The Medical Transcription Workbook
SECOND EDITION

Professional Issues
Medical Terminology
Laboratory
Style & Usage
Anatomy & Physiology
Surgery
Pathophysiology
Pharmacology
With gratitude to

Linda Constance Campbell
Acknowledgments

*The Medical Transcription Workbook, Second Edition*, would not have been possible without the first edition, of course, and that was primarily the brainchild of Linda C. Campbell, CMT, FAAMT, who was director of education and new product development at Health Professions Institute for over 20 years. The Workbook grew out of her experience in working as a medical transcriptionist and in developing *The SUM Program for Medical Transcription Training*. Her daily encounters with students, teachers, and medical transcription professionals convinced her that there was a need for a workbook to accompany the multitude of training and research materials we provided. Her knowledge and skill are evident throughout the book.

*The Medical Transcription Workbook*, first published in 1999, has been enormously successful and widely used by students and practitioners alike. Certified medical transcriptionists have earned continuing education credits by completing the hundreds of worksheets in the book, and it has served as the main textbook in hundreds of classrooms and study groups for medical transcriptionists in various stages of education and experience. Many have used it to fill in the gaps in their formal educational programs and have found it useful in self-assessment of their medical knowledge. We are grateful to all the users of the workbook for their feedback and recommendations.

Many medical transcription colleagues have contributed generously to this book. Although we do not list them for fear of a critical omission, we are grateful for the outstanding contributions they have made to the field of knowledge. To all the *Perspectives on Medical Transcription* authors whose articles we excerpted and quoted in this book, we are truly grateful.

Special thanks go to John H. Dirckx, M.D., for editing the text, identifying significant errors and omissions throughout, and for updating the pharmacology section. We have borrowed liberally from his numerous essays as well as from three textbooks he authored for HPI (*H&P: A Nonphysician’s Guide to the Medical History and Physical Examination; Laboratory Tests & Diagnostic Procedures in Medicine;* and *Human Diseases*). Our gratitude is immense.

We could not have produced this book without a lot of help from our friends. Many, many thanks to you all.

*Sally C. Pitman, M.A.*
*Editor & Publisher*
*Health Professions Institute*
Preface

The Medical Transcription Workbook, Second Edition, has been thoroughly revised and updated for the express purpose of helping both student and professional medical transcriptionists identify, learn, and assess their knowledge of the most relevant and important topics in medical transcription. Completion of this workbook will assist students in achieving an integrated understanding of the multifaceted world of medicine, and practicing MT professionals will find this book has helped to fill gaps in their knowledge base. For both, it should greatly increase their understanding of the language of medicine and thus facilitate the preparation, taking, and passing of credentialing medical transcription examinations.

What’s New. About 40% of the entire workbook has been revised. Section 1, Professional Issues, has many new articles with new or expanded content on HIPAA, transcription practices, electronic resources, and health in the workplace. New articles by Dr. John H. Dirckx, Georgia Green, Adrienne Yazijian, Kathryn Stewart, Julianne Weight, Mike DeTuri, and Elaine Olson add to the value and interest in this section. In addition, there are 17 worksheets on Professional Issues. Content that is better covered in other resources was removed in order to make room for the new content. Section 2, Style & Usage, has been replaced with a better organized and more useful alphabetical, topical structure along with many, many more examples and a total of 21 worksheets, several of which contain more than 40 questions. Section 8, Pharmacology, has been thoroughly reviewed and extensively revised and updated, including new questions, the elimination of discontinued drugs, and the addition of popular new therapies. Pharmacology questions in all the medical specialty sections have also been reviewed and updated as necessary. In sections 3 through 8, there are a total of 104 worksheets. Although there are fewer pages in this edition, the content has actually been expanded, facilitated by redesign of the layout.

Organization. This workbook contains eight sections. Worksheets are provided throughout at the end of each topic or related topics.

Section 1, Professional Issues. Readings on dozens of important topics: The medical transcription profession, the healthcare record, and transcription practices including editing, risk management, proofreading, quality assurance, productivity, compensation, and electronic resources.

Section 2, Style & Usage. A brief review of punctuation, grammar, and spelling rules arranged in an A to Z format for quick reference. Rules and guidelines are illustrated with hundreds of examples from actual dictation and transcription.

Sections 3 through 8: Anatomy and Physiology, Medical Terminology, Pathophysiology, Surgery, Laboratory, and Pharmacology worksheets with subsections laid out by body system or medical specialty. These sections should make obvious to any student or medical transcription practitioner the depth and breadth of knowledge required in this profession. It is not likely that even the most experienced transcriptionist will be able to call to mind the answers to all of the exercises without referring to an anatomy text, a medical terminology book, a human disease text, a book on diagnostic and operative procedures, a laboratory reference, a pharmacology text, and English and medical dictionaries. This fact should also reinforce our recommendation that every practicing medical transcriptionist have access to an adequate reference library, both printed and electronic, and that these references be updated frequently in order to provide the latest information in a rapidly changing medical environment.
A special note about Section 5, Pathophysiology. The term *pathophysiology* was chosen over the more familiar name *human diseases* because its definition more closely defines what that section is—a study of order versus disorder in the human being. Included in the pathophysiology section are questions related to the history and physical examination, certain diagnostic maneuvers and procedures that are not usually classified as surgical, and, of course, human diseases. The individual disciplines of anatomy, terminology, pathophysiology, surgery, laboratory, and pharmacology meld into a general fund of knowledge in medical transcription; it becomes impossible to clearly delineate each of these as courses separate and completely apart from one another. Thus, students and teachers will note the inevitable overlap of anatomy and medical terminology questions, anatomy and pathophysiology questions, pathophysiology and surgery, pharmacology with laboratory, and so on.

Except for sections 1 and 2, no background or instructional reading material is provided. Users of this workbook may want to review relevant readings in textbooks and reference books both before completing the worksheets and again after checking their answers. Answer Keys are provided in a separate booklet so that teachers may restrict access to the answers if they choose to use the workbook for quizzes or tests.

The style of question used was largely determined by the material. Some topics were conducive to the highly desirable multiple-choice format, while others could be written only as true-or-false. Some worksheets contain fill-in-the-blank questions with a blank line long enough to write in an answer, but the length of the line has no bearing on whether the answer is long or short, one word, two words, or more. Matching exercises (matching words with definitions, matching diseases with symptoms) are provided for some topics. In the Style & Usage section, students may be required to circle an answer, punctuate a sentence, or correct the grammar. Infrequently, a question may be asked in one section and asked again, slightly rephrased, in another. Some abbreviations and medications may appear in more than one section because of the natural overlap of specialties; however, these redundancies have been kept to a minimum.

We at Health Professions Institute encourage and salute students and medical transcriptionists in their pursuit of excellence. It is our hope that this book will be a means to that end.
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General Surgery

Select one of the following terms that matches the definition.

- incisional biopsy
- brushing
- fine-needle aspiration
- washing
- biopsy
curettage
- shave biopsy
- excisional biopsy
- needle biopsy
- smear
- frozen section
cryostat
- punch biopsy

1. removal of a plug of skin with a cylindrical punch
2. surgical scraping
3. chilled platform
4. lavage of an organ with fluid, then collection of the fluid for pathologic study
5. whisking of an organ for cell collection
6. surgical removal of an entire lesion from a living person
7. material spread thinly on a slide for microscopic exam
8. removal of tissue from a living person for pathologic exam
9. cells removed by suction with a needle
10. removal of tissue from an organ with the use of a needle
11. thin layer of skin removed with a blade parallel to the surface
12. rapid cryotechnique for reading surgical specimens from a living person
13. surgical removal of part of a lesion from a living person

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

___14. Among the following, which is the finest suture material?
   A. 10-0
   B. #0
   C. #2
   D. 1-0

___15. Which of the following is a type of suture material?
   A. interrupted
   B. figure-of-8
   C. synthetic
   D. pursestring
16. A trocar is used
   A. for traction
   B. to puncture a cavity and withdraw fluid
   C. to support and stabilize another surgical instrument
   D. to enable the surgeon to view internal anatomy

17. Laparoscopy is an example of
   A. open surgery
   B. minimal access surgery
   C. peripheral vascular surgery
   D. “painless” surgery

18. How is the Trendelenburg position best described?
   A. head lower than trunk and thighs
   B. head elevated above trunk and legs
   C. hips elevated higher than legs and head
   D. lying on side with lower leg flexed

19. For which of the following surgeries would the patient be in lithotomy position?
   A. brain surgery
   B. chest surgery
   C. vaginal surgery
   D. knee surgery

20. Which of the following is a suture technique?
   A. mattress
   B. catgut
   C. chromic
   D. monofilament nylon

21. Which of the following is a wound dressing material?
   A. Sabreloc
   B. Lembert
   C. Penrose
   D. Kerlix

Match the terms in the left column with their correct definitions in the right column. Some definitions fit more than one term.

22. sponge
   A. instrument that clasps tissue

23. asepsis
   B. instrument used to create a hollow area in bone

24. drape
   C. freedom from germs and infection

25. dorsal recumbent position
   D. splitting apart of a wound

26. Fowler position
   E. complete removal or destruction

27. Sims position
   F. bring together by suturing

28. gurney
   G. instrument used to cut bone

29. prep
   H. severed vessel

30. bolster
   I. reinforcement suture

31. bleeder
   J. material covering a wound

32. dehiscence
   K. sitting position

33. pursestring
   L. instrument used for exploration of wound or cavity

34. ligate
   M. suture technique

35. nonabsorbable
   N. fluid-resistant sterile barrier

36. retention suture
   O. lying on one’s side

37. free tie
   P. instrument that holds tissue out of the way

38. dressing
   Q. electrical current used to control hemorrhage

39. hemostasis
   R. absorbent pad of folded gauze

40. electrocautery
   S. instrument used to drill holes

41. clamp
   T. supine position

42. ablation
   U. spoon-shaped instrument used for scraping

43. approximate (verb)
   V. wheeled cot

44. forceps
   W. to make ready

45. bur
   X. retention suture tubing

46. curette
   Y. tie

47. retractor
   Z. instrument used to make incisions

48. reamer
   AA. a length of suture for tying

49. osteotome
   BB. suture material not absorbed by the body

50. probe
   CC. control of bleeding

51. tenaculum

52. scalpel
**Anesthesia**

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

1. Which is NOT a type of anesthesia?
   A. endotracheal
   B. spinal
   C. analgesic
   D. topical

2. Bier block anesthesia would be used for
   A. cholecystectomy
   B. angioplasty
   C. myringotomy with insertion of ventilation tubes
   D. carpal tunnel release

3. A “muscle relaxant” is given under general endotracheal anesthesia to
   A. sedate the patient
   B. paralyze the muscles
   C. keep the patient unconscious
   D. combat postoperative nausea

4. Which type of anesthesia might be used for cesarean section?
   A. spinal
   B. local
   C. topical
   D. epidural

5. A patient undergoing laryngoscopy would NOT receive
   A. intravenous sedation anesthesia
   B. topical anesthesia
   C. general anesthesia
   D. spinal anesthesia

6. Which of the following phrases BEST describes general anesthesia with nasotracheal intubation?
   A. patient unconscious with breathing tube in throat
   B. patient unconscious with breathing tube in nose
   C. patient unconscious with breathing tube in trachea
   D. patient unconscious with breathing tube in esophagus

7. Epidural anesthesia may be used for certain surgical procedures
   A. below the spine
   B. below the chest
   C. below the neck
   D. below the head

---

**Surgery on the Integumentary System**

Below are plastic surgery procedures that involve the skin. List the anatomic structures or body parts affected by the surgery.

1. blepharoplasty
2. rhytidectomy
3. microtia reconstruction
4. rhinoplasty
5. cleft palate repair
6. transverse rectus abdominis myocutaneous (TRAM) flap
7. mental implant
8. liposuction
9. mastopexy
10. glomus tumor excision
11. platysmaplasty

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

12. Debridement is the process of
   A. attaching suture material to a needle
   B. shaving a patient in preparation for surgery
   C. removing dead skin and debris from a wound
   D. making a surgical incision

13. The destruction of tissue by use of a freezing instrument is called
   A. cryoscopy
   B. cryoprecipitation
   C. cryoastringer
   D. cryotherapy

14. A skin graft consisting of dermis and the full depth of the epidermis is known as a
   A. free graft
   B. full-thickness graft
   C. fat graft
   D. split-thickness graft

15. The instrument used to take a split-thickness graft is
   A. dermatome
   B. rasp
   C. scoop
   D. scraper
16. Separation of skin and subcutaneous tissue from underlying attachments is called
A. devitalizing
B. meshing
C. undermining
D. dissection

17. Port-wine “birthmark” stains consisting of reddish pink or purple areas are best treated by
A. surgical excision
B. laser surgery
C. camouflage tattooing
D. chemocautery

18. Sanding of the skin with a power-driven abrasive disk is known as
A. sanding
B. dermabrasion
C. tattooing
D. peeling

19. What method of fresh tissue chemosurgery is often performed to remove basal cell carcinoma?
A. Orr
B. Trueta
C. Rebuck
D. Mohs

20. Senile keratoses and warts are often removed by application of which liquid?
A. carbolic acid
B. nitrogen
C. povidone-iodine
D. acid alcohol

21. A device containing a circulating refrigerant that can be rapidly chilled and can deliver subfreezing temperatures to tissues with precision is a(n):
A. cryoprobe
B. ablator
C. pinpoint wand
D. dissector

22. What is the name of the procedure in which small pieces of skin graft are placed randomly over a recipient site?
A. pinch graft
B. flap graft
C. pedicle graft
D. compression graft

23. An instrument that cuts many tiny slits in graft skin to enlarge the graft is called a skin
A. mesher
B. grille
C. lattice
D. roticulator

24. A procedure in which the face is painted with a solution of phenol to burn and erode the area to which it is applied is called
A. dermabrasion
B. cryocautery
C. autografting
D. chemical peel

25. An atraumatic surgical needle with the suture already attached by the manufacturer, and used to minimize skin trauma, is known as what kind of needle?
A. cutting
B. swaged
C. eyed
D. blunt point

26. Melanomas require what type of surgical excision?
A. wide margin
B. narrow margin
C. lateral margin
D. shallow margin

27. Of the following surgically excised lesions, which represents the most serious health threat to the patient?
A. actinic keratosis
B. dermatofibroma
C. basal cell carcinoma
D. squamous cell carcinoma

28. A gangrenous body part must be
A. incised and drained
B. biopsied
C. amputated
D. reconstructed
Surgery on the Genitourinary System

Complete each statement by filling in the blank with a term from the list below.

Babcock
iliac fossa
Young circumcision
transurethral resection
suprapubic
vas deferens
stress urinary incontinence

1. If a kidney stone cannot be removed ureteroscopically or via lithotripsy, an open procedure known as a ___________ ________________________ is performed.

2. A ___________ is performed to reduce the size of a prostate gland enlarged due to benign prostatic hyperplasia (BPH).

3. A simple nephrectomy is performed through a ___________ ________________________ incision.

4. When urinary diversion is required for an extended period, a ___________ ________________________ catheter may be surgically placed.

5. Suspension of the bladder neck and urethra to the cartilage of the pubic symphysis is performed to correct ___________ ________________________ in a female patient.

6. One of the operations designed to suspend the bladder neck and urethra in a female patient is called a(n) ___________ ________________________ procedure.

7. Surgical procedures in the pubic area are initiated by entry into the space of ___________ ________________________.

8. Orchiectomy may be indicated when the testicle has become twisted around the ___________ ________________________.

9. Following dilatation of a ureteral stricture, a ___________ ________________________ may be left in place to keep the ureter open for drainage.

10. A penile epispadias is corrected by formation of a new urethral tube using the technique of ___________ ________________________.

11. A ___________ clamp is often used for urological surgery procedures.

12. The surgeon gains access to the retroperitoneal space to perform a nephrostomy using a ___________ ________________________ incision.

13. A kidney for transplantation is taken from either a living donor or from a ________________________.

14. The donor kidney is placed in the recipient’s (anatomy) ________________________.

15. A ________________________ is performed to correct phimosis.

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

16. What is the medical term for male castration?
   A. penectomy
   B. oophorectomy
   C. vasectomy
   D. orchiectomy

17. The procedure that brings an undescended testicle into the scrotum is called a(n)
   A. hypospadias repair
   B. hydrocelectomy
   C. orchiopexy
   D. vasectomy

18. Surgical removal of the prostate gland in which the bladder is NOT entered is accomplished via
   A. suprapubic prostatectomy
   B. retropubic prostatectomy
   C. vesicopubic prostatectomy
   D. transvesical prostatectomy

19. Sterilization in the male is accomplished by excising a small portion of the
   A. vas deferens
   B. ejaculatory duct
   C. epididymis
   D. seminal vesicles

20. Chordee is
   A. an abnormal curvature of the penis
   B. insertion of an implant into the penis
   C. an intractable erection
   D. sequential catheterization

21. The indwelling urethral catheter used most commonly is the
   A. straight catheter
   B. Foley catheter
   C. Gibbon catheter
   D. Robinson catheter

22. An obturator is a
   A. hollow fiberglass tube
   B. light cable
   C. telescopic lens
   D. metal rod with round tip
Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

20. Surgical treatment for esophageal varices includes injecting the varices with a solution of
   A. saline
   B. denatured alcohol
   C. cartilage emulsion
   D. hydrocortisone

21. A loop colostomy is
   A. excision of part of the ileum
   B. excision of part of the transverse colon
   C. a temporary diversion of the colon
   D. a Whipple procedure

22. A GIA instrument is a
   A. stapler
   B. clamp
   C. reservoir
   D. laser

23. A Roux-en-Y anastomosis is performed in which of the following procedures?
   A. inguinal hernia repair
   B. hemorrhoidectomy
   C. gastric bypass
   D. cholecystectomy

24. Pyloromyotomy is performed for
   A. globus hystericus
   B. biliary atresia
   C. pyloric stenosis
   D. esophageal stricture

25. Varicose veins of the esophagus are treated with
   A. vein excision
   B. saline injections
   C. esophagectomy
   D. incision and drainage

26. The most common indication for splenectomy is
   A. bacterial infection
   B. viral infection
   C. parasitic infection
   D. trauma

27. An open cholecystectomy is the procedure of choice when
   A. stones are present in the gallbladder
   B. laparoscopic cholecystectomy is not an option
   C. the cholecystokinin test is positive
   D. the patient is obese
28. What substance is used to create a pneumoperitoneum for laparoscopic abdominal surgery?
   A. carbon dioxide  
   B. nitrous oxide  
   C. sterile water  
   D. saline solution

29. During laparoscopic abdominal surgery, what instrument is inserted with the trocar?
   A. sleeve  
   B. probe  
   C. straight grasper  
   D. hook scissors

30. An esophagogastroduodenoscopy is performed to assess all but the following structure:
   A. esophagus  
   B. stomach  
   C. duodenum  
   D. jejunum

31. Which scissors are commonly used for abdominal procedures?
   A. Castroviejo  
   B. Metzenbaum  
   C. Bellucci  
   D. Dean

32. End-to-end and end-to-side are types of
   A. suture techniques  
   B. drains  
   C. anastomoses  
   D. bandages

33. An appendectomy that is performed prophylactically during the course of another abdominal surgery is termed
   A. vermiform  
   B. incidental  
   C. unnecessary  
   D. absolute

Surgery on the Musculoskeletal System

Match the orthopedic surgical devices in the left column with their correct definitions in the right column. Some definitions match more than one device.

   ___ 1. cast
   ___ 2. nail
   ___ 3. saw
   ___ 4. knife
   ___ 5. rod
   ___ 6. depth gauge
   ___ 7. awl
   ___ 8. armboard
   ___ 9. mallet
   ____ 10. screwdriver
   ____ 11. rasp
   ____ 12. reamer
   ____ 13. screw
   ____ 14. elevator
   ____ 15. rongeur
   ____ 16. pin
   ____ 17. osteotome
   ____ 18. curette
   ____ 19. clamp
   ____ 20. retractor
   ____ 21. caliper
   ____ 22. hammer
   ____ 23. gouge

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

   ___ 24. Comminution is the presence of more than how many fracture fragments?
   A. 1  
   B. 2  
   C. 3  
   D. 4

   ___ 25. A division of bone to correct angular or rotatory deformity is an
   A. epiphysectomy  
   B. articulation  
   C. arthrodesis  
   D. osteotomy
**Surgery on the Cardiovascular System**

Fill in the blanks with the correct terms. Answers may require more than one word.

1. The goals of carotid endarterectomy are to remove  
   ________________ and restore ________________.

2. Operative repair of an abdominal aortic aneurysm  
   requires replacement of the diseased aortic segment with  
   a prosthetic ________________.

3. A femoral embolectomy is performed to remove  
   ________________ from the femoral-popliteal  
   system and restore circulation to the limb.

4. A portacaval shunt is anastomosis of the portal vein to the  
   vena cava to treat portal ________________.
5. Saphenous vein stripping is performed to treat ______________ of the leg.

6. A ventriculotomy is performed to close a hole in the intraventricular septum; this procedure is known as closure of a(n) ________________.

7. A ________________ graft, made of Dacron or Teflon, is used to strengthen a suture line or close a defect.

8. A compartment ________________ develops when injury causes pressure within an osteofascial compartment to rise, leading to impairment of nerve conduction and blood flow through the compartment.

9. A solution that is used to stop the heart is called a ________________ solution.

10. Correction of ________________ of the thoracic aorta is performed to correct congenital stenosis of the thoracic aorta.

11. Cardiopulmonary ________________ is the method used to divert blood away from the heart and lungs temporarily while surgery on the heart and vessels is performed.

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

12. Which of the following catheters would be inserted in the pulmonary artery to monitor blood pressure in the heart during open heart surgery?
   A. Foley
   B. Hickman
   C. Fogarty
   D. Swan-Ganz

13. The lower extremity vessel most often removed for coronary artery bypass graft is the
   A. femoral artery
   B. saphenous vein
   C. popliteal vein
   D. iliac artery

14. Traditional coronary artery bypass graft surgery is done through a median
   A. sternotomy
   B. thoracotomy
   C. celiotomy
   D. aortotomy

15. A procedure performed to enlarge the lumen of a sclerotic coronary artery is
   A. PTMR
   B. CABG
   C. PICC
   D. PTCA

16. A material used for arterial bypass grafts is
   A. Interpore
   B. OpSite
   C. Gore-Tex
   D. Synthaderm

17. During cardiac surgery, cardioplegic solution is injected in order to precipitate
   A. cardiac arrest
   B. adequate hemostasis
   C. mild bradycardia
   D. nodal rhythm

18. Which of the following suture materials used in cardiac surgery is nonabsorbable?
   A. PDS
   B. catgut
   C. Dexon
   D. silk

19. Repair of a patent ductus arteriosus is done to close the communication between the thoracic aorta and the
   A. thoracic vein
   B. inframammary artery
   C. pulmonary artery
   D. subclavian vein

20. Transvenous and subxiphoid pacemaker implantations do NOT require
   A. fluoroscopy
   B. thoracotomy
   C. local anesthesia
   D. drains

21. Which procedure is used to correct transposition of the great vessels?
   A. Carpentier
   B. Fontan
   C. Shumway
   D. Mustard

22. Tiny pieces of felt used along a suture line to reinforce an anastomosis are called
   A. pledgets
   B. liners
   C. bolsters
   D. wedges
23. Mosquito clamps are so named for their
A. grip  
B. small size  
C. buzzing sound  
D. winged blades

24. Which of the following arterial puncture techniques would NOT be used on the femoral artery during a heart catheterization procedure?
A. Seldinger  
B. Sones  
C. Amplatz  
D. Judkins

25. During thoracotomy, the patient is placed in which position?
A. lateral  
B. supine  
C. prone  
D. Fowler

26. Satinsky and Cooley are types of angled
A. drains  
B. scissors  
C. cannulas  
D. clamps

27. Gelpi and Weitlaner are types of
A. retractors  
B. sump drains  
C. fine-tissue forceps  
D. catheters

28. Beaver and Bard-Parker are types of
A. metal rings  
B. aortic punches  
C. blades  
D. dilators

29. A cardiac pacemaker receives power from the
A. ventricles of the heart  
B. pulse generator  
C. subxiphoid electrodes  
D. myocardium

30. Cardiopulmonary bypass is also known as
A. heart-lung bypass  
B. CABG  
C. cannulation  
D. defibrillation

31. On completion of anastomosis of vein graft to coronary artery, what must be removed before decannulation can be achieved?
A. sutures  
B. air  
C. blood  
D. tissue

32. The procedure performed to relieve stricture in the left coronary artery system caused by atherosclerotic plaque is
A. valvulotomy  
B. angioplasty  
C. commissurotomy  
D. catheterization

33. Porcine prosthetic heart valves are taken from
A. cows  
B. cadavers  
C. pigs  
D. monkeys

34. Surgical correction of congenital pulmonary valve stenosis is accomplished by which procedure?
A. pulmonary valve resection  
B. pulmonary valvulotomy  
C. pulmonary valve replacement  
D. pulmonary diversion

35. A device used to assist cardiopulmonary bypass for patients who have suffered myocardial infarction is
A. intra-aortic balloon catheter  
B. Klein pump  
C. 90/90 wire  
D. Ray threaded fusion cage

36. Arteriosclerotic disease of the femoral artery may be surgically treated with
A. aortofemoral bypass  
B. femoral endarterectomy  
C. femoral embolectomy  
D. femoral-popliteal bypass

37. A “roto-rooter job” is a slang expression for which procedure?
A. atherectomy  
B. percutaneous transluminal angioplasty  
C. balloon angioplasty  
D. cardiac catheterization

38. What type of incision is made to facilitate carotid endarterectomy?
A. neck incision  
B. supraclavicular incision  
C. subxiphoid incision  
D. submental incision

39. The surgical treatment for advanced cardiomyopathy is
A. cardiac revascularization  
B. cardiac catheterization  
C. cardiac bypass  
D. heart transplant
14. Replacement of a patient’s poorly functioning or non-functioning lung with a donor lung

15. Surgical excision of a rib

Surgery on the Respiratory System

Fill in the blanks with the correct names of the respiratory procedures based on the corresponding descriptions.

1. Surgical incision into the thoracic cavity to provide access to organs of the chest

2. Insertion of chest tube

3. Excision of a small piece of lung tissue for microscopic examination

4. Insertion of a lighted instrument into the space in the middle of the chest cavity between the heart and two pleural cavities

5. Creation of a temporary or permanent opening into the trachea to allow air to enter the bronchi and lungs

6. Surgical excision of a lung

7. Insertion of a lighted instrument into the respiratory tree

8. Insertion of a tube into the trachea to facilitate breathing

9. Whisking of cells from bronchi for pathologic examination

10. Irrigation of the bronchi for pathologic examination

11. Surgical splitting of sternal bone to allow access to thoracic cavity

12. Surgical excision of a lobe of the lung

13. Surgical stapling technique used for removal of emphysematous lung tissue

14. Replacement of a patient’s poorly functioning or non-functioning lung with a donor lung

15. Surgical excision of a rib

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

16. A chest tube may be inserted following thoracic surgery in order to prevent
   A. lung expansion
   B. lung collapse
   C. rib fractures
   D. flail chest

17. Surgical excision of a lung would likely be performed for
   A. carcinoma
   B. tuberculosis
   C. intractable fungal infection
   D. chronic bronchiectasis

18. What procedure might be performed to keep an airway open for more than 36 continuous hours?
   A. intravenous cutdown
   B. Hickman catheter insertion
   C. tracheotomy
   D. intubation

19. Of the following, which is NOT a function of bronchoscopy?
   A. extraction of tissue for examination
   B. removal of foreign objects
   C. maintenance of an airway
   D. visualization of the respiratory tree and lungs

20. Which of the following is a standard brand of bronchoscope?
   A. Everest
   B. Whitney
   C. Denali
   D. Olympus

21. The incision for a mediastinoscopy procedure is made
   A. above the thyroid cartilage
   B. over the suprasternal notch
   C. between the tracheal rings
   D. below the diaphragm
13. A rectovaginal fistula should be surgically repaired to prevent infection from the passage of __________ through the vagina.

14. The surgical procedure to treat aggressive cancer of the vulva is known as radical ________________.

**Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.**

15. An incision often used for abdominal hysterectomy, made horizontally just above the symphysis with the convexity curving downward, is the
   A. McBurney
   B. Rockey-Davis
   C. Pfannenstiel
   D. Maylard

16. When an ectopic pregnancy lodges in the fallopian tube, it is necessary to perform
   A. a hysteroscopy
   B. a salpingectomy
   C. an oophorectomy
   D. a gonioscopy

17. Prior to dilatation and curettage, the depth of the uterine cavity is determined by inserting a
   A. caliper
   B. catheter
   C. clamp
   D. sound

18. In which position is a patient placed for vaginal hysterectomy?
   A. lithotomy
   B. recumbent
   C. decubitus
   D. prone

19. Which surgical procedure does NOT preserve the breast?
   A. mastectomy
   B. lymph node sampling
   C. lumpectomy
   D. radiation therapy

20. Which is the correct spelling for a needle commonly used to establish pneumoperitoneum during a laparoscopic procedure?
   A. Veress
   B. Verres
   C. Verre
   D. Vernes
21. Two cervical cerclage techniques used for correction of an incompetent cervix are
   A. Cohen and Gil-Vernet
   B. Leksell and Brown-Roberts-Wells
   C. hanging drop and shoelace
   D. McDonald and Shirodkar

22. A common tubal ligation procedure is named for
   A. Douglas
   B. Salpinx
   C. Pomeroy
   D. Hunter

23. Which is NOT usually an indication for elective hysterectomy?
   A. cervical cancer
   B. irregular menstrual periods
   C. painful endometriosis
   D. leiomyomata uteri

24. Which condition requires that a baby be delivered by cesarean section?
   A. footling breech
   B. amniotic fluid leak
   C. previous cesarean section
   D. cephalopelvic disproportion

25. The Bartholin gland may require surgery when it
   A. shrinks
   B. becomes cystic
   C. is callused
   D. secretes mucus

26. During a dilatation and curettage procedure, the cervix is grasped with a
   A. clamp
   B. tenaculum
   C. dilator
   D. hemostat

27. A total hysterectomy is defined as
   A. complete removal of the uterus
   B. complete removal of the uterus and cervix
   C. complete removal of the uterus, cervix, and fallopian tubes
   D. complete removal of the uterus, cervix, fallopian tubes, and ovaries

28. After the baby has been removed by cesarean section, the placenta is then removed using which technique?
   A. forceps
   B. vacuum
   C. manual
   D. vaginal

29. Suspicious cervical lesions requiring biopsy are identified using
   A. colposcopy
   B. laparoscopy
   C. amnioscopy
   D. gonioscopy

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Surgery on the Ears, Nose, and Throat

Fill in the blanks with the correct answers. Answers may require more than one word.

1. A ___________________________ procedure is carried out to visualize the vocal cords and take biopsies.
2. Adenoidectomy is rarely carried out on adults because the adenoids in most adult patients are______________________.
3. When a patient’s sense of smell has been obliterated, or if the patient’s airway is obstructed from the edematous outgrowths of sinus tissue in the middle meatus, a nasal ___________________________ procedure is often done.
4. Insertion of collar-button tubes is done in a ___________________________ procedure.
5. Repair of ___________________________ palate is done when the child is one or two years of age.
6. Excision of ___________________________ is necessary when these cystlike collections of skin cells and cholesterol cause tympanic perforation.
7. The most common site of facial trauma is the ___________________________.
8. A relatively new and controversial device called a ___________________________ , which allows the deaf to understand spoken words, is surgically placed under the skin near the mastoid process above and behind the ear.
9. Removal of the third ossicle of the middle ear is called a(n) ___________________________.
10. Nasal antrostomy entails drilling a hole through the nasal antrum for the purpose of facilitating ___________________________.
11. Some cases of gum disease are so severe that a ___________________________ (excision of part of the gums) is necessary to remove pockets of pus and allow new tissue to form.
12. Surgical removal of the stapes and replacement with an artificial stapes is the treatment for ___________________________.
Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

___ 13. Ablation by radiosurgery or surgical excision is carried out to remove acoustic neuromas arising from this cranial nerve
A. third
B. eighth
C. ninth
D. twelfth

___ 14. The classification system for maxillary fractures is
A. Malgaigne
B. Delbet
C. Salter
D. LeFort

___ 15. A Caldwell-Luc procedure is performed because of a diagnosis of
A. tonsillitis
B. hearing loss
C. chronic sinusitis
D. nasal fracture

___ 16. A bobbin is a type of
A. aural speculum
B. drainage tube
C. suction device
D. suture passer

___ 17. Myringotomy is indicated for a diagnosis of
A. deviated nasal septum
B. dental malocclusion
C. chronic otitis media
D. nerve deafness

___ 18. Which incision would likely be used for a radical mastoidectomy?
A. postauricular
B. intra-auricular
C. preauricular
D. submandibular

___ 19. A stapedectomy and placement of a prosthesis reestablishes functional linkage between the
A. incus and oval window
B. acoustic meatus and tympanic membrane
C. vestibule and round window
D. cochlea and eustachian tube

___ 20. The initial incision for a nasal septal reconstruction is made through the
A. columella
B. maxillary antrum
C. mucoperichondrium
D. parotid duct

___ 21. Nasal polyps are removed with the use of
A. an aspirator
B. a snare
C. a rongeur
D. an osteotome

___ 22. Repair of mandibular fractures includes fixation with a(n)
A. arch bar
B. stent
C. plaster cast
D. splint

___ 23. Endoscopic ethmoidectomy with nasal antrostomy procedure may be indicated for a diagnosis of
A. broken nose
B. mastoiditis
C. deviated nasal septum
D. sinusitis

___ 24. En bloc removal of lymphatic chains and all nonvital structures of the neck is a
A. parotidectomy
B. polypectomy
C. radical neck dissection
D. tracheal exenteration

___ 25. Most head and neck procedures are carried out with the operating table in a slight
A. Trendelenburg position
B. reverse Trendelenburg position
C. Fowler position
D. Sims position

___ 26. A rhinoplasty is usually carried out
A. within the nose
B. through the roof of the mouth
C. following the natural lines and creases on the outside of the nose
D. through the sinuses

___ 27. A procedure performed on patients who have repeated epistaxis is
A. temporary closure of the nostril with sutures
B. excision of the bleeding vessels
C. suturing of nasal packing to the nose
D. cauterization of the bleeding vessels
**Surgery on the Eyes**

Complete the following statements; answers may be more than one word.

1. Corneal incisions spreading outward from a common center characterize a procedure called ___________________.
2. Cataract extraction and intraocular lens implantation produce what is called a pseudo- ___________________ in the eye.
3. A(n) ___________________ suture is used to provide traction in ophthalmic surgery.
4. Surgery to correct strabismus requires either recession or resection of the ________________ muscles of the eye.
5. Indications for ________________ of an eye include intraocular malignancy and penetrating ocular wound.
6. During a(n) ___________________ procedure, an ultrasonic probe fragments the lens of the eye and reduces it to a liquid material that can be aspirated from the eye.
7. The greater the number of zeros in a suture size, such as that used in ophthalmic surgery, the ______________ the suture material.
8. The purpose of a filtering procedure in glaucoma is to provide a channel for ________________ of aqueous humor from within the eye.
9. An incision into the iris of the eye is called a(n) ___________________.
10. The ________________ allows the surgeon to operate on structures too small to be viewed effectively with the naked eye.
11. Creation of a new, larger opening between the lacrimal sac and the nasal sinus is called a(n) ________________.
12. Entropion repair is done to prevent rubbing of the ________________ on the cornea.
13. Following coreoplasty, the surgeon fills the anterior chamber of the eye with ________________ salt solution.

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

___ 14. During a cataract operation, incision is made into which part of the eye?
 A. iris
 B. sclera
 C. pupil
 D. lens

___ 15. Surgical instruments are often placed on what kind of stand?
 A. Cleveland
 B. Lahey
 C. Meninger
 D. Mayo

___ 16. What is the name of the suture in which one needle is attached to each end of a suture length?
 A. bivalve
 B. multi-tip
 C. double-armed
 D. bird-leg

___ 17. Prep for surgery on the eye extends from the hairline to the mouth and ________________.
 A. from one ear to the other ear
 B. from the nose to the ear
 C. from the chin to the neck
 D. from jaw to jaw

___ 18. Which instrument is used to help isolate the eye from its surrounding structures so that anesthesia can be instilled?
 A. eye trocar
 B. eye speculum
 C. eye scissors
 D. eye forceps

___ 19. After repair of entropion, the surgeon dresses the eye with a(n) ________________
 A. hypoallergenic bolster
 B. cotton eye patch
 C. Kerlix bandage
 D. absorbable sponge

___ 20. Eye muscle surgery is performed to correct a condition called
 A. strabismus
 B. nystagmus
 C. diplopia
 D. enucleation
Choose the correct answer by matching the lettered terms with their definitions below. Write your answer in the space provided next to the number of the question.

**Surgery on the Nervous System**

- **21.** A procedure in which a portion of the eye muscle is excised and the severed end is reattached at the original point of insertion is known as
  A. anterior rectus resection
  B. lateral rectus resection
  C. medial rectus recession
  D. posterior rectus recession

- **22.** Repair of ectropion provides for proper drainage of
  A. pus
  B. blood
  C. tears
  D. mucus

- **23.** Dacryocystorhinostomy is performed to
  A. unblock the tear duct
  B. prepare the eye for cataract extraction
  C. create a passageway between the inner canthus of the eye and the sinus
  D. correct a drooping eyelid

- **24.** Excision of a circular portion of the cornea in preparation for transplant is called
  A. marsupialization
  B. skeletization
  C. trephination
  D. arborization

- **25.** A scleral buckle procedure is performed to correct
  A. strabismus
  B. detached retina
  C. vitreous leakage
  D. macular degeneration

- **26.** A cataract is usually extracted when
  A. it is first discovered
  B. the patient becomes blind
  C. it becomes “ripe”
  D. the lens of the eye decays

- **27.** What is the treatment for diabetic retinopathy?
  A. laser photocoagulation
  B. scleral buckle
  C. vitrectomy
  D. keratoplasty

- **28.** The purpose of radial keratotomy is to
  A. treat corneal abrasion
  B. prevent retinal detachment
  C. restore vision as close to 20/20 as possible
  D. prepare the cornea for transplant

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21. diversion of cerebrospinal fluid away from ventricle to atrium
22. anastomosis of extracranial artery to intracranial artery to bypass stricture
23. interruption of cranial or spinal nerve root
24. opening made in the skull to expose the brain
25. ultrasound study performed to identify brain abscess, tumor, or hematoma
26. interruption of lateral spinothalamic tract of spinal cord
27. direction of cerebrospinal fluid away from ventricle to peritoneal cavity
28. surgical interruption of sympathetic nerve fibers
29. removal of accumulation of blood in the space below the dura of the brain
30. an opening in the skull created with a rotary cutting device
31. injection of contrast into subarachnoid space, followed by x-rays to delineate structures
32. replacement of area of bone in the skull with a plate or graft
33. pictorial radiographs that outline brain structures
34. excision of herniated cervical intervertebral disks and placement of bone grafts
35. surgical removal of abnormal communication between artery and vein
36. substitution of contrast medium for cerebrospinal fluid, followed by x-rays
37. removal of eighth cranial nerve tumor extending into posterior fossa of cranial cavity
38. release of pressure on cranial nerves
19. peripheral nerve repair
20. excision of outpouching of internal carotid or middle cerebral artery
21. creation of opening in the lamina to remove herniated disk, tumor, or aneurysm

Choose the correct answer in each of the following multiple-choice questions. Write the letter of your answer in the space provided.

22. A craniotome is
   A. a nerve ending
   B. a drill
   C. a skull bone hook
   D. a suction/irrigation tool

23. Hemostasis following creation of a bur hole in the skull is often achieved with the use of
   A. methyl methacrylate
   B. Gelfoam and cotton pledgets
   C. Kerlix pressure bandage
   D. bone wax

24. A surgical loupe is used to
   A. magnify small structures
   B. tie off a very fine suture
   C. round out a small hole
   D. wrap one structure around another

25. Cranial expansion and reconstruction is a common surgical treatment for
   A. subdural hematoma
   B. residual surgical defects
   C. decompression of cranial nerves
   D. cranial synostosis

26. In what position is the patient usually placed for anterior cervical spine procedures?
   A. prone
   B. Trendelenburg
   C. supine
   D. reverse Trendelenburg

27. A lumbar laminectomy is performed to
   A. remove a herniated nucleus pulposus
   B. relieve arterial spasm due to vascular disease
   C. anastomose a severed nerve
   D. graft gaping intervertebral disks

28. What is the name of the procedure that surgically rejoins individual severed nerve fibers?
   A. decompression
   B. funicular repair
   C. epineural repair
   D. neural fusion

29. Which instrument is used to bite off protruding bony spinous processes?
   A. drill
   B. mallet
   C. rongeur
   D. dermatome

30. The surgical approach for cervical disk herniation is
   A. lateral or ventral
   B. superior or inferior
   C. cephalad or caudal
   D. anterior or posterior

31. A depressed skull fracture where part of the skull has been removed would likely require what additional surgical procedure?
   A. craniotomy
   B. cranioplasty
   C. craniectomy
   D. craniometry

32. Congenital hydrocephalus is treated by what surgical technique?
   A. bur holes
   B. shunting
   C. fusion
   D. excision

33. Carpal tunnel syndrome may be surgically treated by
   A. decompression of the ulnar nerve
   B. release of the entrapped cutaneous nerve
   C. excision of the median nerve
   D. division of the carpal ligament

34. A hypophysectomy is performed to treat a tumor of the
   A. meninges
   B. glia
   C. pituitary
   D. arachnoid space

35. Resection of the vagus nerve is done to
   A. control bleeding
   B. eliminate nerve pain
   C. slow the spread of metastatic disease
   D. decrease the amount of gastric juice

36. Resection of a tumor of the pituitary gland is approached through the
   A. mouth
   B. back of the head
   C. frontal hairline
   D. ear canal