ABPS 420

Examination Study Guide

American Board of Podiatric Surgery
445 Fillmore Street
San Francisco, CA 94117-3404
(415) 553-7800

April 2009

Table of Contents

U:\DOCS\ABPS Documents History\420\2009-ABPS420_09_v1.doc 4/29/09

Nondiscrimination policy. In accordance with applicable federal laws, the American Board of Podiatric Surgery does not discriminate in any of its policies, procedures, or practices on the basis of race, color, national origin, sex, sexual orientation, age, or disability.

Americans with Disabilities Act. In compliance with the *Americans With Disabilities Act*, the American Board of Podiatric Surgery will make special provisions for individuals with disabilities if written request is made no later than thirty (30) days prior to the date(s) of the examination for which appropriate application has been made, fees paid, and credentialing completed.

Introduction

While obtaining board certification is an important step in the career of every podiatric surgeon, board status is also important to hospitals and the general public. The profession of podiatric medicine has chosen to use the certification process and its examinations component to indicate that a board-certified podiatrist has demonstrated a level of knowledge appropriate to her/his specialty area.

This *Study Guide* is provided to assist candidates in their preparation for the examinations of the American Board of Podiatric Surgery (ABPS). ABPS uses both written, oral, and Computer Based Patient Simulation (CBPS) examinations in its assessment of candidates' knowledge of podiatric surgery. While this guide is designed to represent the types of questions used in certification examinations, the examination content is subject to changes that reflect current technology and medical practice.

The Examinations Committee, in consultation with the ABPS' independent psychometric consultant, prepares the examinations. Scoring, interpretation of scores, and determination of passing scores are the responsibility of the Board of Directors.

Candidates are tested in specific subject areas applicable to the practice of podiatric medicine and surgery and the perioperative care of the podiatric surgical patient. The **written** parts of the examinations use objectively scored (i.e., multiple-choice, true-false, etc.) questions to test declarative knowledge. The written examination may be adaptive or linear and will be administered by computer at testing centers throughout the United States. The **oral** examinations employ face-to-face interaction between the examiner and the candidate to test the candidate's ability to obtain and interpret clinical information, to reason logically, and to arrive at a diagnosis and treatment plan for each patient presentation. The **CBPS** examinations are computer-driven using an interactive screen to gather patient information, order tests and procedures, make a diagnoses and administer treatments.

Before written, oral, and CBPS questions are incorporated into an examination, they are studied and field tested for efficacy. Each question is viewed statistically immediately after the examination. Some questions may be eliminated, or the number of acceptable responses broadened, if evidence of significant ambiguity is discovered.

How to Study for ABPS Examinations

1. Read this Study Guide to learn as much as you can about the examination process.

2. Get maximum benefit from the sample written questions by answering them without looking at the answer key. Then score yourself and note any pattern showing a weakness in any particular subject area.

3. It is imperative that candidates sitting for the CBPS examinations access the practice questions sometime during the weeks prior to the actual examination. Studies have shown that candidates who do not practice the CBPS examination often do not have time to complete the actual CBPS examination. You must become familiar with the computer screens and how they function if you expect to efficiently move through the actual examinations.

   Candidates for the CBPS examination access the practice examination through their personal page on the ABPS web site using their user ID and passwords. Instructions for using the practice examinations are also found on the personal page.

4. Use references listed on the Suggested Reading List (beginning on page 31) to review the subject areas tested in ABPS examinations.

5. While ABPS does not endorse board certification review courses, candidates have reported that the review of subject areas and mock orals included in some review courses have been helpful in preparing for the examinations. Board review courses are advertised in national podiatric publications and are often associated with the colleges of podiatric medicine and state podiatric medical associations.

6. Make time to prepare for the examinations. Cramming and intensive study may not be helpful. Candidates who prepare by carefully reviewing are sometimes less anxious at examination time and may perform better.

Written Examinations:

Board Qualified Foot Surgery
Board Qualified Reconstructive Rearfoot/Ankle Surgery
Recertification Foot Surgery
Recertification Reconstructive Rearfoot/Ankle Surgery

General Information

a. Format. The written examinations consist of objectively scored (i.e., multiple-choice, true-false, etc.) questions administered by computer. Adaptive testing uses a large pool of questions, the difficulty level of which was determined by the questions' statistical performance in ABPS tests. In an adaptive test, the computer dynamically selects questions as the candidate takes the test and adjusts question selection based on the candidate's demonstrated ability level. As each question is answered, the computer assesses the response and selects the next question based on whether the previous answer was right or wrong. Questions become progressively more or less difficult as the program assesses and establishes the test taker's ability level. Each question has only **one** best answer. **In this computer adaptive format, returning to previous questions for review and/or changing answers is not possible.** It should be noted that in an adaptive test, each question is weighted according to its difficulty level and other statistical properties, and not by its position in the test.

b. Subject Areas. The written examinations are based on the following subject areas applicable to the practice of podiatric medicine and surgery:

- **Basic Science**.
  Pathoanatomy.
  Pathomechanics.
  Pathophysiology.
- **Diagnostic Evaluation/Medical Imaging.**
- **Surgical Principles.**
- **Surgical Procedures and Techniques.**
- **Procedural Perioperative Management.**
- **Surgically Relevant Medical Management.**
  General medical.
  Anesthesia.
  Emergency Medicine.
  Lower extremity conservative.
- **Complications.**

NOTE: The following specific conditions may be tested under each response subject area:

- Deformities.
- Infections.
- Neoplasm/tumors/masses.
- Other conditions.
- Acute trauma.

c. Time considerations. Candidates with average reading skills should have ample time to complete each written examination session. Extra time has been factored in to allow most candidates to work steadily through the questions without running out of time.

d. Scoring. Examination results are provided as a scale score. The score is determined by the difficulty level of the questions you are able to answer correctly. The examinations are not graded on a curve. All examinations will be administered at computer sites throughout the United States.. Except for the Reconstructive Rearfoot/Ankle Surgery Recertification Examination, all written examinations are adaptive. The Reconstructive Rearfoot/Ankle Surgery Recertification Examination is a linear examination. The Board of Directors sets passing scores.

e. Review of Scores. Each examination is scored by computer, and failed examinations are automatically rechecked and re-scored. Therefore, once examination results are mailed to candidates, there is no further review of scores.

f. Inclusion of Non-scored Questions. Some questions may be included in the ABPS examinations to improve the examination system and to provide data for investigations into the examination process. Such questions are not counted in determining your scores.

Board Qualified and Recertification in Foot Surgery

a. Content. The Foot Surgery examinations will test the *diagnostic evaluation* of conditions pertaining to the foot and ankle and *intraoperative/perioperative management* of both forefoot and non-reconstructive rearfoot procedures.

b. Schedule. Both the Board Qualified and the Foot Surgery Recertification examinations will consist of 125 questions, given in one session of no more than three hours in length.

Board Qualified and Recertification in Reconstructive Rearfoot/Ankle Surgery

a. Content. The Reconstructive Rearfoot/Ankle examinations will test *diagnostic, intraoperative, and perioperative management* pertaining to reconstructive rearfoot and ankle procedures.

b. Schedule. The Board Qualified examination will consist of 125 questions given in one session of no more than three hours. The Recertification examination in Reconstructive Rearfoot/Ankle Surgery will contain 100 questions, given in one session of no more than three hours.

Self-Assessment in Foot and Ankle Surgery

a. Content. The Foot and Ankle Surgery Self-Assessment examination will test *diagnostic, intraoperative, and perioperative management* pertaining to foot and ankle procedures.

b. Schedule. The self-assessment examination in Foot and Ankle Surgery will consist of 100 questions. The examination is administered as a secured examination at compute test sites.

Oral and CBPS Examinations:

Certification Foot Surgery
Certification Reconstructive Rearfoot/Ankle Surgery

The oral and CBPS examinations serve to evaluate the candidate's knowledge and skill in obtaining and interpreting clinical information as well as their ability to reason logically and to arrive at a diagnosis and a treatment plan for a specific patient presentation.

General Information

a. Overall Process. Each candidate is assigned to a group with a unique schedule for the oral and CBPS examination sessions. Groups gather in a central meeting area until their schedule begins at which time they are escorted to the examination hallways in the hotel. Each oral examination session is held in a private room where the candidate and the oral examiner (selected by the Board of Directors) sit across from each other at a table. Candidates move between rooms until the group schedule is complete, and then return to the central meeting area. Every attempt is made to equalize waiting times for all groups. The CBPS questions are administered in larger groups with each candidate having access to a laptop computer.

b. Oral Question Format. At the beginning of each question, the candidate receives a Candidate Information Sheet describing a clinical situation. Based on the described situation, the candidate must request additional information (such as patient history, physical examination, radiographs, laboratory reports, etc.) in a manner simulating a real patient encounter. The examiner will respond as a patient would and will only report, not interpret, any requested data. The examiner will not volunteer information, so the candidate must be thorough and specific when asking for all information needed to reach a diagnosis and treatment plan. The examiner scores each question by noting which predetermined essential areas are satisfactorily covered by the candidate.

Example of an examiner/candidate interchange:

Candidate:	Is there a history of injury?
Examiner:	Specifically?
Candidate:	Is there history of injury to the foot or ankle?
Examiner:	The patient says that he hurt his foot when he was very small.

c. Scoring. Examiners fill out scorecards for each candidate. Each oral question has predetermined essential areas that must be adequately covered to pass the question. A passing score is set by the Board of Directors based on psychometric evaluation of the examination.

d. Review of Scores. The scorecards of failing candidates are automatically reviewed and rechecked for accuracy. Therefore, once examination results are mailed to candidates, there is no further review of scores.

e. Challenge Examination. If a candidate feels that an oral examiner has been unfair, or that a personality conflict has interfered with the examination, the candidate may request a challenge examination by another examiner. The candidate must request the challenge immediately upon leaving the examiner's room. The Chairman of the Examinations Committee will determine whether a challenge examination is warranted. Specific instructions about this process will be given to candidates during the candidate orientation session prior to the examination.

f. CBPS Examination. A CBPS examination is "Candidate-Process Driven." You will drive the examination by performing actions to collect and analyze information. You will select the necessary information for problem solving. For example, if you wanted to palpate a foot mass, you would select "palpate mass" in the "Physical Exam" section. If you wanted to aspirate the mass, you might select "aspirate needle" in the "Diagnostic Procedures" section. If you wanted to order a magnetic resonance image (MRI) on the foot, you would select the appropriate MRI in the "Imaging" section. Performing a surgical technique (procedure) on the mass is done in the "Treatment**"** section. Follow-up care is also selected, when appropriate, in the **"**Treatment" section. By practicing with the software and the simulated case examination, you will be become familiar with how to navigate through the simulation.

You are to complete the CBPS as best you can by taking into account the relevant aspects of patient management, (case history, physical examination, imaging, labs, diagnostic procedures, diagnosis, treatment; and in some cases follow-up diagnoses and treatments). While collecting patient information, you must balance thoroughness with efficiency, as well as balancing quality versus quantity. You will need to pace yourself and be careful to not take too much time on any one point or decision as the CBPS is a timed examination. Field testing has demonstrated that users who have practiced the CBPS will have ample time to complete each case. As you collect information regarding your simulated case, keep in mind that relevancy holds the key to successful resolution of a clinical problem. For example if you are hesitant about whether a procedure is warranted, make the decision based on clinical indications. CBPS scoring is based on the relevancy of the processes or actions performed.

Certification in Foot Surgery

a. Schedule. There are six traditional (examiner/candidate) oral questions and six Computer Based Patient Simulation (CBPS) given in three sessions, over one and one-half days.

b. Content. The questions will test the *diagnostic evaluation* of conditions pertaining to the foot and ankle, and *intraoperative/perioperative management* of both forefoot and non-reconstructive rearfoot procedures.

c. Subject Areas. The Foot Surgery Certification Oral Examination (oral and CBPS) focuses on those deformities and conditions involving the forefoot and non-reconstructive rearfoot procedures. Questions may emphasize the following areas:
   - Biomechanical/Acquired deformities.
   - Congenital and/or pediatric deformities.
   - Infections.
   - Metabolic conditions and/or emergency medical management.
   - Neoplastic (primary or metastatic) conditions.
   - Traumatic conditions.
   - Surgical or traumatic complications.

d. Timing. Candidates receive six tradition oral questions divided between three sessions. Each question lasts 14 minutes. Candidates receive six CBPS questions divided between three sessions. Each question lasts 25 minutes.

e. Passing Score. Each year a passing score is set by the Board of Directors based on psychometric evaluation of the examination.

Certification in Reconstructive Rearfoot/Ankle Surgery

a. Schedule. There are four traditional (examiner/candidate) oral questions and four Computer Based Patient Simulation (CBPS) questions given over one day.

b. Content. The examination will involve diagnostic, intraoperative, and perioperative management pertaining to reconstructive rearfoot and ankle procedures.

c. Subject Areas. The Reconstructive Rearfoot/Ankle Surgery Certification Examination (oral and CBPS) focuses on those deformities and conditions involving the rearfoot and ankle. Questions may emphasize the following subject areas:
    - Common rearfoot/ankle trauma.
    - Adult rearfoot/ankle deformities.
    - Pediatric rearfoot/ankle trauma or deformities.
    - Surgical or traumatic complications.
    - Neoplasms or infections.

d. Timing. Each oral question lasts for 20 minutes, while each CBPS lasts 25 minutes.

e. Passing Score. Each year a passing score is set by the Board of Directors based on psychometric evaluation of the examination.

NOTE: Both the qualification examination and the certification examination in Reconstructive Rearfoot/Ankle Surgery must be passed for Certification in Reconstructive Rearfoot/Ankle Surgery. If a candidate sits for both the qualification and the certification examination and passes the qualification only, he/she is **Board Qualified** in Reconstructive Rearfoot/Ankle Surgery, provided the candidate has completed a PSR-24 or PSR-24+ or PM&S-36 residency (Board Qualified or Certification in Foot Surgery is a prerequisite for attaining Board Qualified status in Reconstructive Rearfoot/Ankle).

SAMPLE FOOT SURGERY WRITTEN QUESTIONS

Note: These questions are representative of the various formats used by the ABPS in its examinations. These questions are not meant to be representative of the scope or level of difficulty of any specific examination.

Answers found on page30.

1. A patient presents with painful hallux abductovalgus deformity. There is pain-free range of motion of the first metatarsophalangeal joint (MPJ). Radiographs reveal:

hallux abductus angle:	35 degrees
intermetatarsal angle:	15 degrees
proximal articular set angle:	22 degrees
distal articular set angle:	4 degrees
metatarsus adductus angle:	8 degrees

What is the most appropriate procedure?

A. closing wedge with McBride.
B. proximal Akin with McBride.
C. closing base wedge with Reverdin-Green.
D. Austin with proximal Akin.

2. Following removal of the proximal phalanx of the fifth digit, what is an appropriate surgical procedure for prevention of fifth digit flailing?

A. syndactylism of the fourth digit to the fifth digit.
B. arthrodesis of the distal interphalangeal joint.
C. shortening of the flexor tendons.
D. flexor tendon transfer.

3. A patient presents with an acute dorsal dislocation of the third metatarsophalangeal articulation. Radiographs show no fractures and closed reduction is performed under local anesthetic. What is the proper sequence of maneuvers to reduce the dislocated digit?

A. longitudinal traction and plantarflexion of the digit.
B. plantarflexion and then longitudinal traction of the digit.
C. dorsiflexion, longitudinal traction, and plantarflexion of the digit.
D. longitudinal traction, dorsiflexion, and plantarflexion of the digit.

4. A patient with a history of true penicillin allergy is scheduled for a total joint implant. Antibiotic prophylaxis would best be served with which of the following medications?

A. piperacillin (Pipracil).
B. cephalothin (Keflin).
C. ciprofloxacin (Cipro).

D. vancomycin (Vancocin).

5. A 60-year-old male suddenly begins complaining of a "crushing" sensation in his chest. The episode lasts very briefly then subsides. It begins again and is more intense. What should you administer to this patient?

A. nitroglycerin (Nitrogard) 0.5 mg.
B. diazepam (Valium) 5 mg.
C. ephedrine (Racephedrine) 25 mg.
D. morphine sulfate 15 mg.

6. Radiographs taken of a 25-year-old male with a painful bunion indicate the following:

interphalangeal abductus angle:	18 degrees
hallux abductus angle:	30 degrees
distal articular set angle:	6 degrees
proximal articular set angle:	7 degrees
metatarsus primus adductus angle:	14 degrees
deviated first metatarsophalangeal joint	

Based upon this information, what is the procedure of choice?

A. proximal Akin with Austin.
B. proximal Akin.
C. distal Akin with Austin.
D. distal Akin with Reverdin.

7. What procedure should be performed on a patient with a 25 degree metatarsus primus adductus angle and a severe first ray hypermobility?

A. Lapidus.
B. lateral closing wedge osteotomy.
C. crescentic osteotomy.
D. Logroscino.

8. A 32-year-old woman has a history of a slowly enlarging, subcutaneous, multinodular, painless mass beneath the flexor surface of the great toe. There is radiographic evidence of marginal bone erosion. What is the most likely diagnosis?

A. glomus tumor.
B. enchondroma.
C. giant cell tumor of the tendon sheath.
D. ganglion.

9. What would a dorsoplantar radiograph of the foot with a plantarflexed first ray taken in the angle and base of gait show the position of the hallucal sesamoids to be?

A. medial to the metatarsal head.
B. proximal to the metatarsal head.
C. distal to the metatarsal head.
D. lateral to the metatarsal head.

10. A patient presents with an inversion ankle sprain. Stress inversion radiographs reveal a 15 degree difference between the symptomatic and asymptomatic ankle. A peroneal tenogram reveals contrast media within the ankle joint and extravasation anterior, lateral, and distal to the lateral malleolus. These findings are consistent with rupture of the:

    A. anterior talofibular ligament.
    B. anterior talofibular and calcaneofibular ligaments.
    C. anterior talofibular ligament and peroneal tendons.
    D. anterior talofibular, calcaneofibular, and posterior talofibular ligaments.

11. A 65-year-old female diabetic on insulin therapy arrives at the surgeon's office. While waiting she begins to feel faint and loses consciousness. What would be the treatment of choice?

    A. administer phenytoin (Dilantin) 200 mg. intramuscularly (I.M.).
    B. administer epinephrine 0.5 cc. intramuscularly (I.M.).
    C. protect patient from injury and observe.
    D. administer 25 cc. of 50 percent dextrose in water intravenously (I.V.)

12. A 25-year-old female has unremitting numbness in the lesser digits. The pain becomes more severe while walking and is difficult to relieve. Over the past several months, the pain has been sharp with radiating sensation in the arch. What is the most likely diagnosis?

    A. neuroma of the third intermetatarsal nerve.
    B. sciatica.
    C. diabetes mellitus.
    D. compression of the posterior tibial nerve.

13. What is an alternate approach to hallux limitus that does **not** require a joint destructive procedure? (*note negative format*)

    A. dorsiflexory osteotomy of the proximal phalanx.
    B. Jones tenosuspension.
    C. lengthening of extensor hallucis longus.
    D. dorsiflexory osteotomy of first metatarsal base.

14. A plantar fibroma is removed. Two months later the wound has healed, but the three medial digits begin to hyperextend at the metatarsophalangeal joints (MPJ). A possible cause would be the severance of which of the following nerves or muscles?

    A. medial plantar nerve.
    B. quadratus plantae.
    C. saphenous nerve.
    D. flexor digiti minimi.

15. A 30-year-old male complains of a painful right ankle after sustaining a forced plantarflexion injury. Plantarflexion of the foot and dorsiflexion of the hallux greatly exacerbate the symptoms. What is the most probable diagnosis?

    A. flexor digitorum longus tendinitis.
    B. fracture of the sustentaculum tali.
    C. fracture of the posterior lip of the tibia.
    D. fracture of the posterior tubercle of the talus.

16. Three weeks following excision of a neuroma in the third intermetatarsal space, the third digit drifts into an adducted position. The most probable cause would be severance of which of the following anatomical features?

    A. second lumbrical muscle.
    B. third dorsal-interossei tendon.
    C. second plantar interossei muscle.
    D. lateral capsule of the third metatarsophalangeal joint.

17. In using a Z-plasty to correct a skin contracture, what should the surgeon do?

    A. keep the Z as small as possible.
    B. make the central incision of the Z parallel to the contracted skin.
    C. place the Z perpendicular to Langer's lines of tension.
    D. make the wings of the Z angled 25 degrees from the central incision.

18. A 36-year-old female has a history of recurrent masses in the medial longitudinal arch of the right foot. What is the most likely primary lesion of the foot causing metastasis to the lung?

    A. melanoma.
    B. rhabdomyosarcoma.
    C. fibrosarcoma.
    D. neurofibromatosis.

19. A 15-year-old female sustained an injury resulting in a Salter-Harris type V epiphyseal fracture of the first metatarsal base. What should initial treatment include?

    A. cast immobilization.
    B. open reduction and ASIF fixation.
    C. soft cast and wooden shoe.
    D. no treatment is necessary.

20. Which of the following procedures is **not** an appropriate treatment of a dog bite on the foot which occurred eight hours ago? (*note negative format*)

    A. debridement of wound and primary closure.
    B. pulsed lavage irrigation of wound.
    C. saline web-to-dry daily dressing changes.
    D. OR debridement.

21. Keratoses beneath the second metatarsal head are frequently observed in association with hallux valgus deformities. What is the most common cause of these keratoses?

    A. hypermobility of the first ray.
    B. short second metatarsal bone.
    C. long first metatarsal bone.
    D. rigid plantarflexed first ray.

22. A patient has a history of hypertension which is controlled by furosemide (Lasix) 40 mg. (q.d.). What is the most frequent electrolyte disturbance observed in this type of patient?

    A. hypokalemia.
    B. hyponatremia.
    C. hyperkalemia.
    D. hypernatremia.

23. Which benign soft-tissue lesion may be invasive into bone?

    A. synovioma.
    B. histiocytoma.
    C. villonodular synovitis.
    D. neurilemmoma.

24. What is the condition that must be present before attempting an extensor suspension (Jones) procedure of the first metatarsal?

    A. contracted hallux.
    B. flexible plantarflexed first metatarsal.
    C. forefoot supinatus that is reducible by manual pressure.
    D. adequate interphalangeal joint motion.

25. A 25-year-old female sustained an inversion ankle sprain 24 hours ago. The area is severely edematous and ecchymotic. Diagnostic tests reveal rupture of the lateral collateral ligaments. What should the treatment consist of at this time?

    A. compression dressing for 24-to-48 hours.
    B. open ligament repair.
    C. posterior splint and warm compresses for 24-to-48 hours.
    D. tape strapping with high top athletic shoe for 24-to-48 hours.
    E. short-leg walking cast.

26. To derotate an adductovarus fifth digit, how is the lenticular incision made?

    A. distal medial to proximal lateral.
    B. distal lateral to proximal medial.
    C. lateral to medial.
    D. medial to lateral.

27. A 40-year-old female presents with a ganglion at the base of the first metatarsal medially. After surgical excision of the ganglion, the patient complains of anesthesia along the medial aspect of the foot, up to the first metatarsal head. Which peripheral nerve was involved?

    A. medial plantar.
    B. lateral plantar.
    C. saphenous.
    D. common peroneal.

28. What coalition does the Harris-Beath view (axial view of the calcaneus) best demonstrate?

    A. talonavicular coalition.
    B. calcaneonavicular coalition.
    C. talocalcaneal coalition.
    D. calcaneocuboid coalition.

29. When performing a Lapidus procedure for hallux abductovalgus, what structure should be avoided when exposing the first metatarsocuneiform articulation?

    A. deep perforating artery.
    B. flexor hallucis longus tendon.
    C. deep peroneal nerve.
    D. anterior tibial tendon.

30. A 41-year-old female has a unilateral flatfoot of six-months duration. The patient relates a history of multiple cortisone injections by another doctor for "os tibial externum." What is the most likely cause of this patient's condition?

    A. dorsal tear of the plantar fascia.
    B. subtalar degenerative arthritis.
    C. rupture of the peroneus brevis tendon.
    D. rupture of the posterior tibial tendon.

31. A 60-year-old male develops an anaphylactic reaction secondary to a drug injection. Epinephrine (Adrenalin) 0.5 cc. is injected intramuscularly (I.M.) immediately. What is the purpose of administering this drug in this situation?

    A. slow the rate of absorption of the offending drug.
    B. strengthen myocardial contractions.
    C. combat cardiac arrhythmias.
    D. dilate the bronchioles.

32. What is most often the cause of anterior process fractures of the calcaneus?

    A. inversion with the foot plantarflexed.
    B. eversion with the foot plantarflexed.
    C. inversion with the foot dorsiflexed.
    D. eversion with the foot dorsiflexed.

33. When is electrical stimulation of the bone best indicated?

    A. synovial pseudoarthrosis.
    B. hypertrophic nonunion.
    C. fibrous nonunion.
    D. fibrous malunion.

34. Three months after resecting a ganglion from the dorsum of the midfoot, a patient presents complaining of persistent numbness along the adjacent sides of the second and third digits. The most likely diagnosis is iatrogenic severance of which nerve?

    A. saphenous.
    B. deep peroneal.
    C. lateral dorsal cutaneous.
    D. medial dorsal cutaneous.

35. What procedure most effectively transfers the action of the flexor digitorum longus to the metatarsophalangeal joint (MPJ) of the lesser digit?

    A. arthroplasty of proximal interphalangeal joint.
    B. arthrodesis of proximal and distal interphalangeal joints.
    C. flexor lengthening.
    D. extensor tenotomy.

36. What is the major reason for countersinking?

    A. reduce screw prominence.
    B. disperse compression force of screw head evenly.
    C. allow for shorter screw utilization.
    D. provide proper angulation of screw.

37. In the early stages of superficial spreading malignant melanoma, which of the following conditions is **not** present? (*note negative format*)

    A. change in size.
    B. pain and bleeding.
    C. variation in color.
    D. irregular borders.

38. On a peripheral blood smear stained with hematoxylin and eosin, the presence of "rosettes" (clusters of polynuclear leukocytes surrounding an extracellular hematoxylin body) most likely indicates which of the following systemic disorders?

    A. rheumatoid arthritis.
    B. lupus erythematosus.
    C. hematogenous infection.
    D. thrombocytopenic purpura.

39. Shortly after general anesthesia, a patient is nauseous and treatment is required. Which of the following would be the most appropriate treatment?

    A. diazepam (Valium) 10 mg. intramuscularly (I.M.).
    B. prochlorperazine (Compazine) 10 mg. intramuscularly (I.M.).
    C. fentanyl (Sublimaze) 0.05 mg. intramuscularly (I.M.).
    D. meprobamate (Meprospan) 100 mg. intramuscularly (I.M.).

40. A patient presents with a brachymetatarsia on the fourth metatarsal right foot. What is the limiting factor when considering the maximum length that may be added to the metatarsal?

    A. tendon length.
    B. nerve length.
    C. adjacent metatarsal length.
    D. vascular length.

41. The dynamic compression plate is most suitable as a solitary fixation device for which of the following fractures?

    A. oblique.
    B. spiral.
    C. transverse.
    D. compression.

42. Why should burning of bone with a power saw be avoided?

    A. it decreases phagocytosis at operative site.
    B. it causes an increased zone of resorption at the osteotomy site.
    C. it results in necrotic bone in which white blood cells fail to migrate.
    D. additional inflammation causes a decrease in phosphate and displacement of calcium in bone matrix.

43. A 30-year-old female complains of a painful, six-month-old lesion on the bottom of her foot. Examination shows a hyperkeratotic lesion beneath the third metatarsal head without a central nucleated core. The third digit is contracted at the proximal interphalangeal joint and is nonreducible. The metatarsal parabola is normal. What is the procedure of choice?

    A. flexor tendon transfer.
    B. flexor tenotomy of the third digit.
    C. arthrodesis fusion of the third digit.
    D. resection of the third metatarsal head.

44. A patient presents eight weeks after sustaining a fracture through the neck of the talus. What finding is a prognostic indicator that the vascular supply is intact?

    A. resorption of subchondral bone of talar dome.
    B. increased density of the talar body.
    C. increased trabecular pattern across fracture.
    D. absence of degenerative arthritis.

45. Which procedure for hallux abductovalgus has the **least** effect on growth centers in a young child? (*note negative format*)

    A. Austin.
    B. opening abductory wedge.
    C. Lapidus.
    D. closing abductory wedge.

46. Which complication is **not** associated with the Keller bunionectomy? (*note negative format*)

    A. loss of hallux purchase.
    B. diminished propulsion of digit.
    C. stress fracture of second metatarsal.
    D. tibial sesamoiditis.

47. In a Steindler stripping, which group of muscles is sectioned?

    A. flexor digitorum brevis, abductor digiti quinti, abductor hallucis.
    B. flexor digitorum brevis, adductor hallucis, abductor hallucis.
    C. abductor hallucis, adductor hallucis, quadratus plantae.
    D. quadratus plantae, abductor digiti quinti, flexor digitorum brevis.

48. Twenty-one hours after an Austin bunionectomy under general anesthesia, the patient develops a temperature of 102 degrees Fahrenheit. What is the most likely cause?

    A. pulmonary atelectasis.
    B. postoperative wound infection.
    C. superficial thrombophlebitis.
    D. constipation.

49. The preoperative complete blood count (CBC) on a 45-year-old male reveals the following:

platelets:	1.0 million
leukocytes:	10,000
hemoglobin:	low

    What is the most likely cause of these abnormal values?

    A. myelofibrosis.
    B. polycythemia vera.
    C. thrombocythemia.
    D. leukemia.

50. Bence-Jones proteinuria is most commonly associated with which of the following diseases?

    A. lymphoma.
    B. systemic lupus erythematosus.
    C. scleroderma.
    D. multiple myeloma.

51. What is the local anesthetic that should be used on a patient with cirrhosis of the liver?

    A. lidocaine (Xylocaine).
    B. mepivacaine (Carbocaine).
    C. procaine (Novocain).
    D. bupivacaine (Marcaine).

52. The most severe nerve injury is complete disruption of the axon, Schwann cell, and endoneurial tubes with varying disruption of the perineurium and epineurium. What is the term used to designate this condition?

    A. neuropraxia.
    B. axonotmesis.
    C. neurotmesis.
    D. neuritis.

53. The most probable etiology of heloma molle of the fourth interdigital space is pressure between which of the following structures?

    A. head of the fifth proximal phalanx and the base of the fourth proximal phalanx.
    B. head of the fourth proximal phalanx and the base of the fifth proximal phalanx.
    C. head of the fourth metatarsal and the base of the fifth proximal phalanx.
    D. head of the fifth metatarsal and the base of the fourth proximal phalanx.

54. For the traditional Austin procedure to be modified to produce both shortening and plantarflexion of the capital fragment, how must the osteotomy be angulated?

    A. proximal-medial dorsal and distal-lateral plantar.
    B. distal-medial dorsal and proximal-lateral plantar.
    C. dorsal proximal-lateral and plantar-medial distal.
    D. medial plantar and dorsal lateral.

55. Which of the following results is seen in simple chronic anemia?

    A. hemoglobin and hematocrit increase.
    B. hemoglobin and hematocrit decrease.
    C. hemoglobin decreases and hematocrit increases.
    D. hemoglobin increases and hematocrit decreases.

56. A 50-year-old nondiabetic male cigarette smoker presents with one block right calf claudication. Bilateral femoral pulses are palpable with no bruits. The left pedal pulse is present, but the right popliteal and pedal pulses are absent. What is the most likely level of arterial occlusion?

    A. abdominal aorta.
    B. right common iliac artery.
    C. right popliteal artery.
    D. right superficial femoral artery.

57. In performing a McBride bunionectomy under local anesthesia, which of the following nerves should **not** be anesthetized? (*note negative format*)

    A. saphenous.
    B. deep peroneal.
    C. medial dorsal cutaneous.
    D. intermediate dorsal cutaneous.

58. Charcot joints are **not** commonly associated with which disease? (*note negative format*)

    A. syringomyelia.
    B. gout.
    C. diabetes mellitus.
    D. alcoholism.

59. A 43-year-old male with Addison's disease of 20 years duration is on a maintenance dose of 30 mg. hydrocortisone per day. Prior to surgery, how should this patient be treated?

    A. be supplemented with additional hydrocortisone.
    B. discontinue hydrocortisone.
    C. be supplemented with thyroxin.
    D. maintain his daily hydrocortisone dosage.

60. A two-and-one-half-year-old has been under treatment for the past year for a unilateral metatarsus adductus. The most recent treatment included a series of eight weekly casts with manipulation. Radiographs now show a metatarsus adductus angle of 25 degrees. What is the indicated treatment?

    A. additional casting and manipulation.
    B. tarsometatarsal and intermetatarsal base releases and casting.
    C. Denis-Browne night splints.
    D. metatarsal base osteotomies with casting for six-to-eight weeks.

61. A 45-year-old male sustains a crushing-type injury to the left foot. Radiographs are negative for fracture and dislocation. Which of the following tests is the most helpful in determining skin flap viability?

    A. fluorescein dye study.
    B. disital plethysmography.
    C. segmental pressure gradients.
    D. indium scan.

62. Which radiographic finding is most important in evaluating placement of an osteotomy for correction of hallux valgus?

    A. tibial sesamoid position.
    B. hallux abductus angle.
    C. first intermetatarsal angle.
    D. first metatarsal protrusion distance.

63. Surgical excision of the hallucal sesamoids would most directly result in what condition?

    A. hallux limitus.
    B. lack of propulsive stability of the hallux.
    C. inability of the first ray to dorsiflex.
    D. inability of the forefoot to evert.

64. A man is coughing and wheezing from a foreign body lodged in his airway. What should be done?

    A. give him four back blows.
    B. give him four back blows and four manual thrusts.
    C. give him water.
    D. attempt to dislodge the foreign body by sweeping your fingers through his mouth.
    E. encourage him to continue coughing.

65. Which malignant melanoma is most commonly misdiagnosed as a pyogenic granuloma?

    A. superficial spreading.
    B. nodular.
    C. lentigo malignant.
    D. acral lentiginous.

66. A 35-year-old male presents with a hallux abductovalgus deformity of the left foot. Radiographs reveal the following:

intermetatarsal angle:	13 degrees
proximal articular set angle:	12 degrees
distal articular set angle:	8 degrees
hallux abductus angle:	20 degrees
metatarsal adductus angle:	27 degrees
metatarsal protrusion:	+1 mm.
medial exostosis is present	

    Which statement is true regarding findings of the intermetatarsal angle?

    A. less important because of the hallux abductus angle.
    B. less important because of the metatarsus adductus angle.
    C. more important because of the hallux abductus angle.
    D. more important because of the metatarsus adductus angle.

67. A 31-year-old female presents with a complaint of pain of the dorsal distal aspect of the hallux. Radiographs reveal a radiolucent area at the distal phalanx with surrounding sclerosis. There is no sign of infection, no sinus tract, and no edema. What is the clinical diagnosis?

    A. subungual exostosis.
    B. enchondroma.
    C. osteoid osteoma.
    D. osteochondroma.
    E. aneurysmal bone cyst.

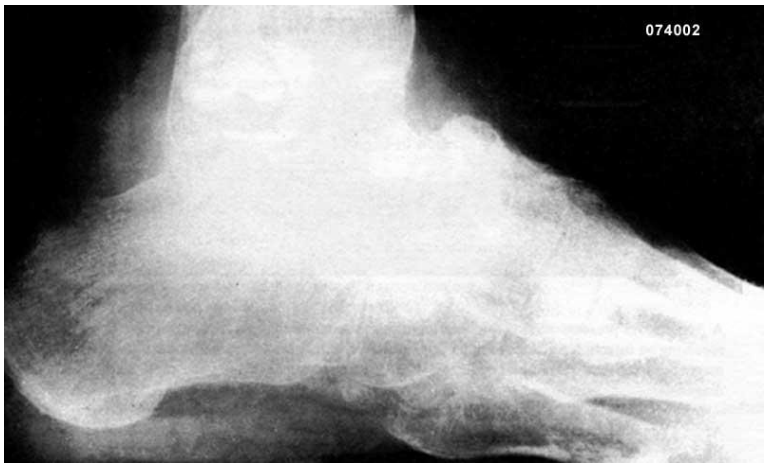
68. Excision of a second intermetatarsal neuroma results in an abducted third digit. Damage to which intrinsic muscles would produce this deformity?

    A. first plantar interossei.
    B. third dorsal interossei.
    C. second lumbrical.
    D. flexor digitorum brevis.

***The following are examples of VISUAL questions*.**

69. The radiograph shown below is consistent with which type of Charcot diabetic osteoarthropathy?

    A. developmental atrophic.
    B. developmental hypertrophic.
    C. coalescence atrophic.
    D. coalescence hypertrophic.



70. Shown below is a radiograph of a 14-year-old male who fell six feet and presented to the emergency department two hours after the injury. Which of the following diagnostic tests is the most important to order?

    A. axial radiograph of the foot.
    B. computed tomography (CT) scan of the foot.
    C. magnetic resonance imaging (MRI) of the foot.
    D. spine radiograph.

71. The radiograph shown below was taken 29 days postoperatively. Which treatment is appropriate?

A. a minimum of 13 additional days of fixation is required.
B. the pin can be removed as clinical healing is noted.
C. the pin must remain in place since a nonunion is developing.
D. re-evaluate the patient's condition in one week.

SAMPLE RECONSTRUCTIVE REARFOOT/ANKLE WRITTEN QUESTIONS

Answers found on page 30.

72. A 20-year-old male sustains his first ankle injury which is diagnosed as a rupture of the lateral collateral ligaments of the ankle. What is the most appropriate treatment plan?

    A. splinting and functional rehabilitation
    B. elastic-type ankle support for six weeks.
    C. open repair of lateral ligaments.
    D. short-leg nonweightbearing cast for eight-to-ten weeks.

73. A 27-year-old man develops a deep wound infection three weeks following open reduction and internal fixation of a pilon ankle fracture with interfragmental screws and a medial buttress plate. The wound is debrided and the patient is placed on intravenous (I.V.) antibiotics. What should be done with the hardware?

    A. removed regardless of the degree of fracture healing.
    B. removed and an external fixator applied.
    C. left in place until fracture union is obtained, unless loosening occurs.
    D. removed only if exposed.

74. Why is the trephine technique to fuse the posterior facet during a triple arthrodesis **contraindicated** in a cavus foot? (*note negative format*)

    A. varus deformity in rearfoot cannot be corrected.
    B. cavus deformity creates too much stress through posterior facet.
    C. calcaneal and talar posterior facets are oblique to each other.
    D. it is too difficult technically to perform a trephine technique in a cavus foot type.

75. What is a **contraindication** to performing a Young tenosuspension flatfoot procedure? (*note negative format*)

    A. talonavicular fault.
    B. patient age 12.
    C. rigid deformity.
    D. dorsiflexed first metatarsal.

76. How is chronic peroneus longus rupture resulting in a dorsiflexed and inverted foot best treated?

    A. lateral transfer of anterior tibial tendon to cuneiforms.
    B. transfer of anterior tibial tendon to plantar aspect of foot.
    C. Young tenosuspension.
    D. Kidner procedure.

77. The advancement of the Achilles tendon more anteriorly toward the posterior aspect of the subtalar joint on the dorsum of the calcaneus is useful in treating which of the following conditions?

    A. spastic equinus.
    B. spastic heel varus.
    C. talipes calcaneus deformity.
    D. peroneal spastic flatfoot.

78. Axial load forces creating instability in diaphyseal fibular and tibial fracture surfaces may be dissipated by the use of which of the following mechanisms?

    A. buttress plate.
    B. neutralization plate.
    C. tension band cerclage wiring.
    D. double compression plate.

79. In a patient with Charcot-Marie-Tooth disease (peroneal muscular atrophy) and weak anterior group muscles, which of the following tendons should be transferred to improve foot function?

    A. posterior tibial.
    B. flexor digitorum longus.
    C. anterior tibial.
    D. flexor hallucis longus.

80. What is the most appropriate fixation technique for a small, displaced avulsion fracture of the lateral malleolus?

    A. tension band.
    B. single lag screw.
    C. single lag screw and a one-third tubular plate.
    D. dynamic compression plate.

81. What is the muscle that is most commonly transferred through the interosseous membrane to function as a dorsiflexor of the foot?

    A. posterior tibial.
    B. anterior tibial.
    C. peroneus longus.
    D. flexor digitorum longus.

82. A 21- year- old female presents with pain and swelling to the right ankle. The patient states that last week she jumped from a high fence on to uneven ground, twisted her foot and fell forward. Assuming that the foot was inverted and then forced into dorsiflexion, this type of trauma would suggest what type of frequently missed fracture?

    A. lateral process of the talus.
    B. avulsion of the medial malleolus.
    C. oblique proximal fibula.
    D. sustentaculum tali of the calcaneus.

83. In performing a pantalar arthrodesis, which materials would be **least** effective in compression fixation of the ankle and subtalar joint? (*note negative format*)

    A. external fixator.
    B. intramedullary nail.
    C. large cancellous screws crossing both joints.
    D. crossed Steinman pins.

84. A 30-year-old male, who had a resection of a calcaneonavicular bar at age 11, exhibits fixed valgus deformity of his foot. Radiographs demonstrate the recurrence of a calcaneonavicular coalition with subtalar joint degeneration and talar beaking. What is the appropriate surgical treatment?

    A. resection of coalition with interposition of extensor digitorum brevis muscle.
    B. subtalar joint arthrodesis.
    C. resection of coalition with subtalar arthroereisis.
    D. triple arthrodesis.

85. For a severe rigid and painful talipes equinovarus in an adult, what primary surgical approach is **contraindicated**? (*note negative format*)

    A. soft-tissue release and tendon transfer.
    B. talectomy and foot-to-leg arthrodesis.
    C. tarsal osteotomies.
    D. triple arthrodesis.

86. In performing a posteromedial release for a congenital clubfoot deformity, what is the most important joint to release to prevent recurrence of the deformity?

    A. ankle.
    B. subtalar.
    C. talonavicular.
    D. calcaneocuboid.

87. In a six-month-old child, aggressive casting for the equinus component of a clubfoot deformity may result in which of the following conditions?

    A. dislocation of the ankle.
    B. subluxation of the midtarsal joint.
    C. compression of the subtalar joint.
    D. rupture of posterior talotibial ligament.

88. What condition is a **contraindication** in performing a lateral subtalar arthroereisis? (*note negative format*)

    A. 15 degrees of calcaneal valgus.
    B. plantarflexed talus.
    C. significant internal femoral torsion.
    D. weakness of the posterior tibial muscle.

89. What is the ankle fusion technique that is indicated in a child to preserve the potential for growth of the distal tibial and fibular physis?

    A. Blair fusion.
    B. transfibular fusion.
    C. distraction-compression fusion.
    D. Charnley compression fusion.

90. What is the first step in the open reduction and internal fixation of an ankle pilon fracture?

    A. bone grafting of the metaphyseal defect.
    B. fixation of the fibular fracture.
    C. fixation of the medial malleolar fracture.
    D. restoration of the articular surface of the distal tibia.

91. Hypertrophy of synovial villi with impingement between capsule and joint surfaces and resultant thickening of the tissue may lead to which of the following pathological intra-articular structures encountered in ankle arthroscopy?

    A. chondral lesions grade I-IV.
    B. osteochondral lesions.
    C. meniscoid bodies.
    D. impingement exostosis.

92. Which phrase best describes the physeal fracture of Tillaux?

    A. occurs more frequently in adolescents than in children.
    B. represents a supination-external rotation mechanism.
    C. represents a Salter-Harris type III injury.
    D. all of the above.
    E. A and B only.

93. For a one-year-old patient with calcaneal valgus, what is an acceptable treatment plan?

    A. manipulation only.
    B. manipulation with serial casting.
    C. soft-tissue release.
    D. arthroereisis.
    E. triple arthrodesis at skeletal maturity.

94. In the treatment of the equinovarus foot as described by Ponsetti, what is the last stage to be corrected by casting?

    A. varus component.
    B. forefoot adductus component.
    C. supination at the subtalar joint component.
    D. equinus deformity.

95. What is the primary indication for the Evans calcaneal osteotomy with insertion of a bone graft?

    A. congenital vertical talus.
    B. residual talipes equinovarus.
    C. transverse plane flatfoot deformity.
    D. tarsal coalition.

96. A 16-year-old male with peroneal spastic flatfoot has 8 degrees tibia varum. What is the proper position of the calcaneus to the tibia for triple arthrodesis?

    A. 0 degrees.
    B. 2 degrees inverted.
    C. 6 degrees everted.
    D. 10 degrees everted.

97. A 52-year-old female presents with a unilateral dropfoot condition. Following electromyelography, nerve conduction studies and full neurological work-up the etiology remains obscure. Physical examination notes loss of the anterior tibial and long extensors, and weakness of the posterior tibial, peroneal, and triceps. A flaccid pes valgus dropfoot gait is noted. What is the most appropriate method of treatment?

    A. subtalar fusion.
    B. triple arthrodesis.
    C. ankle fusion.
    D. pantalar fusion.

98. Which of the following techniques is **not** appropriate fixation for a Salter-Harris type III fracture of the distal tibial physis? (*note negative format*)

    A. two smooth Kirschner wires through the fragment, across the physis, and into the metaphysis.
    B. one cancellous screw through the fragment and into the epiphysis.
    C. tension band wiring using two Kirschner wires through the fragment, across the physis, and into the metaphysis.
    D. one cancellous screw and one Kirschner wire through the fragment and into the epiphysis.

99. Which radiographic sign is **not** consistent with congenital convex pes planovalgus? (*note negative format*)

    A. talus parallel with the longitudinal axis of the tibia.
    B. dorsiflexion of the calcaneus.
    C. navicular dorsal to the talus.
    D. talocalcaneal angle greater than 40 degrees on the anteroposterior view.

100. What is an indication for primary fusion of the subtalar joint following a calcaneal fracture?

    A. concomitant peroneal injury.
    B. widening of the calcaneal body.
    C. large osseous defect.
    D. severe comminution.

Answers for Sample Written Questions

1.	C	27.	C	53.	A	79.	A
2.	A	28.	C	54.	B	80.	A
3.	C	29.	A	55.	B	81.	A
4.	D	30.	D	56.	D	82.	A
5.	A	31.	D	57.	D	83.	D
6.	C	32.	A	58.	B	84.	D
7.	A	33.	B	59.	A	85.	A
8.	C	34.	D	60.	A	86.	C
9.	C	35.	B	61.	A	87.	B
10.	B	36.	B	62.	C	88.	C
11.	D	37.	B	63.	B	89.	C
12.	D	38.	B	64.	E	90.	B
13.	A	39.	B	65.	B	91.	C
14.	A	40.	D	66.	D	92.	D
15.	D	41.	C	67.	B	93.	B
16.	B	42.	B	68.	A	94.	D
17.	B	43.	C	69.	D	95.	C
18.	C	44.	A	70.	D	96.	D
19.	A	45.	A	71.	B	97.	D
20.	A	46.	D	72.	A	98.	C
21.	A	47.	A	73.	C	99.	B
22.	A	48.	A	74.	A	100.	D
23.	C	49.	C	75.	C		
24.	B	50.	D	76.	A		
25.	A	51.	C	77.	A		
26.	A	52.	C	78.	B		

SUGGESTED READING

The following references are a sampling of books from which readings may be helpful in preparation for ABPS written and oral examinations. The list is suggested only, and may not be exhaustive for any particular examination.

Abramson, C. (ed.): *Infectious Diseases of the Lower Extremities*. Philadelphia, Williams & Wilkins, 1991. *

Adelaar, R.S.: *Disorders of the Great Toe*. Rosemont, IL, AAOS, 1997.

Adelaar, R.S.: *Complex Foot and Ankle Trauma*. Philadelphia, Lippincott, 1999.

Alexander, I.: *The Foot: Examination, Diagnosis and Conservative Care*, 2nd ed. New York, Churchill Livingstone, 1996.

Andreoli, T.E. (ed.): *Cecil Essentials of Medicine*, 5th ed. Philadelphia, Saunders, 2000.

Baxter, D.E.: *Foot and Ankle in Sport.* St. Louis, Mosby, 1995.

Berquist, T.H. (ed.): *Radiology of the Foot and Ankle*, 2nd ed. New York, Raven Press, 2000.

Birrer, R.B.: *Common Foot Problems in Primary Care*, 2nd ed.. St. Louis, Mosby, 1998.

Bouysset, M. (ed.): *Bone and Joint Disorders of the Foot and Ankle: a Rheumatological Approach*. New York, Springer-Verlag, 1998.

Butterworth, R.: *Color Atlas and Text of Forefoot Surgery*. St. Louis, Mosby, 1992.

Cailliet, R.: *Foot and Ankle Pain*, 3rd ed. Philadelphia, Davis, 1997.

Canale, S.T.: *Campbell's Operative Orthopaedics*, 9th ed. St. Louis, Mosby, 1997.

Carrel, J.M. (ed.): *Complications in Foot and Ankle Surgery*, 3rd ed. Baltimore, Williams & Wilkins, 1992. *

Cole, D.R. and DeLauro, T.M. (ed.): *Neoplasms of the Foot and Leg*. Baltimore, Williams & Wilkins, 1990. *

Condon, R. (ed.): *Manual of Surgical Therapeutics*, 9th ed. Boston, Little-Brown Co., 1996.

Coughlin, M.J. (ed.): *Surgery of the Foot and Ankle*, 7th ed. St. Louis, Mosby, 1999.

Coussons, T.R. (ed.): *Manual of Medical Care of the Surgical Patient*, 4th ed. Boston, Little-Brown Co., 1990. *

Crim, J.: *Imaging of the Foot and Ankle*. Philadelphia, Lippincott, 1996.

Deutsch, A.L. (ed.): *MRI of the Foot and Ankle*. New York, Raven Press, 1992.

DeValentine, S.J. (ed.): *Foot and Ankle Disorders in Children*. New York, Churchill Livingstone, 1991. *

Dockery, G.L.: *Color Atlas of Foot and Ankle Dermatology*. Philadelphia, Lippincott, 1999.

Dockery, G.L.: *Cutaneous Disorders of the Lower Extremity*. Philadelphia, Saunders, 1997.

---

* Out of print

Compiled: September 2000

Downey, M.S. and Malay, D.S.: *Manual of Digital Surgery of the Foot*. New York, Churchill Livingstone, 1991. *

Draves, D.J.: *Anatomy of the Lower Extremity*. Baltimore, Williams & Wilkins, 1986. *

Drennan, J.C. (ed.): *The Child's Foot and Ankle*. New York, Raven Press, 1992.

Falanga, V.: *Leg & Foot Ulcers: a Clinician's Guide*. St. Louis, Mosby, 1995. *

Ferkel, R.D.: *Arthroscopic Surgery: the Foot and Ankle*. Philadelphia, Lippincott, 1996.

Forrester, D.M., et al.: *Imaging of the Foot and Ankle*. Rockville, Aspen Publ., 1988. *

Frykberg, R.G. (ed.): *The High Risk Foot in Diabetes Mellitus*. New York, Churchill Livingstone, 1991. *

Gerbert, J. (ed.): *Textbook of Bunion Surgery*, 2nd ed. Mt. Kisco, NY, Futura Publ. Co., 1991. *

Gilman, A.G.: *Goodman and Gilman's Pharmacological Basis of Therapeutics*, 9th ed. New York, Macmillan and Co., 1996.

Goldman, D. (ed.): *Perioperative Medicine: Medical Care of the Surgical Patient*, 2nd ed. New York, McGraw-Hill, 1994.

Gould, J.S. (ed.): *Operative Foot Surgery*. Philadelphia, Saunders, 1994.

Greenfield, G.: *Radiology of Bone Diseases*, 5th ed. Philadelphia, Lippincott, 1990.

Guhl, J.F. (ed.): *Foot and Ankle Arthroscopy*, 2nd ed. . Thorofare, NJ, Slack Inc, 1993. *

Hansen, S.: *Functional Reconstruction of the Foot and Ankle*. Philadelphia, Lippincott, 2000.

Harkless, L.B.: *Foot and Ankle Secrets*. Philadelphia, Hanley & Belfus, 1997.

Harkless, L.B. and Krych, S.M. (eds.): *Handbook of Common Foot Problems*. New York, Churchill Livingstone, 1990. *

Heim, U.: *Internal Fixation of Small Fractures*. New York, Springer-Verlag, 1988.

Helal, B. (ed.): *Surgery of Disorders of the Foot and Ankle*. Philadelphia, Lippincott, 1996.

Hetherington, V.J. (ed.): *Hallux Valgus and Forefoot Surgery*. New York, Churchill Livingstone, 1994. *

Holmes, G.B. (ed.): *Surgical Approaches to the Foot and Ankle*. New York, McGraw-Hill, 1994.

Jahss, M.H.: *Disorders of the Foot and Ankle*, 3 Vols., 2nd ed. Philadelphia, Saunders, 1991.

Jay, R.M. (ed.): *Current Therapy in Podiatric Surgery*. Philadelphia, B.C. Decker, Inc., 1989. *

Jay, R.M. (ed.): *Pediatric Foot and Ankle Surgery*. Philadelphia, Saunders, 1999.

Johnson, K.A. (ed.): *Foot and Ankle*. New York, Raven Press, 1994.

Johnson, K.A.: *Surgery of the Foot and Ankle*. New York, Raven Press, 1989.

Joseph, W. S.: *Handbook of Lower Extremity Infections*. New York, Churchill Livingstone, 1990.

Kang, H.S. and Resnick, D.: *MRI of the Extremities: An Anatomic Atlas*. Philadelphia, Saunders, 1990.

---

* Out of print

Compiled: September 2000

Katzung, B.G.: *Basic and Clinical Pharmacology*, 7th ed. Stamford, CT, Appleton & Lange, 1998.

Kelikian, H.: *Disorders of the Ankle*. Philadelphia, Saunders, 1985. *

Kelikian, A.S. (ed.): *Operative Treatment of the Foot and Ankle*. Stamford, CT.: Appleton & Lange, 1999.

Klenerman, L.: *Foot and Its Disorders*, 3rd ed. Oxford, Blackwell, 1991.

Kominsky, S.J. (ed.): *Advances in Podiatric Medicine & Surgery*. St. Louis, Mosby, 1995-96. 3 Volumes *

Kominsky, S.J. (ed.): *Medical and Surgical Management of the Diabetic Foot*. St. Louis, Mosby, 1994.

Kozak, G.P. (ed.): *Management of Diabetic Foot Problems*, 2nd ed. Philadelphia, Saunders, 1995. *

Lankhorst, G.J. (ed.): *Management of Ankle Injuries*. Kirtland, WA, Hogrefe & Huber Publ., 1991. *

Levy, L.A. and Hetherington, V.J. (eds.): *Principles and Practice of Podiatric Medicine*. New York, Churchill Livingstone, 1989. *

Longnecker, D.E., et al. (eds.): *Dripps' Introduction to Anesthesia*, 9th ed. Philadelphia, Saunders, 1997.

Luces, J.R. (ed.): *Color Atlas of Foot Disorders*. Mt. Kisco, NY, Futura Publ. Co., 1990. *

Lundeen, R.O.: *Manual of Ankle and Foot Arthroscopy*. New York, Churchill Livingstone, 1992. *

Lutter, L.D.: *Atlas of Adult Foot and Ankle Surgery*. St. Louis, Mosby, 1997.

Mandel, S. (ed.): *Handbook of Lower Extremity Neurology*. New York, Churchill Livingstone, 2000.

Marcinko, D.E. (ed.): *Comprehensive Textbook of Hallux Abducto Valgus Reconstruction*. St. Louis, Mosby, 1992. *

Marcinko, D.E.: *Infection of the Foot: Diagnosis, Management and Prevention*. St. Louis, Mosby, 1998.

Marcinko, D.E. (ed.): *Medical and Surgical Therapeutics of the Foot and Ankle*. Baltimore, Williams & Wilkins, 1992. *

Masquelet, A.C. (ed.): *Atlas of Surgical Exposures of the Lower Extremity*. Philadelphia, Lippincott, 1993.

Mayer, D.D., et al.: *Foot and Ankle: a Sectional Imaging Atlas*. Philadelphia, Saunders, 1993.

McDermott, J.E.: *The Diabetic Foot*. Rosemont, IL, AAOS, 1995.

McGlamry, E.D. (ed.): *Comprehensive Textbook of Foot Surgery*. 2 Vols., 2nd ed. Baltimore, Williams & Wilkins, 1992.

McMinn, R.M.H.: *Color Atlas of Foot and Ankle Anatomy*, 2nd ed. St. Louis, Mosby, 1996.

Merriman, L. (ed.): *Assessment of the Lower Limb*. New York, Churchill Livingstone, 1995.

Mizel, M.S.: *Orthopedic Knowledge Update: Foot and Ankle*, 2nd ed. Rosemont, IL, AAOS, 1998.

Morrissy, R.T. (ed.): *Lovell and Winter's Pediatric Orthopedics*, 2 vols., 4th ed. Philadelphia, Lippincott, 1996.

Muller, M.E. (ed.): *Manual of Internal Fixation, Techniques Recommended by the AO-ASIF Group*, 3rd ed. New York, Springer-Verlag, 1991. *

---

* Out of print

Compiled: September 2000

Myerson, M. (ed.): *Current Therapy in Foot and Ankle Surgery*. St. Louis, Mosby, 1993. *

Myerson, M.S. (ed.): *Foot and Ankle Disorders*. Philadelphia, Saunders. 2000

Negus, D.: *Leg Ulcers: A Practical Approach to Management*, 2nd ed. Newton, MA., Butterworth, 1995.

Oestreich, A.E.: *How to Measure Angles from Foot Radiographs*. New York, Springer-Verlag, 1990. *

Oloff, L.M. (ed.): *Musculoskeletal Disorders of the Lower Extremity*. Philadelphia, Saunders, 1994.

Omer, G.E. (ed.): *Management of Peripheral Nerve Problems*, 2nd ed. Philadelphia, Saunders, 1994.

Ouriel, K.: *Lower Extremity Vascular Disease*. Philadelphia, Saunders, 1995.

Peacock, E.E., Jr.: *Wound Repair*, 3rd ed. Philadelphia, Saunders, 1984. *

Pfeffer, G.B. and Frey, C.C. (eds.): *Current Practice in Foot and Ankle Surgery*. New York, McGraw-Hill. Volume 1: 1993 *, Volume 2: 1994.

Ranawat, C.S. (ed.): *Disorders of the Heel, Rearfoot, and Ankle*. New York, Churchill Livingstone, 1999.

Resnick, D.: *Bone and Joint Imaging*, 2nd ed. Philadelphia, Saunders, 1996.

Robbins, J.M.: *Primary Podiatric Medicine*. Philadelphia, Saunders, 1994.

Root, N.L.: *Normal and Abnormal Function of the Foot*. Los Angeles, Clinical Biomechanics Corp., 1977.

Salter, R.: *Textbook of Disorders and Injuries of the Musculoskeletal System*, 3rd ed. Baltimore, Williams & Wilkins, 1998.

Sammarco, G.J. (ed.): *Foot and Ankle Manual*, 2nd ed. Philadelphia, Lea & Febiger, 1998.

Sammarco, G.J. (ed.): *Rehabilitation of the Foot and Ankle*. St. Louis, Mosby, 1995.

Sarrafian, S.K.: *Anatomy of the Foot and Ankle*, 2nd ed. Philadelphia, Lippincott, 1993. *

Schwartz, S. (ed.): *Principles of Surgery*, 7th ed. New York, McGraw-Hill, 1999.

Scurran, B.L. (ed.): *Foot and Ankle Trauma*, 2nd ed. New York, Churchill Livingstone, 1995.

Shereff, M.J.: *Atlas of Foot and Ankle Surgery*. Philadelphia, Saunders, 1993.

Sherk, H.H. (ed.): *Lasers in Orthopaedics*. Philadelphia, Lippincott, 1990. *

Simons, G.W. (ed.): *Clubfoot: the Present and a View of the Future*. New York, Springer-Verlag, 1994. *

Stiehl, J.B. (ed.): *Inman's Joints of the Ankle*. Baltimore, Williams & Wilkins, 1991. *

Tachdjian, M.O.: *Atlas of Pediatric Orthopedic Surgery*. Philadelphia, Saunders, 1994.

Tachdjian, M.O.: *Clinical Pediatric Orthopedics*. Stamford, CT, Appleton & Lange, 1997.

Tierney, L.M. (ed.): *Current Medical Diagnosis and Treatment*, 40th ed. Norwalk, Appleton & Lange, 2001.

---

* Out of print

Compiled: September 2000

Tollafield, D.R. (ed.): *Clinical Skills in Treating the Foot*. New York, Churchill Livingstone, 1997.

Valmassy, R. L. (ed.): *Clinical Biomechanics of the Lower Extremities*. St. Louis, Mosby, 1995.

Witkowski, J.: *Color Atlas of Cutaneous Disorders of the Lower Extremities*. New York, Igaku-Shoin, 1993. *

Weinstein, S.L. (ed.): *Turek's Orthopedics*, 2 vols., 5th ed. Philadelphia, Lippincott, 1994.

Williams, P.L. (ed.): *Gray's Anatomy*, 38th ed.. New York, Churchill Livingstone, 1995.

Wulker, N. *An Atlas of Foot and Ankle Surgery*. St. Louis, Mosby, 1998.

Yao, J.S.T.: *Ischemic Extremity: Advances in Treatment*. Norwalk, Appleton-Lange, 1995.

Young, J.R. (ed.): *Peripheral Vascular Diseases*, 2nd ed. St. Louis, Mosby, 1996.

Zier, B.G. (ed.): *Essentials of Internal Medicine in Clinical Podiatry*. Philadelphia, Saunders, 1990. *

* Out of print