cells
24. Which of the following local anesthetics has the shortest duration of action?
- (A) Tetracaine
 - (B) Lidocaine
 - (C) Bupivacaine
 - (D) Etidocaine

25.



The radiograph shown is most characteristic of

- (A) osteoarthritis
- (B) gouty arthritis
- (C) psoriatic arthritis
- (D) rheumatoid arthritis

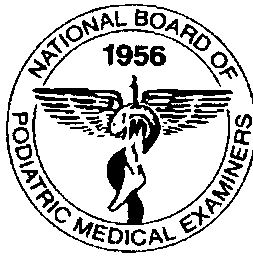
26. Which of the following is the first step in basic life support (BLS)?
- (A) Ventilation
 - (B) Airway restoration
 - (C) Restoration of circulation
 - (D) Assessment for unresponsiveness
27. A 42-year-old patient underwent second interspace neuroma surgery 2 years ago. The patient now complains that the second toe is deviated medially. Damage to which of the following muscles during surgery would result in this finding?
- (A) First plantar interossei
 - (B) Second dorsal interossei
 - (C) Third dorsal interossei
 - (D) Lumbricales
28. Which of the following is a CONTRAINDICATION to the resection of a calcaneonavicular coalition?
- (A) Peroneal spasm
 - (B) Talar beaking
 - (C) A completely ossified bar
 - (D) Degenerative disease of the subtalar joint
29. An apparently nervous 25-year-old female patient demonstrates lid lag during examination, along with a fine tremor of her outstretched hands. Her skin is warm, moist, and smooth. Her nervousness is most likely the result of which of the following?
- (A) Addison's disease
 - (B) Cushing's syndrome
 - (C) Pheochromocytoma
 - (D) Hyperthyroidism
30. The proliferative phase of wound healing is characterized by
- (A) neutrophilic infiltrates
 - (B) remodeling and scar tissue formation
 - (C) epithelialization and connective tissue repair
 - (D) inflammation and decreased tensile strength
31. Stabilization of toes at the metatarsophalangeal joint during midstance is aided by which of the following muscles?
- (A) Gastrocnemius
 - (B) Quadratus plantae
 - (C) Tibialis posterior
 - (D) Extensor digitorum longus
32. Running in a shoe with a sole that is too rigid across the metatarsophalangeal joints increases a person's risk of developing
- (A) piriformis syndrome
 - (B) posterior tibial tendinitis
 - (C) fibularis (peroneus) longus tendinitis
 - (D) anterior tibial shin splints
33. The hinge axis concept is useful when planning which of the following procedures?
- (A) A hallux interphalangeal joint arthrodesis
 - (B) A subtalar joint arthroereisis
 - (C) A metatarsal basilar osteotomy
 - (D) A Kidner procedure
34. Intravenous barbiturates can produce all of the following EXCEPT
- (A) hypnosis
 - (B) unconsciousness with increased doses
 - (C) myocardial excitation with increased doses
 - (D) interference with the sensitivity of the medullary respiratory center to carbon dioxide
35. Capitation is generally part of which of the following health care delivery systems?
- (A) PPO
 - (B) IPA
 - (C) HMO
 - (D) Fee-for-service
36. From a plantar approach, the common digital nerve divides into two proper digital nerves which, in relation to the deep transverse metatarsal ligament, are
- (A) superficial
 - (B) superior
 - (C) proximal
 - (D) deep

37. A 64-year-old male patient complains of a cold left foot and cramping pain in his left calf and buttock when walking. He also states that he is impotent. Examination reveals a weak femoral pulse on the left side and nonpalpable pulses at the popliteal and pedal arteries. It is most likely that an occlusion has occurred in which of the following arteries?
- (A) Deep femoral
 - (B) Superficial femoral
 - (C) Common femoral
 - (D) Common iliac
38. A 21-year-old basketball player sustained a complete rupture of the Achilles tendon. It is now 5 days after the injury and the patient has been immobilized in a posterior splint. The most appropriate treatment at this time is
- (A) a primary anastomosis with an augmentation graft if necessary
 - (B) resection of the fibrous plug and an augmentation graft of the defect
 - (C) a long leg cast for 4 weeks followed by a short leg cast for 4 weeks
 - (D) a short leg cast for 6 weeks followed by aggressive physical therapy
39. Radiographs of a college basketball player who presents with a foot injury reveal a minimally displaced fracture of the proximal shaft of the fifth metatarsal. Treatment should consist of which of the following?
- (A) Tape and immobilization
 - (B) A nonweightbearing cast
 - (C) An Ace bandage and ambulation as tolerated
 - (D) An Unna's boot and partial weightbearing with crutches
40. All of the following are clinical signs of anabolic steroid use in young athletes EXCEPT
- (A) alopecia
 - (B) hypertension
 - (C) osteoporosis
 - (D) temporary sterility
41. Which type of exercise should be recommended to minimize muscle atrophy in a patient with a short leg cast?
- (A) Concentric
 - (B) Isotonic
 - (C) Isokinetic
 - (D) Isometric
42. When a dressing is applied after a flexor to extensor tendon transfer for stabilization, it is most important to
- (A) allow the toe to seek its own level
 - (B) apply povidone-iodine to prevent infection
 - (C) plantarflex the proximal phalanx at the metatarsophalangeal joint
 - (D) dorsiflex the proximal phalanx at the metatarsophalangeal joint
43. Which of the following therapies is recommended for initial treatment of an acute asthmatic attack?
- (A) Intravenous theophylline
 - (B) Inhaled glucocorticoids
 - (C) Inhaled beta-adrenergic agonists
 - (D) Intramuscular antihistamines
44. A podiatric physician suspects that a patient may be abusing the hydrocodone prescribed for the patient's foot surgery. All of the following signs and symptoms would indicate hydrocodone abuse EXCEPT
- (A) miosis
 - (B) diarrhea
 - (C) drowsiness
 - (D) pruritus of the nose
45. Which of the following is true about the talocalcaneal angle?
- (A) It is 8°-10° in the normal foot.
 - (B) It is increased in a flatfoot deformity.
 - (C) It is increased in a supinated foot deformity.
 - (D) It is decreased in a pronated foot deformity.

46. In civil court, the performance of a procedure on a patient without the patient's informed consent could be considered
- (A) assault
 - (B) malpractice
 - (C) abuse
 - (D) battery
47. Which of the following gait patterns is most commonly seen in cases of lower motor neuron pathology?
- (A) Steppage
 - (B) Circumduction
 - (C) Festinating
 - (D) Ataxic
48. A 30-year-old male patient with a history of seizures since childhood has a seizure during a routine office visit for a wound check. The podiatric physician should immediately
- (A) insert a bite block
 - (B) turn the patient on his side
 - (C) administer phenytoin, 500 mg, IV
 - (D) administer diazepam, 10 mg, IV
49. Which of the following is a typical radiographic finding in cases of osteochondroma?
- (A) Epiphyseal location
 - (B) Moth-eaten appearance
 - (C) Osseous protuberance that grows toward the joint
 - (D) Osseous protuberance with the cortex continuous with the parent bone
50. In podiatric radiology, the standard anode-film distance usually falls within a range of
- (A) 12-17 inches
 - (B) 18-23 inches
 - (C) 24-30 inches
 - (D) 31-36 inches
51. Which of the following is the best treatment for a dermatofibroma on the anterior ankle?
- (A) Fulguration or laser ablation
 - (B) Salicylic acid treatments with debridement
 - (C) Surgical excision and pathological examination
 - (D) Wide excision, pathological examination, and probable chemotherapy
52. The doctor-patient privilege may be waived
- (A) by the patient only
 - (B) by the doctor only
 - (C) only if both the patient and the doctor agree to waive it
 - (D) only with the consent of a judge
53. How often should a patient's vital signs be monitored following general inhalation anesthesia?
- (A) Every 15 minutes until stable
 - (B) Every hour
 - (C) Twice a day
 - (D) Every nursing shift
54. The risk of which of the following is increased most for patients who undergo hip and knee-joint replacement procedures?
- (A) Pneumonia
 - (B) Atelectasis
 - (C) Pulmonary embolism
 - (D) Myocardial infarction
55. A patient's blood laboratory results reveal elevated levels of creatine phosphokinase, aldolase, and alanine transaminase. Which of the following is the most likely diagnosis?
- (A) Muscular dystrophy
 - (B) Rheumatoid arthritis
 - (C) Aneurysmal bone cyst
 - (D) Cerebral palsy

56. If a person falls from a height, causing the lateral process of the talus to drive into the calcaneus over the neutral triangle, the most likely calcaneal fracture would be
- (A) a beak fracture
 - (B) a sustentaculum fracture
 - (C) a joint depression fracture
 - (D) an avulsion fracture
57. In a T1-weighted MRI of the foot, which of the following lesions will have the lowest signal intensity? Select the three that apply.
- (A) Ganglion cyst
 - (B) Unicameral bone cyst
 - (C) Adamantinoma
 - (D) Interosseous lipoma
 - (E) Hemangioma
58. Which of the following radiographic angles in a dorsoplantar view are most indicative of talipes equinovarus? Select the three that apply.
- (A) Talo-first metatarsal angle of 10°
 - (B) Talo-first metatarsal angle of 5°
 - (C) Kite's angle (talocalcaneal angle) of 5°
 - (D) Kite's angle (talocalcaneal angle) of 25°
 - (E) Bohler's angle of 30°
59. Typical presentations of multiple myeloma include which of the following? Choose the three that apply.
- (A) Bone pain
 - (B) Renal failure
 - (C) Hypocalcemia
 - (D) Normocytic anemia
 - (E) Multiple areas of uptake on a bone scan
-
60. List the order in which the components of the talipes equinovarus deformity should be corrected during casting treatment (from first to last).
- (A) Adduction component
 - (B) Inversion component
 - (C) Equinus component
 - (D) Internal torsional component at the tibia
1. _____
2. _____
3. _____
4. _____

END OF PRACTICE TEST 2



NATIONAL BOARD OF PODIATRIC MEDICAL EXAMINERS

PART II Clinical Science Examination

PRACTICE TEST 3

The Part II Practice Tests are representative of the content covered in the Part II Examination. They include question formats found in the actual examination. They also include questions of varying difficulty. A candidate's performance on a Practice Test does not guarantee similar performance on the actual examination.

CLINICAL SCIENCE EXAMINATION
PRACTICE TEST 3

60 questions

Directions for questions 1-55: These questions are followed by four suggested answers. Select the one answer that is best in each case.

NOTE: Throughout this test, the term “medial oblique foot” refers to a nonweightbearing medial oblique position in which the film is flat on the orthoposer, the medial side of the foot is closest to the film and the sole forms a 45° angulation with the film, and the central beam is 90° to the film (the tubehead is angulated 0°). The converse is true for the term “lateral oblique.”

1. Diazepam is used in the anesthetic setting to reduce
 - (A) cardiac depression
 - (B) respiratory tract secretions
 - (C) postoperative pain
 - (D) anxiety
2. Which of the following classes of drugs is used to treat osteoporosis?
 - (A) Calcium channel blockers
 - (B) Bisphosphonates
 - (C) Antiestrogens
 - (D) Steroids
3. Radiographically, the inversion ankle stress view is most useful in evaluating which of the following conditions?
 - (A) Achilles tendon rupture
 - (B) Lateral ligament rupture
 - (C) Osteoarthritis
 - (D) Osteochondral defect
4. Which of the following is the phase of gait during which the body’s center of mass is directly over the metatarsophalangeal joints and the sesamoids are most compressed?
 - (A) Just after heel contact
 - (B) Midstance
 - (C) Just before heel lift
 - (D) Swing
5. When should a podiatric physician prescribe ambulation and range-of-motion exercises for a postoperative patient with a history of deep vein thrombosis?
 - (A) Before symptoms develop, for prevention
 - (B) After symptoms develop but before a definitive diagnosis is made
 - (C) After a definitive diagnosis is made
 - (D) Three days after a venous thrombus has been identified
6. Which of the following conditions has a strong (short) T1 signal on MRI?
 - (A) Lipoma
 - (B) Osteomyelitis
 - (C) Hemangioma
 - (D) Ganglionic cyst
7. In football players, the most common mechanism of metatarsophalangeal dislocation is
 - (A) hyperdorsiflexion
 - (B) hyperplantarflexion
 - (C) hyperadduction
 - (D) hyperabduction
8. The main concern during surgery following an inadvertent scrape or needle stick is
 - (A) hepatitis A infection
 - (B) hepatitis B infection
 - (C) a positive TB test
 - (D) a gram-positive infection

9. A 60-year-old male patient is scheduled for a neurectomy in a podiatric physician's office. On preoperative examination his blood pressure is 160/115 mm Hg on three consecutive readings. In this situation, the podiatric physician should do which of the following?
- (A) Cancel the surgery.
 - (B) Administer calcium channel blockers and proceed with the surgery 15 minutes later.
 - (C) Change the procedure to an in-hospital setting for the next day.
 - (D) Proceed with the surgery as planned.
10. A patient presents with interdigital lesions that fluoresce coral pink under a Wood's light. The drug of choice for treatment is
- (A) tetracycline
 - (B) erythromycin
 - (C) ciprofloxacin
 - (D) terbinafine
11. A 26-year-old patient presents to the emergency department with a puncture wound of the right foot, sustained while working in a construction zone. Emergency department records confirm a similar injury 1 year ago, at which time the patient was given a tetanus immunization. Which of the following is a true statement about tetanus prophylaxis at this time?
- (A) No additional tetanus immunization is necessary.
 - (B) The patient will require half of the normal dose of tetanus toxoid.
 - (C) The patient will require tetanus immunoglobulin only.
 - (D) The patient will require tetanus immunoglobulin and tetanus toxoid.
12. All of the following are risk factors for the development of deep vein thrombophlebitis EXCEPT
- (A) obesity
 - (B) varicose veins
 - (C) use of local anesthetics
 - (D) smoking
13. In closed-chain kinetics, internal rotation of the leg results in
- (A) locking of the midtarsal joint
 - (B) effective weightbearing of the first ray
 - (C) pronation of the subtalar joint
 - (D) abduction of the talus
14. Twelve hours postoperatively, a patient with a cast complains of severe pain, bluish discoloration of the digits, numbness, and throbbing. Which of the following would be the most appropriate treatment?
- (A) Apply heat.
 - (B) Apply ice and elevate.
 - (C) Apply a bivalve cast.
 - (D) Administer intramuscular meperidine.
15. The establishment of the doctor-patient relationship requires a
- (A) written contract between doctor and patient that must be witnessed or notarized
 - (B) written contract that must be signed by both doctor and patient
 - (C) written or oral contract that must be acknowledged by both doctor and patient
 - (D) written, oral, or implied contract between doctor and patient
16. Which of the following conditions would benefit most from immobilization alone?
- (A) Atrophic nonunion
 - (B) Hypertrophic nonunion
 - (C) Infected nonunion
 - (D) Pseudoarthrosis
17. Patients with rheumatoid arthritis frequently have a subluxation of
- (A) the subtalar joint
 - (B) the lumbar spine
 - (C) C1 and C2
 - (D) T2 and T3

18. Aggressive dissection of the first interspace at the time of a fibular sesamoid release is most likely to damage the intrinsic muscle belly of which of the following muscles?
- (A) Quadratus plantae
 - (B) Abductor hallucis
 - (C) First dorsal interosseous
 - (D) First plantar interosseous
19. In the oral treatment of onychomycosis, which of the following drugs is fungicidal at low concentrations?
- (A) Griseofulvin
 - (B) Terbinafine
 - (C) Fluconazole
 - (D) Itraconazole
20. In a Lisfranc's fracture of the midfoot, the most common displacement seen is
- (A) dorsal and lateral
 - (B) dorsal and medial
 - (C) plantar and lateral
 - (D) plantar and medial
21. After the primary repair of a ruptured anterior tibial tendon, the most appropriate casting technique would be a
- (A) short leg cast with the ankle neutral
 - (B) short leg cast with the ankle plantarflexed
 - (C) long leg cast with the ankle plantarflexed
 - (D) long leg cast with the ankle neutral
22. OSHA regulations require that an employer do which of the following?
- (A) Provide hepatitis B vaccinations for all employees.
 - (B) Post OSHA regulations in a highly visible area for all employees.
 - (C) Require that all employees receive CPR certification.
 - (D) Establish a contractual agreement with an OSHA-approved management program.
23. In order to classify a neuromuscular disorder as cerebral palsy, there must be
- (A) cranial trauma
 - (B) a brain tumor
 - (C) a nonprogressive lesion
 - (D) paralysis of the lower extremity
24. On lateral weightbearing radiographs, markedly increased density is noted in the area of the subtalar joint and sustentaculum tali. Osteophytosis is noted at the level of the talar neck. The differential diagnosis should include all of the following EXCEPT
- (A) osteoarthritis
 - (B) tarsal coalition
 - (C) compression fracture of the subtalar joint
 - (D) osteomyelitis
25. The inflammatory phase of wound healing normally lasts approximately
- (A) 24 hours
 - (B) 3-5 days
 - (C) 14 days
 - (D) 6 weeks
26. In the normal development of the foot, the center of ossification appears last in the
- (A) talus
 - (B) calcaneus
 - (C) lateral cuneiform
 - (D) navicular
27. When surgical scars are planned, it is important to remember that skin tension lines appear in which direction relative to the direction of muscle movement?
- (A) Oblique
 - (B) Parallel
 - (C) Tangential
 - (D) Perpendicular

28. The initial treatment of choice for reflex sympathetic dystrophy in the lower extremity is
- (A) surgical sympathectomy
 - (B) the administration of vasoconstrictors
 - (C) immobilization of the affected extremity
 - (D) physical therapy of the affected extremity
29. Which of the following instruments has strong, heavily constructed opposing jaws, each of which is scooped out like the tip of a curette?
- (A) A gouge
 - (B) A malleable retractor
 - (C) A rongeur forceps
 - (D) A double-action bone cutting forceps
30. Transcutaneous electrical nerve stimulation (TENS) is used for
- (A) neuromuscular reeducation
 - (B) edema reduction
 - (C) pain relief
 - (D) biofeedback to overcome postinjury muscle inhibition
31. A 58-year-old female patient has a septic ankle joint that requires irrigation. She has a negative cardiac history and takes no medications. The patient has had fevers to 103.2°F and blood cultures are positive for *Staphylococcus aureus*. Which of the following anesthesia options would be CONTRAINDICATED in this patient?
- (A) Spinal anesthesia
 - (B) Sciatic block anesthesia
 - (C) General endotracheal anesthesia
 - (D) Laryngeal mask anesthesia
32. A patient presents with a second toe that is dislocated in the sagittal plane. One year ago, the proximal phalangeal base of the toe was removed. The most likely cause of the dislocation is loss of attachment of the
- (A) first lumbrical and the first and second dorsal interossei
 - (B) first lumbrical and the first and second plantar interossei
 - (C) first and second lumbricals and the first dorsal interosseous
 - (D) first and second lumbricals and the first plantar interosseous

33.



Which of the following organisms would most likely produce the finding displayed in the radiograph?

- (A) *Staphylococcus aureus*
- (B) *Pseudomonas aeruginosa*
- (C) *Streptococcus pyogenes*
- (D) *Clostridium perfringens*

34. Below the knee, osteoid osteomas are most commonly found in the
- (A) calcaneus
 - (B) tibia
 - (C) metatarsal
 - (D) navicular
35. Which of the following findings is most suggestive of child abuse?
- (A) Limping gait
 - (B) Multiple leg bruises
 - (C) A spiral fracture of the humerus
 - (D) Fractures in different stages of healing
36. A 30-year-old patient presents with bilateral ankle pain. A systems review is positive for shortness of breath and a dry cough. Physical examination reveals multiple tender erythematous subcutaneous nodules on both legs. The probable etiology of the ankle pain is
- (A) sarcoidosis
 - (B) psoriatic arthritis
 - (C) enteropathic arthritis
 - (D) rheumatoid arthritis
37. All of the following are considered seronegative spondyloarthropathies EXCEPT
- (A) psoriatic arthritis
 - (B) ankylosing spondylitis
 - (C) erythromelalgia
 - (D) Reiter's syndrome
38. An intra-articular epiphyseal fracture extending through the physis and epiphysis would be classified as which type of Salter-Harris fracture?
- (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV

Questions 39-40 refer to the following case.

A 47-year-old patient has pain in the right ankle of several weeks' duration. The patient remembers no inciting event but says the pain worsens with increased activity. The right foot appears more pronated than the left foot on weightbearing; on attempts to rise to the toes, the patient has considerable pain and the rearfoot does not invert. Pain is found on palpation just proximal to the navicular tuberosity.

39. Which of the following is the most likely diagnosis?
- (A) Popliteal rupture
 - (B) Talonavicular bar
 - (C) Calcaneal stress fracture
 - (D) Tibialis posterior tendinitis
40. Which of the following examination techniques would be most appropriate?
- (A) Side-to-side compression of the calcaneus
 - (B) Supination of the subtalar joint against resistance
 - (C) A calf squeeze
 - (D) A Coleman block test

41. Rheumatic heart disease is characterized by
- (A) mitral valve damage
 - (B) tricuspid valve damage
 - (C) holosystolic murmur
 - (D) a history of *Staphylococcus aureus* infection
42. Which of the following sets of parameters will result in the lowest radiation dose to the patient?
- (A) 15 mA, 10/60 sec, 69 kVp
 - (B) 15 mA, 10/60 sec, 60 kVp
 - (C) 15 mA, 5/60 sec, 69 kVp
 - (D) 30 mA, 5/60 sec, 60 kVp
43. Absorbable pins are an appropriate method of fixation for which of the following procedures?
- (A) Proximal metatarsal osteotomy
 - (B) Austin bunionectomy
 - (C) Base wedge osteotomy
 - (D) Metatarsophalangeal joint fusion
44. A 53-year-old female patient presents with a 1-year history of an unsightly painless “bump” on the dorsum of the right foot. She has worked outdoors in sandals all of her adult life. The lesion is 1 centimeter in diameter. It has an elevated, “rolled” translucent border and a central umbilication with a central crust that bleeds on debridement. Which of the following would be an appropriate presumptive diagnosis?
- (A) Red ant bite
 - (B) Verruca vulgaris
 - (C) Basal cell carcinoma
 - (D) Molluscum contagiosum
45. A nerve block procedure may NOT be successful in the presence of infection for which of the following reasons?
- (A) Local anesthetics are bases and may be neutralized by the acidic environment of an infection.
 - (B) Local anesthetics may be degraded by the increased amounts of pseudocholinesterase.
 - (C) Local anesthetics may be degraded by the bacteria.
 - (D) Edema and inflammation may prevent the anesthetic from crossing the nerve’s lipid barrier.
46. Which of the following immune reactions best describes allergic contact dermatitis?
- (A) Immune-complex formation
 - (B) Hapten-mediated cytotoxicity
 - (C) IgE-mediated allergic reaction
 - (D) Delayed cutaneous hypersensitivity
47. A 20-year-old male patient with hemophilia presents for podiatric treatment of a paronychia. He is currently under treatment by his physician and requires routine transfusion and Factor VIII administration. Which of the following would provide the most pertinent information?
- (A) Platelet count
 - (B) Reticulocyte count
 - (C) Prothrombin time (PT)
 - (D) Partial thromboplastin time (PTT)
48. If a patient presents with the classic symptoms of a stress fracture, but the radiographs are initially normal, the next special imaging study to order would be
- (A) ultrasound
 - (B) xeroradiography
 - (C) bone scintigraphy
 - (D) angiography
49. Which of the following is the most common bone lesion?
- (A) An aneurysmal bone cyst
 - (B) An enchondroma
 - (C) An osteochondroma
 - (D) An osteblastoma
50. A competitive collegiate basketball player presents with a 1-week history of lateral midfoot pain and swelling. Radiographs reveal a nondisplaced transverse fracture at the proximal metaphyseal-diaphyseal junction of the fifth metatarsal. No intramedullary sclerosis is present at the fracture site. The most appropriate treatment would be
- (A) a posterior splint
 - (B) a bone stimulator with partial weightbearing
 - (C) fracture shoe immobilization for 6-8 weeks
 - (D) open reduction and internal fixation with an intramedullary screw

51. Which of the following is considered a violation of sterile technique?
- (A) Double-gloving
 - (B) Hands above the head
 - (C) Hands below the waist
 - (D) Switching positions back-to-back
52. A 45-year-old construction worker sustains a severe crush injury to the right foot, and on admission to the emergency department is noted to be hypotensive. The paramedics report that the patient lost approximately 1,000 cubic centimeters of blood during transit to the hospital. Packed red cell transfusions are instituted. Approximately 4 hours later, the patient is in shock with severe back pain, flushing, and fever. Which of the following is a likely diagnosis?
- (A) Sepsis
 - (B) Pulmonary edema
 - (C) Myocardial infarction
 - (D) Major hemolytic reaction
53. Following repair of an Achilles tendon rupture, which type of cast should be applied?
- (A) A short leg cast with the foot in a neutral position
 - (B) A short leg cast with the foot in an equinus position
 - (C) A long leg cast with the foot in a neutral position
 - (D) A long leg cast with the foot in an equinus position
54. The number of electromagnetic waves that pass a given point per unit of time is referred to as the
- (A) wavelength
 - (B) wave frequency
 - (C) photon length
 - (D) speed of propagation
55. In the United States, the largest percentage of the health dollar is utilized in which of the following age categories?
- (A) 0-1 year
 - (B) 2-8 years
 - (C) 19-64 years
 - (D) 65 years and older
56. A T1 image on an MRI scan is described by which of the following parameters? Select the two that apply.
- (A) TE of 25 msec
 - (B) TE of 125 msec
 - (C) TE of 1000 msec
 - (D) TR of 25 msec
 - (E) TR of 500 msec
57. Which of the following complications are commonly caused by sickle cell disease? Select the three that apply.
- (A) Osteoporosis
 - (B) Early puberty
 - (C) Chronic hematuria
 - (D) Aseptic necrosis of the hips
 - (E) Chronic osteomyelitis caused by *Salmonella*
58. A patient with a unilateral flatfoot deformity presents with pain centered over the medial navicular. Radiographic studies of the involved foot demonstrate the presence of a small rounded ossicle-like structure adjacent to the medial navicular. Which of the following are likely conclusions? Select the three that apply.
- (A) This is an os tibiale externum type I.
 - (B) This is an os tibiale externum type II.
 - (C) This is an avulsed fracture fragment.
 - (D) This has nothing to do with the symptomatology.
 - (E) Contralateral studies may make MR evaluation unnecessary.

59. Which of the following statements regarding normal first ray function and anatomy are true? Select the three that apply.
- (A) The first ray axis has a supinatory-pronatory nature.
 - (B) The first ray consists of the first metatarsal and proximal phalanx.
 - (C) Inversion and adduction motions are coupled with dorsiflexion of the first ray.
 - (D) The first ray axis orientation runs from posteromedial and dorsal to anterolateral and plantar.
 - (E) The fibularis (peroneus) longus stabilizes the first ray against the lesser tarsus and ground in midstance.

60. Informed consent may be legally obtained from which of the following? Select the three that apply.
- (A) A geriatric patient
 - (B) A legal guardian
 - (C) A 19-year-old patient
 - (D) An intoxicated patient
 - (E) A minor patient

END OF PRACTICE TEST 3

PRACTICE TEST 1
ANSWER KEYS AND RATIONALES

Sequence: Key
1 C

In congenital hip dislocation, the femoral head is usually posterior and superior to the acetabulum, resulting in shortening of the limb with an increase in thigh folds and limited hip abduction on the affected side.

Sequence: Key
2 C

Even though actual transmission is rare, because sharps injuries are so commonly associated with occupational transmission of HIV and HBV, sharps management is the best method to prevent infection.

Sequence: Key
3 D

Surgical syndactylization of the fourth and fifth toes provides stability and a predictable position for a flail fifth digit.

Sequence: Key
4 A

Vancomycin is most appropriate in this case because it produces a rapid response to treat the disorder.

Sequence: Key
5 B

Congenital vertical talus presents as the talus fixed in a vertical position with hypoplasia of the talar neck and head. The navicular is dislocated and articulates with the dorsal aspect of the talar neck. The tibionavicular and dorsal talonavicular ligaments are contracted preventing reduction of the navicular.

Sequence: Key
6 B

The fibularis (peroneus) brevis tendon inserts on the styloid process of the fifth metatarsal and can cause fracture of the process with excessive traction applied to the bone by the tendon.

Sequence: Key
7 C

Uncomplicated navicular stress fractures will usually heal with strict nonweightbearing for 6 to 8 weeks; surgical treatment is usually not recommended unless the navicular is unstable.

Sequence: Key
8 C

The greater the angle formed between the axis and the plane of motion, the more motion is available in that plane. As the calcaneal inclination angle decreases, the sagittal plane compensation becomes more significant.

Sequence: Key
9 C

The presence of asthma along with these symptoms makes atopic dermatitis the most likely etiology.

Sequence: Key
10 D

Lengthening of the extensor tendon will affect sagittal plane positioning but will not affect transverse plane (hallux varus) deformities.

Sequence: Key
11 B

The extent to which a podiatric physician can practice is determined by the state legislature in a set of laws called the State Practice Act.

Sequence: Key
12 A

Creatine phosphokinase is an enzyme found in heart, brain, and skeletal muscle tissue. It is used to detect muscle disorders in serum blood testing.

Sequence: Key
13 A

The posterior columns of the spinal cord carry the sensory nerve fibers for position, vibration, and proprioception.

Sequence: Key
14 B

MRI T2-weighted images of osteomyelitis have an increased signal intensity.

Sequence: Key
15 B

The most common mechanism of a fractured ankle is supination external rotation. At the time of injury the foot is in a supinated position and an external rotatory force is applied.

Sequence: Key
16 B

The typical normal PTT range is 28-30 sec. Effective prophylaxis against deep vein thrombosis is typically considered to require a 1.5-fold to 2.5-fold elevation in the PTT.

Sequence: Key
17 C

A lateral radiograph is the most appropriate view to evaluate the posterior aspect of the ankle. The posterior process of the talus is clearly visualized on a lateral view of the foot and ankle.

Sequence: Key
18 B

The primary advantage of plaster of Paris compared to synthetic materials is that it is more moldable. This is particularly important for pediatric orthopedic conditions which often require close contouring and molding of the cast to the extremity in order to maintain proper alignment and accurate positioning.

Sequence: Key
19 B

Hexachlorophene does not contain iodine and is sufficient for surgical preparation.

Sequence: Key
20 A

Patients with AIDS have been found to be protected by the Americans with Disabilities Act. It is illegal to discriminate against these patients by refusing to treat them or referring them to others based on their HIV status.

Sequence: Key
21 C

Allergic or atopic diseases are some of the most common causes of eosinophilia.

Sequence: Key
22 B

Rigid forefoot valgus that cannot be compensated for by forefoot inversion and first ray dorsiflexion will require supination of the subtalar joint.

Sequence: Key
23 D

A heel spur or plantar fasciitis is shown on the radiograph. Plantar fasciitis is a biomechanical condition caused by overuse and is best treated mechanically. Mechanical support initially includes shoe modification, stretching, and taping and later includes orthotics to support the plantar fascia.

Sequence: Key
24 B

Hypotension during spinal anesthesia is the result of arterial and venous dilation.

Sequence: Key
25 A

With the prone suspension technique, the forefoot-to-rearfoot relationship can be visualized from behind, allowing the subtalar joint to be manipulated through its range of motion to help determine the joint's neutral position.

Sequence: Key
26 B

The definition of standard of care is the level of practice of the average, prudent provider in any given community.

Sequence: Key
27 C

Digitalis poisoning can cause a variety of arrhythmias.

Sequence: Key
28 C

Since calcaneal inversion (frontal plane motion) is a component of subtalar joint supination, placing the heel in an inverted position also puts the subtalar joint in a supinated position, thus limiting subtalar joint pronation.

Sequence: Key
29 B

An involucrum is new bone formed beneath an elevated periosteum surrounding necrotic bone in osteomyelitis.

Sequence: Key
30 D

Generalized causes of wound dehiscence include infection, hematoma, injury to the wound, and incorrect suturing technique.

Sequence: Key
31 C

The symptoms of acute meningitis include fever, headache, and a stiff neck.

Sequence: Key
32 B

A lateral roentgenogram of a flatfoot pronated in stance will reveal talar plantarflexion.

Sequence: Key
33 D

Promethazine is a drug used prophylactically against postoperative nausea and vomiting.

Sequence: Key
34 B

Ultrasound therapy is used to treat enthesopathy, which is inflammation at the site of attachment of muscle tendons and ligaments to bones or joint capsules. Ultrasound therapy reduces tightness and spasms, decreases inflammation, and assists in healing.

Sequence: Key
35 A

A long leg cast with the ankle plantarflexed 20° will immobilize the medial and lateral heads of the gastrocnemius muscle across the knee and also reduce the tension of the Achilles tendon distally.

Sequence: Key
36 B

Neutrophils evolve from stem cells with the specialized ability to move toward and completely engulf bacteria and fungi. They are capable of producing a number of different granules containing potent chemicals, which results in the destruction of the engulfed organisms.

Sequence: Key
37 B

During the inflammatory phase of wound healing collagen exposed during wound formation activates the clotting cascade. After injury to tissue occurs the cell membranes, damaged from wound formation, release thromboxane A₂ and prostaglandin 2- α , potent vasoconstrictors. This helps to limit hemorrhage. After a short period, capillary vasodilatation occurs secondary to local histamine release.

Sequence: Key
38 C

Infant mortality rate in a population is defined as the number of deaths of children under the age of 1 during a year divided by the number of live births that year. The rate is expressed per 1,000 live births.

Sequence: Key
39 C

By definition, Ewing's sarcoma is a malignant bone tumor.

Sequence: Key
40 A

Costal chondritis will not usually be localized to the substernal area. It will normally present as moderate, generalized chest pain.

Sequence: Key
41 B

Malignant hyperthermia is a potentially life-threatening though rare disorder characterized by extremely high fever, muscle rigidity, cardiac arrhythmias, and acidosis. It may be precipitated by inhaled anesthetics, both depolarizing and nondepolarizing, neuromuscular blocking agents and by other means including stress.

Sequence: Key
42 A

The calcaneofibular ligament is specifically stressed when the ankle is in a neutral position and inversion force is applied against the foot relative to the tibia.

Sequence: Key
43 B

Pterygium is frequently seen when nails are affected by lichen planus due to involvement of the nail matrix.

Sequence: Key
44 B

When a radiograph is taken, current is measured in milliamperes (mA). Increasing the current increases the number of electrons emitted, which in turn increases the intensity of the rays produced, thus resulting in a blacker radiograph.

Sequence: Key
45 C

Enlargement of the hands and feet is an early feature of acromegaly.

Sequence: Key
46 A

Of the options presented, the most likely cause of a fever that occurs during the first postoperative day is atelectasis.

Sequence: Key
47 C

To properly assess tibial varum, which is the inward angulation of the distal third of the shaft toward the midline in the frontal plane, the rearfoot should be in the neutral calcaneal stance position.

Sequence: Key
48 C

Of the options listed, the only tendon encountered in the third interspace is the lumbrical to the fourth toe.

Sequence: Key
49 C

CT scans use special x-ray equipment to produce multiple images of the inside of the body. A computer is used to join the images together to produce cross-sectional views of the area of interest. The image in this question was taken at the level of the foot.

Sequence: Key
50 A

In the absence of any hypercoagulable state or significant risk factors, the mechanical compression provided by elastic stockings is usually sufficient to prevent blood clot formation postoperatively.

Sequence: Key
51 C

Pentoxifylline is used for the treatment of arterial insufficiency.

Sequence: Key
52 D

A complete sequential reduction will reduce the deformity, but the position must be maintained with temporary fixation to prevent redislocation.

Sequence: Key
53 B

Lidocaine helps suppress ectopic ventricular rhythms by depressing automaticity which decreases the slope of phase IV depolarization.

Sequence: Key
54 D

A rupture of the posterior tibial tendon is followed by symptoms which often include pain, swelling, a flattening of the arch, and an inward rolling of the ankle. Generally these symptoms do not improve with conservative treatment such as shoe modification.

Sequence: Key
55 A

An MRI scan is the imaging study of choice to confirm the diagnosis. An MRI scan can reveal a complete or incomplete rupture of the tibialis posterior tendon.

Sequence: Key
56 A

Charcot-Marie-Tooth disease is also known as peroneal muscle atrophy. As the disease progresses, symmetrical muscular atrophy and weakness are apparent in peroneal muscles and toe extensors.

Sequence: Key
57 C D

Health departments pursue a legislative policy agenda promoting health. They also design and implement a health care delivery system.

Sequence: Key
58 A D

Accessory bones are bones that are not regularly present. A sesamoid is a type of accessory bone that is embedded within a tendon or joint capsule. On x-ray, this type of variant anatomy may be mistaken for pathology.

Sequence: Key
59 A C E

Urinary incontinence and dehydration are often early signs of sepsis in elderly patients. Polyuria is rare. Because of the increased respiration rate, respiratory alkalosis is a risk.

Sequence: Key
60 The order is: C E A B D

The McBride procedure is an important historical procedure for hallux valgus correction in which the sequence of steps is medial capsulotomy, exostectomy, section of the deep transverse intermetatarsal ligament, release of the conjoined adductor tendon, and removal of the fibular sesamoid.

PRACTICE TEST 2
ANSWER KEYS AND RATIONALES

Sequence: Key
1 C

Generalized osteopenia on a radiograph is a characteristic feature of osteoporosis; however, it cannot be used as the only diagnostic criterion for the condition.

Sequence: Key
2 A

Thiopental is an intravenous sedative-hypnotic that is used as an induction agent.

Sequence: Key
3 B

Tinea pedis most often appears as dryness and scaling in a moccasin distribution.

Sequence: Key
4 C

The use of tobacco is the most prevalent and preventable risk factor involved in lower extremity ischemia and disease.

Sequence: Key
5 D

Charcot-Marie-Tooth disease specifically increases the spasticity of the fibularis (peroneus) longus muscle, resulting in the supination of the entire foot around the subtalar joint, producing a pes cavus appearance of the foot.

Sequence: Key
6 A

In a weightbearing lateral view, the film is placed vertically in the orthoposer with the medial aspect of the foot and ankle against the plate.

Sequence: Key
7 C

PT measures blood clotting ability and is increased with the use of warfarin.

Sequence: Key
8 A

First-generation cephalosporins are most effective against *Staphylococcus aureus*, the most common cause of postoperative infection.

Sequence: Key
9 B

A rocker-bottom shoe acts as a dynamic lever to decrease the need for required ankle motion in the sagittal plane during the gait cycle, allowing the patient to ambulate with a more normal gait.

Sequence: Key
10 C

Stress fracture of the metatarsal can occur after excessive cyclic loading of the bone, such as after prolonged, strenuous weightbearing activity.

Sequence: Key
11 D

When a lateral radiograph is taken, the patient stands with the medial side of the foot placed against the film and the tubehead angled 90 degrees from vertical.

Sequence: Key
12 D

Swelling and erythema are seen in the initial phase of Charcot arthropathy.

Sequence: Key
13 D

An isolated rupture of the calcaneofibular ligament will allow the talus to invert relative to the tibia due to lateral instability but will not allow anterior displacement of the talus to the tibia if the anterior talofibular ligament is intact.

Sequence: Key
14 B

Blood glucose levels should be measured preoperatively and postoperatively. The need for additional measurements is determined by the duration and magnitude of surgery and the stability of the diabetes. Signs of hypoglycemia include tachycardia, hypertension, and diaphoresis.

Sequence: Key
15 A

An increased metatarsus adductus angle is associated with the podopediatric condition of metatarsus adductus. It involves medial displacement of the metatarsals and is not a feature of subtalar joint pronation.

Sequence: Key
16 C

Child abuse legislation in most states provides for immunity from prosecution arising from reporting suspected child abuse in good faith.

Sequence: Key
17 C

Clindamycin is used for anaerobic infections. Ciprofloxacin is primarily used to treat gram-negative infections but also provides gram-positive coverage.

Sequence: Key
18 D

X-ray findings in tarsal coalition include dorsal talar head and neck beaking. Pain is a common symptom. Limitations of subtalar motion and valgus deformity vary in severity.

Sequence: Key
19 A

The Harris-Beath (calcaneal axial) view can allow visualization of the middle facet of the talocalcaneal joint. The joint space is obliterated in the case of osseous coalition. If there is fibrocartilaginous coalition, the joint space appears narrow and subchondral sclerosis may be present.

Sequence: Key
20 C

Mönckeberg's arteriosclerosis occurs in peripheral arteries of the lower limbs as calcification of the tunica media. The radiographic appearance has been called "rail tracking" and described as a pipe stem pattern.

Sequence: Key
21 D

In therapeutic ultrasound, high frequency sound waves are absorbed primarily by connective tissue, such as tendons and ligaments, heating the tissue, increasing blood flow, and reducing chronic inflammation.

Sequence: Key
22 A

Osteogenesis imperfecta is a genetic disease that results in weakness of the bones secondary to a malfunction of the body's production of collagen. Pedal manifestations include decreased metatarsal girth.

Sequence: Key
23 C

Immediate hypersensitivity is the result of antigen binding to IgE, which is attached to circulating tissue mast cells and basophils.

Sequence: Key
24 B

Lidocaine is commonly used for peripheral nerve blocks and has a usual duration of 1-3 hours.

Sequence: Key
25 A

Common radiographic findings of osteoarthritis include subchondral sclerosis, asymmetric joint space narrowing, and marginal osteophyte formation.

Sequence: Key
26 D

The American Heart Association Basic Life Support Guidelines establish the assessment for unresponsiveness as the initial action to be performed.

Sequence: Key
27 B

It is critical to understand the surgical anatomy of the second interspace in order to avoid potential complications. Severing of the second dorsal interossei will cause the second toe to deviate medially.

Sequence: Key
28 D

Degenerative disease of the subtalar joint with a calcaneonavicular coalition requires arthrodesis, not resection of the coalition.

Sequence: Key
29 D

Clinical features of hyperthyroidism include warm moist skin, lid lag, and fine tremors.

Sequence: Key
30 C

The second phase of wound healing is the proliferative phase, which is characterized by epithelialization, angiogenesis, granulation tissue formation, and collagen deposition.

Sequence: Key
31 B

Stabilization of the toes in midstance is assisted by the plantar intrinsic musculature, which includes the quadratus plantae.

Sequence: Key
32 D

A shoe that does not flex at the metatarsophalangeal joints has the effect of increasing the lever arm of ground reactive force at the ankle. The longer the lever arm of ground reactive force, the greater the tension on the Achilles tendon in plantarflexing the ankle. This results in overuse of the tibialis anterior muscle as it attempts to counteract the resistance of the Achilles tendon, causing inflammation where the muscle of the tibialis anterior attaches to the anterior aspect of the tibia.

Sequence: Key
33 C

Maintaining the hinge axis for a metatarsal basilar osteotomy is critical to provide another point of stabilization.

Sequence: Key
34 C

The cardiovascular effects of barbiturates include a decrease in blood pressure and a compensatory increase in heart rate.

Sequence: Key
35 C

Capitation is a fixed periodic HMO payment calculated to cover the expected cost of providing services to patients over a period of time.

Sequence: Key
36 A

When an excision is performed through a plantar approach, the two proper digital nerves that are divisions of the common digital nerve are found superficial to the deep transverse metatarsal ligament.

Sequence: Key
37 D

Symptoms of iliac artery occlusion include weak femoral pulses, sexual dysfunction, and buttock claudication.

Sequence: Key
38 A

Young healthy athletes have a high rate of success with surgical repair of an Achilles tendon rupture.

Sequence: Key
39 B

The patient is at risk for delayed union or nonunion of the fracture due to instability and limited blood supply in the region of the fracture. Nonweightbearing is a necessary part of the conservative post-injury treatment to allow for complete healing in a timely manner.

Sequence: Key
40 C

Anabolic steroids are FDA-approved for use to relieve the bone pain associated with osteoporosis. They do not cause osteoporosis in young athletes.

Sequence: Key
41 D

Muscle atrophy due to disuse is a major concern when a patient is in a cast. Isometric exercises, a form of resistance training where the muscle contracts but does not change length while exerting a force, allows muscles to be exercised while the limb is immobilized.

Sequence: Key
42 C

A flexor to extensor tendon transfer for stabilization requires healing with the proximal phalanx plantarflexed at the metatarsophalangeal joint to ease tension on the tenodesis.

Sequence: Key
43 C

Inhaled beta-adrenergic agonists provide immediate relief of asthma symptoms by causing direct dilation of the constricted air passages.

Sequence: Key
44 B

Opioid agonists cause constipation.

Sequence: Key
45 B

The talocalcaneal angle is important in the evaluation of a flatfoot deformity. When the talocalcaneal angle is markedly increased, heel valgus is said to be present, which indicates a more significant deformity.

Sequence: Key
46 D

Under civil law, the performance of a procedure without consent is an offense referred to as battery.

Sequence: Key
47 A

Lower motor neuron lesions cause weakening of muscles and paralysis which leads to a steppage gait.

Sequence: Key
48 B

The greatest immediate risk to this patient is aspiration of vomit, which is minimized when the patient is turned on his side. Vomiting is not uncommon in patients experiencing seizures.

Sequence: Key
49 D

A key radiographic feature that defines an osteochondroma is the continuity of the cortex of the lesion with the cortex of the involved bone.

Sequence: Key
50 C

The standard distance between the film and anode when a podiatric foot x-ray is performed is 24-30 inches.

Sequence: Key
51 C

Dermatofibromas are common benign tumors but some pigmented basal cell carcinomas and even some melanomas can present with a similar appearance, so excision with pathological examination is often indicated.

Sequence: Key
52 A

In many states, the doctor can invoke a legal privilege on the patient's behalf when asked to disclose or divulge information about the patient. This privilege belongs to the patient, not the doctor, so only the patient may waive it, usually by written consent.

Sequence: Key
53 A

After a general anesthetic is administered, a minimal level of monitoring must be provided in the post-anesthesia care unit. Vital signs including blood pressure, heart rate, breathing rate, airway patency, and level of consciousness should be monitored every 15 minutes.

Sequence: Key
54 C

The risk of deep vein thrombosis associated with total hip arthroplasty ranges from 20% to 80%; for total knee replacement the risk is approximately 50%. Patients who undergo these procedures are at increased risk for the development of pulmonary embolism.

Sequence: Key
55 A

All three tests when elevated suggest myopathy or a neuromuscular disease such as muscular dystrophy.

Sequence: Key
56 C

The mechanism of injury produces an intra-articular fracture of the calcaneus, creating a posterior facet fragment that is impacted or “depressed” into the calcaneal body.

Sequence: Key
57 A B C

Tissues consisting primarily of water have the lowest signals on T1-weighted images.

Sequence: Key
58 A B C

In talipes equinovarus, the increase in the talo-first metatarsal angle from the normal range of 0° to -20° is due to the adductus of the forefoot, while the decrease in the talocalcaneal angle from the normal range of 20° to 50° reflects the inversion (varus) of the heel.

Sequence: Key
59 A B D

Lytic lesions are frequently seen on bone scans as “cold” areas. Hypercalcemia is frequently seen due to increased bone destruction and release of calcium into the circulation.

Sequence: Key
60 The order is: A B D C

To reduce a talipes equinovarus deformity accurately, the casting treatment should correct the components in the following order: adduction, inversion, internal torsion at the tibia, and equinus.

**PRACTICE TEST 3
ANSWER KEYS AND RATIONALES**

Sequence: Key
1 D

In the anesthetic setting, diazepam is used as a preoperative medication and adjuvant drug partly because of its anxiolytic properties.

Sequence: Key
2 B

Bisphosphonates are a class of compounds that slow bone resorption and are used to treat osteoporosis.

Sequence: Key
3 B

The inversion ankle stress view or “talar tilt” test is most useful for evaluating injury to the lateral ankle ligaments.

Sequence: Key
4 C

The metatarsophalangeal joints and sesamoids are regions that receive maximal ground reactive force at the very end of the midstance phase of gait, just before heel lift.

Sequence: Key
5 A

Deep vein thrombosis is a serious medical complication that needs to be addressed preventively, prior to formation.

Sequence: Key
6 A

A fat-containing lesion like a lipoma has a short T1 signal and a long T2 signal.

Sequence: Key
7 A

Extreme dorsiflexion of the metatarsophalangeal joint causes the metatarsal head to rupture the plantar joint capsule with dorsal and proximal displacement of the digit. The injury is common among football players due to the combination of artificial playing surfaces which require the use of more flexible shoe gear and the frequency with which the player is positioned with the toes fixed on the playing surface and the heel raised.

Sequence: Key
8 B

The hepatitis B virus (HBV) is a blood borne pathogen that causes serious viral disease and targets the liver. It can cause chronic infection, cirrhosis, and death. HBV is the longest known occupational pathogen, and infection is largely preventable through vaccination.

Sequence: Key
9 A

Patients with poorly controlled hypertension may be at an increased risk for intraoperative or postoperative myocardial infarct or stroke. A traditional recommendation has been to delay surgery if the diastolic blood pressure is greater than 110 mm Hg.

Sequence: Key
10 B

Erythromycin is the drug of choice for treatment of erythrasma which fluoresces coral pink under a Wood’s light.

Sequence: Key
11 A

Tetanus toxoid immunization booster administration is recommended every 10 years by the CDC.

Sequence: Key
12 C

The use of local anesthetics is not a risk factor for deep vein thrombophlebitis.

Sequence: Key
13 C

In closed-chain subtalar joint pronation, the talus adducts and plantarflexes, and the leg internally rotates.

Sequence: Key
14 C

The application of a bivalve cast will provide immediate relief of the patient's symptoms and restore blood flow.

Sequence: Key
15 D

The establishment of a doctor-patient relationship requires an individual to voluntarily seek a doctor's care and expect that the communication be held in confidence. The relationship can be defined in writing but can also be oral or implied.

Sequence: Key
16 B

Hypertrophic nonunion results from excessive motion, so eliminating movement will allow complete bone healing.

Sequence: Key
17 C

Clinical features of rheumatoid arthritis include tendon and ligament erosion which in the cervical spine leads to instability between the C1 and C2 vertebrae.

Sequence: Key
18 C

The only muscle belly present in the first interspace is the first dorsal interosseous.

Sequence: Key
19 B

Terbinafine is fungicidal rather than fungistatic at the minimum therapeutic dose.

Sequence: Key
20 A

Displacement after a Lisfranc's fracture most commonly occurs in a dorsal and lateral direction. The dorsal ligaments are intrinsically weak and more likely to rupture than the plantar ligaments. Lateral deviation occurs due to rupture of Lisfranc's ligament.

Sequence: Key
21 A

A short leg cast with the ankle neutral will provide zero tension and ideal positioning for healing of a repaired anterior tibial tendon.

Sequence: Key
22 B

OSHA regulations state that it is "mandatory to post" regulations in a location all employees routinely visit.

Sequence: Key
23 C

Cerebral palsy is defined as a nonprogressive lesion in the brain that alters motor control, leading to disorders of movement and posture.

Sequence: Key
24 D

Markedly increased density is not a radiographic feature of osteomyelitis; therefore, it can be excluded from the differential diagnosis.

Sequence: Key
25 B

The inflammatory phase of wound healing lasts approximately 3-5 days. Blood fills the wound, epithelial cells mobilize, and venules are more permeable.

Sequence: Key
26 D

A long leg cast immobilizes both knee and ankle joints, reducing strain on the gastrocnemius-soleus complex and Achilles tendon. Casting the foot in an equinus position reduces the risk that the tendon will heal in an elongated, weakened position.

Sequence: Key
27 D

Flexion-extension creases in the skin form tension lines perpendicular to the direction of muscle pull over joints.

Sequence: Key
28 D

Physical therapy is the best initial treatment for reflex sympathetic dystrophy because inactivity can exacerbate the disease and perpetuate the pain cycle.

Sequence: Key
29 C

A rongeur forceps has strong, heavily constructed opposing jaws, each of which is scooped out like the tip of a curette.

Sequence: Key
30 C

TENS is a relatively safe, noninvasive method of pain management.

Sequence: Key
31 A

A spinal anesthetic is not recommended for a patient with sepsis due to the increased risk for meningitis.

Sequence: Key
32 A

The first lumbrical and the first and second dorsal interossei all insert in the base of the proximal phalanx of the second digit.

Sequence: Key
33 D

Soft tissue “emphysema” or gas on a radiograph is most commonly associated with *Clostridium perfringens*.

Sequence: Key
34 B

Half of all osteoid osteomas are seen in the tibia and femur, making the tibia the most likely location below the knee.

Sequence: Key
35 D

Whenever a child presents with multiple fractures at various stages of healing, child abuse should be at the top of the differential diagnosis.

Sequence: Key
36 A

Erythema nodosum and subcutaneous nodule formation are common in the latter stages of sarcoidosis. The presence of shortness of breath and nonproductive cough are also manifestations of sarcoidosis.

Sequence: Key
37 C

Erythromelalgia is a neuropathic pain syndrome, not a seronegative spondyloarthropathy.

Sequence: Key
38 C

A Salter-Harris type III injury occurs through the physis and the epiphysis. The fracture passes through the hypertrophic layer of the physis and extends to split the epiphysis, inevitably damaging the reproductive layer of the physis.

Sequence: Key
39 D

The tibialis posterior muscle acts as a supinator of the subtalar joint, counterbalancing the effects of the fibularis (peroneus) brevis muscle, which acts as a pronator. Posterior tibial tendinitis will result in weakness of the muscle, causing a more pronated appearing foot, as well as discomfort at the tendon’s insertion on the navicular tuberosity.

Sequence: Key
40 B

Since the tibialis posterior muscle is a supinator of the subtalar joint, having the muscle contract against resistance should demonstrate both pain and weakness associated with tendon dysfunction.

Sequence: Key
41 A

A common complication of rheumatic fever is thickening and stenosis of the mitral valve.

Sequence: Key
42 C

The least time of radiation exposure while minimizing the current (mA) takes precedence over the kVp when trying to minimize radiation dose to the patient.

Sequence: Key
43 B

Absorbable pins provide stability for inherently stable osteotomies, such as the commonly performed Austin bunionectomy.

Sequence: Key
44 C

The presence of asymptomatic central ulceration, which may be dry and crusted, is highly suggestive of basal cell carcinoma. This is frequently associated with sun exposure.

Sequence: Key
45 A

Acidosis from local infection retards the diffusion of local anesthetics because of increased ionization.

Sequence: Key
46 D

Contact dermatitis is a T cell mediated phenomenon wherein the T cells are sensitized with exposure to a specific antigen, then activated by subsequent re-exposure to the antigen.

Sequence: Key
47 D

PTT is elevated when an inadequate level of Factor VIII is present.

Sequence: Key
48 C

Scintigraphy records on film the distribution of radioactivity in tissue following the use of radioactive tracer substances. When a stress fracture is strongly suspected and the initial radiographs are normal, the next study to order would be a triple phase nuclear medicine bone scan.

Sequence: Key
49 C

Osteochondroma is an overgrowth of cartilage and bone. It is the most common benign bone tumor accounting for 20-50 percent of benign bone tumors and 10-15 percent of all bone tumors.

Sequence: Key
50 D

In a competitive athlete, this type of fracture should be treated aggressively due to the increased incidence of delayed union or nonunion associated with this injury.

Sequence: Key
51 C

Hands below the waist is considered a violation of sterile technique.

Sequence: Key
52 D

These symptoms occurring during this time frame after transfusion are most likely the result of acute hemolysis resulting from a reaction to the transfusion.

Sequence: Key
53 D

The ossification center of the navicular bone appears at approximately 3 years of age and is the last center of ossification to appear in the foot.

Sequence: Key
54 B

Wave frequency is simply defined as the number of electromagnetic waves that pass a given point per unit of time.

Sequence: Key
55 D

Health costs for those age 65 and older are more than three times higher than for younger age groups.

Sequence: Key
56 A E

In clinical practice the TE is always shorter than the TR and usually it is lower than 30 msec. The TR is usually lower than 500 msec. TE and TR scan parameters can help determine if the image is T1-weighted or T2-weighted.

Sequence: Key
57 C D E

Sickle cell disease complications are due to vascular effects caused by the altered red blood cell shape and function. Osteoporosis and delayed puberty are primarily endocrine effects and are not commonly seen in sickle cell disease.

Sequence: Key
58 A D E

In this case, the os tibiale externum is a normal finding. A smooth rounded appearance categorizes this ossicle as type I and disassociates it from the flatfoot deformity. When there is doubt about normal anatomical x-ray findings, contralateral studies can eliminate the need for MRI.

Sequence: Key
59 C D E

The first ray axis runs through all three planes of motion from a posteromedial and dorsal direction to an anterolateral and plantar direction. As a result, when the first ray dorsiflexes, it also inverts and adducts. The fibularis (peroneus) longus stabilizes the first ray in midstance.

Sequence: Key
60 A B C

Consent is regulated by laws that vary from state to state but generally define competent adults eligible to make health care decisions.