

***Medical Language - Immerse Yourself 6th edition
Turley Solutions Manual***

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CHAPTER 2

HEALTH CARE TODAY

LEARNING OUTCOMES

After teaching this chapter, students should be able to:

- 2.1 Define *health*.
- 2.2 Describe approaches for organizing information about the body.
- 2.3 Define *disease*.
- 2.4 Describe categories of diseases.
- 2.5 Describe the onset, course, and outcome of disease.
- 2.6 Name medical specialties and their related body systems.
- 2.7 Name medical specialists and their medical specialities.
- 2.8 Describe types of healthcare professionals.
- 2.9 Describe the settings in which health care is provided.
- 2.10 Describe techniques used to perform a physical examination.
- 2.11 Describe the types and components of electronic health records.

and Presentation

1. Create a PowerPoint presentation to outline your lecture.
 - a. Augment your presentation by downloading images available for this chapter from the Image Library.

Materials Needed

Scan through the activities for this chapter. Then use this checklist to identify which items you will need to bring with you to class.

- Textbook
- PowerPoint presentation
- Paper, pens and/or pencils
- Medical Internet video or clip from a TV medical show
- Flash Cards
- Jigsaw Puzzle Pieces, Large
- Diagnostic Images
- Electronic Medical Record examples
- Medical Report
- Physical Examination Instruments
- Worksheets *
 - It All Starts with Word Parts
 - Pronouncing, Spelling, and Dissecting
 - Body Directions

**A printable Worksheets file and separate Answer Key file can be found on the Instructor's Resources page.*

Learning Outcomes 2.1 – 2.2

Define health.

Describe approaches for organizing information about the body.

A. Classroom Talking Points—Health and Disease

1. The body is in a state of health when all the parts function correctly.
 - a. Health is a state of complete physical, mental, and social well-being.
 - b. Understanding health requires understanding body planes, directions, and positions; body cavities; body quadrants and regions; anatomy and physiology; and body systems and medical specialties.
2. Disease is any change in the normal structure or function of the body.

- a. A disorder is a disturbance of action or function, usually applied to mental function and psychiatric conditions.
- b. Etiology refers to the cause or origin of a disease.
- c. Preventive medicine is health care that focuses on staying healthy and preventing disease.

B. Classroom Talking Points—Body Planes, Directions, and Positions; Body Cavities; and Body Quadrants and Regions

1. The human body is studied in anatomical position.
2. Based on the anatomical position, the body can be studied according to body planes, directions, and positions.
 - a. A plane is an imaginary flat surface that divides the body into two parts; there are three body planes.
 - b. The sagittal plane is a vertical plane that divides the body in the midline into right and left sides.
 - Moving toward the midline is moving in a medial direction.
 - Moving away from the midline is moving in a lateral direction.
 - Bilateral indicates both sides of the body.
 - c. The coronal plane or frontal plane is a vertical plane that divides the body in the midline into front and back sections.
 - The front of the body is the anterior or ventral section.
 - The back of the body is the posterior or dorsal section.
 - Lying face down is being in the prone position.
 - Lying on the back is being in the dorsal or dorsal supine position.
 - d. The transverse plane is a horizontal plane that divides the body into upper and lower sections.
 - The upper part is the superior section.
 - The lower part is the inferior section.
 - Moving toward the head is the cephalad direction.
 - Moving toward the tailbone is the caudad direction.

- e. Moving toward the end of an arm or leg is moving in a distal direction.
 - f. Moving toward the point of attachment of an arm or leg is moving in a proximal direction.
 - g. Structures on the surface of the body are superficial or external.
 - h. Structures below the surface and inside the body are deep or internal.
3. The human body can be studied according to body cavities and their internal organs.
- a. A cavity is a hollow space within the body; there are five body cavities.
 - b. The cranial cavity is within the bony cranium of the head and contains the brain, cranial nerves, and related structures.
 - c. The spinal cavity travels down the midline of the back and contains the spinal cord, spinal nerves, and related structures.
 - d. The thoracic cavity within the chest contains the heart, lungs, and other structures.
 - e. The abdominal cavity within the abdomen contains the stomach, small intestine, part of the large intestine, spleen, liver, gallbladder, pancreas, and kidneys.
 - f. The pelvic cavity is a continuation of the abdominal cavity and contains the rest of the large intestine, uterus, bladder, some of the male genitalia, and other structures.
 - g. The abdominopelvic cavity is the combined space of the abdominal and pelvic cavities.
4. The human body can be studied according to its quadrants and regions.
- a. The anterior surface of the abdominopelvic area can be divided into four quadrants: the right upper quadrant, the left upper quadrant, the right lower quadrant, and the left lower quadrant.

- b. The abdominopelvic area can be divided into nine regions: the right and left hypochondriac regions, the epigastric region, the right and left lumbar regions, the umbilical region, the right and left inguinal regions, and the hypogastric region.

C. Classroom Talking Points—Anatomy and Physiology, Body Systems, and Medical Specialties

1. Anatomy is the study of the structures of the human body.
2. Physiology is the study of the functions of the structures of the human body.
3. Anatomy begins with a cell, cells combine to form tissues, and tissues combine to form body organs; several organs and related structures form a body system.
4. Studying body systems is the standard approach used in anatomy and physiology textbooks and medical terminology textbooks.

D. Classroom Activity Suggestions

1. Show students different diagnostic images, and have them identify which plane is being used.
2. Worksheet: Body Directions
 - a. Have students pair up with another student.
 - b. Have the first student read the first sentence of the worksheet to the second student, who will follow those directions to come up with an answer.
 - c. Have students switch back and forth until they have completed the worksheet.
 - d. When students are finished, go through the worksheet in class.
3. Missing Vowel Activity
 - a. Have students close their books and take out a sheet of paper.
 - b. Have them write out as many of the categories of diseases they can think of.
 - c. Ask them to list each category of diseases that is missing the vowel *A*, or the vowel *E*, or the vowel *I*, etc.

- Missing an *A*: genetic and infectious
- Missing an *E*: idiopathic and nutritional
- Missing an *I*: genetic
- Missing an *O*: degenerative, genetic, hereditary
- Missing a *U*: congenital, degenerative, environmental, genetic, hereditary, iatrogenic, idiopathic, and neoplastic

4. Minute Paper Activity

- a. After dividing the class in half, have each group write down as many body systems as they can in 5 minutes.
- b. After students switch papers, have them list as many diseases as they can think of for each body system in 10 minutes, writing at least one disease for each system listed.

E. Homework Activity Suggestions

1. Textbook Exercises
 - a. Label Structures, pg. 34–35
 - b. Give the Meaning of Combining Forms, pg. 35–36

F. Study Activity Suggestions: MyLab Medical Terminology™

Learning Outcomes 2.3 – 2.5

Define disease.

Describe categories of diseases.

Describe the onset, course, and outcome of disease.

A. Classroom Talking Points—Disease Categories

1. Diseases can be divided into categories based on their etiology.
 - a. A congenital disease is caused by an abnormality in the fetus.

- b. A degenerative disease is caused by progressive destruction of cells.
 - c. An environmental disease is caused by exposure to substances in the environment.
 - d. A genetic disease is caused by a mutation in a person's genes.
 - e. A hereditary disease is caused by an inherited recessive defective gene.
 - f. A hospital-acquired infection is caused by exposure to a disease-causing agent while in the hospital environment.
 - g. An iatrogenic disease is caused by medicine or treatment.
 - h. An idiopathic disease has no identifiable cause.
 - i. An infectious disease is caused by a pathogen.
 - j. A neoplastic disease is caused by the growth of a mass or tumor.
 - k. A nutritional disease is caused by lack of nutritious food, insufficient food, or an inability to utilize nutrients.
2. The onset of a disease is noticed because of signs or symptoms.
- a. A symptom is any deviation from health that is experienced by the patient.
 - b. A symptom that can be detected by others is a sign.
 - c. Signs and symptoms can be acute, subacute, or chronic.
 - d. An exacerbation is a sudden worsening of symptoms or signs.
 - e. A remission is a temporary improvement in the signs or symptoms of disease.
 - f. A relapse is a recurrence of symptoms or signs of disease.
 - g. A sequela is a complication of a disease that remains after the original disease is resolved.
 - h. Symptomatology is the clinical picture of all of the patient's signs and symptoms.
 - i. Asymptomatic indicates that the patient is showing no signs or symptoms of disease, even if disease is present.
 - j. A syndrome is a set of symptoms and signs associated with a particular disease.
3. The course of a disease is all the events from onset until the final outcome.
- a. The course or outcome of a disease can be affected by treatment.
 - b. Therapeutic treatment causes the symptoms or signs of the disease to disappear.
 - c. Refractory disease does not respond to treatment.

- d. Certain diseases may require treatment with surgery.
- e. A prognosis is the predicted outcome of a disease.
- f. Recuperation is a return to a normal state of health.
- g. A disability is a permanent loss of the ability to perform certain activities or functions.
- h. A terminal illness is one that eventually results in death.

Learning Outcomes 2.6 – 2.7

Name medical specialties and their related body systems.

Name medical specialists and their medical specialties.

1. In medicine, body systems are studied within the context of medical specialties.
 - a. The medical specialty of dermatology studies the integumentary system.
 - b. The medical specialty of gastroenterology studies the gastrointestinal system.
 - c. The medical specialty of pulmonology studies the respiratory system.
 - d. The medical specialty of cardiology studies the cardiovascular system.
 - e. The medical specialties of hematology and immunology study the blood and lymphatic system.
 - f. The medical specialty of orthopedics studies the skeletal system and the muscular system.
 - g. The medical specialty of neurology studies the nervous system.
 - h. The medical specialty of urology studies the urinary system.
 - i. The medical specialty of male reproductive medicine studies the male genitourinary system.
 - j. The medical specialty of gynecology and obstetrics studies the female genital and reproductive system.
 - k. The medical specialty of endocrinology studies the endocrine system.
 - l. The medical specialty of ophthalmology studies the eyes.
 - m. The medical specialty of otolaryngology studies the ears, nose, and throat.

- n. The medical specialty of psychiatry studies the mind.
- o. The medical specialty of oncology studies masses or tumors.
- p. The medical specialty of radiology and nuclear medicine studies x-rays.
- q. Other medical specialties are listed in Table 2.3.

Learning Outcome 2.8

Describe types of healthcare professionals.

A. Classroom Talking Points—Healthcare Professionals

1. A physician or doctor leads the healthcare team.
 - a. Physicians examine the patient, order tests, diagnose diseases, and treat diseases.
 - b. Physicians can have a Doctor of Medicine or Doctor of Osteopathy degree.
 - c. Physicians can choose a specialized area for their medical practice.
 - Surgeons have specialized training in surgical techniques.
 - Primary care physicians specialize in family practice or pediatrics.
 - An attending physician is on the medical staff of a hospital.
 - d. Other doctors, such as chiropractors, optometrists, podiatrists, dentists, and pharmacists, focus their training on just one part of the body or one aspect of medicine.
2. Physician extenders perform some of the duties of a physician.
 - a. Physician extenders usually work under the supervision of a physician.
 - b. Examples include physician's assistants, nurse practitioners, certified nurse midwives, and certified registered nurse anesthetists.
3. Nurses interview patients, examine patients, make nursing diagnoses, and administer treatments or medicines ordered by the physician.
4. Allied health professionals support patients and nurses and perform specific services ordered by the physician.
 - a. Other allied health professionals include technologists, technicians, therapists, and others.

Learning Outcome 2.9

Describe the settings in which health care is provided.

A. Classroom Talking Points—Healthcare Settings

1. A hospital provides care for patients who are acutely ill and require medical or surgical care for longer than 24 hours.
 - a. A patient in a hospital is an inpatient.
 - b. A hospital is divided into floors or nursing units that provide care for specific types of patients.
 - Specialty care units include the intensive care unit.
 - Ancillary departments provide additional services such as radiology and physical therapy.
 - Nonmedical departments provide other services such as housekeeping and billing.
2. A physician's office can have one or more physicians and may have their own diagnostic equipment.
3. Clinics provide healthcare services for one type of patient or one type of disease.
 - a. Outpatient clinics are located in a hospital or separate facility, but the patients do not stay overnight.
 - b. Walk-in clinics provide services for minor injuries or illnesses and routine care.
 - c. Urgent care clinics treat patients with serious but non-life-threatening illnesses and injuries.
4. An ambulatory surgery center is a facility where minor surgery is performed, and the patient does not stay overnight.
5. A long-term care facility is a primary residential facility for individuals who are unable to care for themselves.
 - a. Skilled nursing facilities provide a higher level of medical and nursing care.
 - b. Long-term care facilities often provide rehabilitation services to prepare a patient to live independently.

6. A home health agency provides a range of healthcare services to persons in their homes.
7. Hospice is either an inpatient facility or at home for patients who are dying from a terminal illness.

B. Classroom Activity Suggestions

1. Have students write down two lists: one listing the types of healthcare professionals and the other listing the different healthcare settings.
 - a. Starting with the first professional, ask which of the listed settings the professional is likely to work in. You can also ask students to provide an example of what type of care they would provide in that setting.
 - b. [Note: Professional settings vary from state to state and location to location. Therefore, there are no absolute correct or incorrect answers. Use your experience and expertise to provide answers.]

Learning Outcome 2.10

Describe techniques used to perform a physical examination.

A. Classroom Talking Points—History and Physical Examination

1. A physician takes the patient's history and performs a physical examination.
2. The history includes asking about the location, onset, duration, and severity of the symptoms.
3. The history may also include the patient's past medical history, past surgical history, family history, social history, and history of allergies.
4. The physician uses four techniques during the physical examination.
 - a. Inspection uses eyes or an instrument to examine the body.
 - b. Palpation uses the fingers to feel masses or enlarged organs or to detect pain.
 - c. Auscultation uses a stethoscope to listen to the sounds of the heart, lungs, or intestines.
 - d. Percussion uses the finger of one hand to tap on the finger of the other hand, which is spread over a body cavity, and listens to the sound that is produced.

5. Based on the patient's history and physical examination, the physician can rule out diseases or make a diagnosis.

B. Classroom Activity Suggestions

1. Bring available physical examination instruments to class.
 - a. Have students experiment with the different physical examination techniques.

Learning Outcome 2.11

Describe the types and components of electronic records.

A. Classroom Talking Points—Electronic Health Records

1. A medical record is where healthcare professionals document all care provided to a patient.
2. Most healthcare facilities have converted their paper medical records to electronic health records.
3. In physicians' offices and clinics, the EHR usually contains short narrative notes and checklists.
4. Hospitals have more extensive documentation than physicians' offices, including the history and physical examination, operative report, and discharge summary.
5. Standard headings in healthcare documents include Chief Complaint, History of Present Illness, Physical Examination, Diagnosis, and others.

B. Classroom Activity Suggestions

2. Patient Interview
 - a. Pretend that you are a patient who has made an appointment with your doctor to have your blood pressure checked.
 - b. Have the students ask you questions using the "Standard Headings in Healthcare Documents" section on page 47 of the text.
 - c. Show students an example of an electronic patient record.
 - d. Point out to students that each body system chapter has a medical record report at the end.

C. Homework Activity Suggestions

1. Ask students to perform an Internet search and identify 10 different healthcare professions that were not mentioned in the text. Examples:
 - a. Environmental Health Practitioner
 - b. Medical Illustrator
 - c. Perfusionist
 - d. Speech Therapist
 - e. Sterile Supply Technician
2. Textbook Exercises
 - a. Give the Meaning of Combining Forms, pg. 58
 - b. Build Medical Words, pg. 59

D. Study Activity Suggestions: MyLab Medical Terminology™

MyLab Medical Terminology™

MyLab Medical Terminology is a premium online homework management system that includes a host of features to help students study. Resources available for this chapter include:

- Access for full Personalized Study Material
- Interactive exercises
- Audio glossary
- And much more...

Exams, Quizzes, and Tests: Create exams, quizzes, and/or tests to meet the needs of your class.

** The Test Bank and Answer Key are available on the Instructor's Resources page.*

End of Class:

Homework Assignment Checklist

1. Pass out the homework assignment checklist indicating the assignments they need to complete.
2. Remind students that homework will need to be turned in by the beginning of the next class.
3. [Note: At the beginning of the next class, review the homework that was assigned.]

Post-Lecture Pack-Up: Prior to students packing up for the end of class, have them close their books and notes and ask them the following questions.

1. Spell and pronounce two words about the body, health, and disease.
2. How would you define health? How would you define disease?
3. Name one body plane and two directional words.
4. Give two categories of disease and name a disease in each of those two categories.
5. Name a physical examination technique and give an example of how it would be used.
6. Recall three of the healthcare professionals mentioned in the text.
7. How would you summarize the format and content of the electronic patient record?

Before You Go Activity

1. Line Up!
 - a. Have students line up.
 - b. Ask the first student the meaning of a combining form or abbreviation.
 - c. If the student answers the question correctly, they can leave the classroom.
 - d. If the student answers it incorrectly, they have to go to the back of the line.
 - e. Go through the line until all students have been dismissed for the day.
2. [Note: This activity allows you to determine which students might be having problems with the material.]

Homework Assignment Checklist

The following checked assignments need to be completed prior to the beginning of the next class.

- Identify 10 different healthcare professions that were not mentioned in the text.
- Chapter Review Exercises:
 - *The Body in Health:*
 - Matching, pg. 66
 - Circle Exercise, pg. 66
 - True or False, pg. 66
 - *The Body in Disease:*
 - Matching, pg. 67
 - Circle Exercise, pg. 67
 - True or False, pg. 67
 - Dividing Words, pg. 67
 - Build Words, pg. 68
 - Definition of the Medical Word, pg. 68
 - *Medical Specialties and Specialists:*
 - Matching, pg. 68
 - Fill in the Blank, pg. 69
 - Pronounce and Spell, pg. 69
 - Healthcare Professionals and Settings:
 - Matching, pg. 69
 - True or False, pg. 69
 - Dividing Words, pg. 70
 - Physical Examination and Electronic Health Records:
 - Matching, pg. 70
 - True or False, pg. 70
 - Fill in the Blank, pg. 70
 - Define Abbreviations, pg. 71

* An Exercise Answer Key is available on the Instructor's Resources page.

Instructor's Answer Key

Chapter 1: Medical Language: Its Structure and Meaning

1.1 Practice Laps

A. Matching Exercise

3, 4, 6, 5, 7, 2, 1

B. True or False Exercise

- | | |
|------|------|
| 1. T | 5. T |
| 2. F | 6. T |
| 3. T | 7. T |
| 4. F | |

C. Fill in the Blank Exercise

1. Reading medical words
2. Hearing medical words
3. Thinking, analyzing, and understanding medical words
4. Writing (or typing) and spelling medical words
5. Speaking and pronouncing medical words

1.2 Practice Laps

A. Give the Meaning of Combining Forms

1. density
2. abdomen
3. artery
4. joint
5. living organism; living tissue
6. heart
7. heart
8. colon
9. rib
10. skin
11. blue
12. skin
13. skin
14. break down food; digest
15. intestine
16. feeling; sensation
17. stomach
18. group; set
19. liver

20. skin
21. intestine
22. abdomen
23. side
24. white
25. breast
26. muscle
27. nose
28. birth
29. nerve
30. pregnancy and childbirth
31. hip bone; pelvis; renal pelvis
32. eating; swallowing
33. paralysis
34. air; lung
35. mind
36. breathe; coil
37. pressure; tension
38. treatment
39. thyroid gland
40. tonsil
41. urinary system; urine
42. uterus; womb
43. vagina
44. vein

B. Matching Exercise

4, 17, 6, 8, 14, 11, 7, 3, 12, 15, 2, 5, 10, 1, 16, 13, 9

C. True or False Exercise

- | | |
|------|------|
| 1. T | 4. F |
| 2. T | 5. T |
| 3. T | |

D. English Plural Noun Exercise

- | | |
|-------------|------------|
| 1. hormones | 4. nerves |
| 2. kidneys | 5. ovaries |
| 3. arteries | |

E. Greek Plural Noun Exercise

- | | |
|--------------|----------------|
| 1. irides | 3. carcinomata |
| 2. phalanges | 4. ganglia |

F. Latin Plural Noun Exercise

- | | |
|--------------|--------------|
| 1. vertebrae | 7. bacteria |
| 2. sclerae | 8. ova |
| 3. bronchi | 9. diagnoses |
| 4. alveoli | 10. testes |
| 5. thrombi | 11. cortices |
| 6. atria | |

1.3 Practice Laps

A. True or False Exercise

- | | |
|------|------|
| 1. T | 4. T |
| 2. F | 5. T |
| 3. F | 6. T |

B. Divide Medical Words

- | | | |
|-----------|-------------|--------|
| 1. | cardi/o- | -logy |
| 2. | cardi/o- | -ac |
| 3. | intestin/o- | -al |
| 4. | muscul/o- | -ar |
| 5. | ven/o- | -ous |
| 6. intra- | ven/o- | -ous |
| 7. brady- | cardi/o- | -ia |
| 8. | urin/o- | -ation |
| 9. | tonsill/o- | -itis |
| 10. bi- | later/o- | -al |

C. Build Medical Words

Suffix that Begins with a Vowel

- | | |
|---------------|----------------|
| 1. cardiac | 4. neuroma |
| 2. digestive | 5. therapist |
| 3. intestinal | 6. tonsillitis |

Suffix that Begins with a Consonant

- | | |
|----------------|-----------------|
| 7. arthropathy | 9. cardiomegaly |
| 8. cardiology | 10. colonoscope |

D. Spell Medical Words

- | | |
|----------------|-----------------|
| 1. psychiatry | 5. pelvic |
| 2. cardiac | 6. cardiology |
| 3. tonsillitis | 7. hypertension |
| 4. venous | 8. antibiotic |

E. Pronounce and Spell Medical Words

- | | |
|---------------|-------------------|
| 1. abdominal | 8. muscular |
| 2. cardiac | 9. psychiatry |
| 3. cardiology | 10. therapist |
| 4. digestion | 11. tonsillectomy |
| 5. digestive | 12. urinary |
| 6. intestinal | 13. pelvic |
| 7. mammogram | 14. venous |

Chapter Review Exercises: Chapter 1

Dive In: Medical Language Exercises

1.1 Medical Language

Circle Exercise

- | | |
|-----------------|-----------|
| 1. terminology | 3. Arabic |
| 2. word origins | |

True or False Exercise

- | | | | |
|------|------|------|------|
| 1. F | 2. T | 3. T | 4. F |
|------|------|------|------|

1.2 Medical Nouns and Word Parts

Matching Exercise

2, 1, 1, 2, 3, 3, 1

Matching Exercise

1, 10, 5, 4, 17, 9, 12, 15, 7, 6, 16, 20, 14, 3, 19, 18, 2, 8, 13, 11

Circle Exercise

- | | |
|-------------------|--------------|
| 1. -ae | 6. testis |
| 2. combining form | 7. vertebrae |
| 3. intestine | 8. bacteria |
| 4. -i | 9. alveoli |
| 5. phalanx | 10. ovum |

True or False Exercise

- | | |
|------|------|
| 1. F | 4. F |
| 2. F | 5. T |
| 3. F | |

Plural Noun Exercise

- | | |
|--------------|---------------|
| 1. irides | 8. bacteria |
| 2. diagnoses | 9. ganglia |
| 3. ova | 10. vertebrae |
| 4. phalanges | 11. arteries |
| 5. ovaries | 12. thrombi |
| 6. hormones | 13. testes |
| 7. bronchi | 14. ovaries |

1.3 Use Medical Words

Divide Medical Words

- | | | |
|--------|-------------|-------|
| 1. | langu/o- | -age |
| 2. | medic/o- | -al |
| 3. | etym/o- | -logy |
| 4. bi- | later/o- | -al |
| 5. | cardi/o- | -ac |
| 6. | intestin/o- | -al |

- | | | | |
|-----|------------|----------|------|
| 7. | muscul/o- | -ar | |
| 8. | uter/o- | -ine | |
| 9. | urin/o- | -ary | |
| 10. | digest/o- | -ive | |
| 11. | peri- | cardi/o- | -al |
| 12. | hyper- | tens/o- | -ion |
| 13. | anti- | bi/o- | -tic |
| 14. | cardi/o- | -megaly | |
| 15. | tonsill/o- | -ectomy | |

Build Medical Words

- | | | |
|----|--------|-------------|
| 1. | -ive | digestive |
| 2. | -ous | venous |
| 3. | -ics | obstetrics |
| 4. | -ation | urination |
| 5. | -itis | tonsillitis |
| 6. | -pathy | arthropathy |
| 7. | -scopy | gastroscopy |

Spell Medical Words

- | | |
|-----------------|----------------|
| 1. cardiac | 5. tonsillitis |
| 2. subcutaneous | 6. urination |
| 3. mammography | 7. venous |
| 4. tachycardia | |

Pronounce and Spell Medical Words

- | | |
|----------------|-----------------|
| 1. cardiac | 4. neurology |
| 2. urination | 5. tonsillitis |
| 3. intravenous | 6. subcutaneous |

3. right lumbar region
4. umbilical region
5. right inguinal region
6. left hypochondriac region
7. left lumbar region
8. left inguinal region
9. hypogastric region
10. right upper quadrant
11. left upper quadrant
12. right lower quadrant
13. left lower quadrant

B. Give the Meaning of Combining Forms

1. back; dorsum
2. abdomen
3. before; front part
4. tailbone
5. hollow space
6. cell
7. head
8. cartilage
9. structure that encircles like a crown
10. cranium; top part of the skull
11. cell
12. away from the center or point of origin
13. outside
14. front
15. stomach
16. below
17. groin
18. inside
19. side
20. lower back
21. middle
22. hip bone; pelvis; renal pelvis
23. physical function
24. back part
25. near the center or point of origin
26. four
27. front to back
28. backbone; spine
29. above
30. chest; thorax
31. cut; layer; slice
32. navel; umbilicus
33. abdomen; front

Chapter 2: Health Care Today

2.1 Practice Laps

A. Label Structures

Body Directions

- | | |
|-----------------------|-------------|
| 1. posterior (dorsal) | 4. lateral |
| 2. anterior (ventral) | 5. proximal |
| 3. medial | 6. distal |

Body Cavities

- | | |
|--------------------|---------------------|
| 1. cranial cavity | 4. diaphragm |
| 2. spinal cavity | 5. abdominal cavity |
| 3. thoracic cavity | 6. pelvic cavity |

Body Regions

1. right hypochondriac region
2. epigastric region

2.2 Practice Laps

A. Give the Meaning of Combining Forms

1. medicine
2. time
3. impart; transmit
4. present at birth
5. cause of disease
6. increase; provoke
7. bend; break up
8. arising from; produced by
9. gene
10. creation; production
11. knowledge
12. genetic inheritance
13. medical treatment; physician
14. individual; unknown
15. disease within
16. new
17. hospital
18. nourishment
19. disease
20. formation; growth
21. prevent
22. recover
23. send back
24. operative procedure
25. collection of symptoms
26. boundary; end; word
27. therapy; treatment

B. Build Medical Words

- | | |
|----------|-------------|
| 1. -logy | etiology |
| 2. -ic | symptomatic |
| 3. -gen | pathogen |
| 4. -ery | surgery |
| 5. -al | congenital |
| 6. -ic | therapeutic |
| 7. -ary | hereditary |
| 8. -ious | infectious |

2.3 Practice Laps

A. Give the Meaning of Combining Forms

1. medicine
2. heart
3. secrete

4. tooth
5. skin
6. innermost; within
7. intestine
8. stomach
9. genitalia
10. old age
11. female; woman
12. blood
13. medical treatment; physician
14. immune response
15. skin
16. inside
17. intestine
18. larynx; voice box
19. lymph; lymphatic system
20. muscle
21. birth
22. new
23. nerve
24. nerve
25. pregnancy and childbirth
26. mass; tumor
27. eye
28. straight
29. ear
30. child
31. drug; medicine
32. produce
33. mind
34. lung
35. forearm bone; radius; x-ray
36. skeleton
37. breathe; coil
38. urinary system; urine
39. urinary system; urine
40. blood vessel

B. Build Medical Words

- | | |
|-----------|---------------|
| 1. -logy | pharmacology |
| 2. -istry | dentistry |
| 3. -ary | integumentary |
| 4. -atic | lymphatic |
| 5. -ics | obstetrics |
| 6. -iatry | psychiatry |

2.4–2.7 Practice Laps

A. Give the Meaning of Combining Forms

- | | |
|------------------------|-------------------------|
| 1. study of; word | 8. feeling; touching |
| 2. walking | 9. tapping |
| 3. accessory; servant | 10. physical function |
| 4. listening | 11. operative procedure |
| 5. give ability | 12. technical skill |
| 6. look at | 13. distance |
| 7. reduce the severity | 14. treatment |

B. Build Medical Words

- | | |
|-----------|--------------|
| 1. -eon | surgeon |
| 2. -ist | therapist |
| 3. -ive | palliative |
| 4. -ation | auscultation |
| 5. -ation | consultation |

- | | | |
|---------|--------------|------|
| 5. pro- | gnos/o- | -sis |
| 6. re- | fract/o- | -ory |
| 7. | surg/o- | -ery |
| 8. | therapeut/o- | -ic |

Build Medical Words

- | | |
|----------|-------------|
| 1. -al | congenital |
| 2. -gen | pathogen |
| 3. -ic | therapeutic |
| 4. -ery | surgery |
| 5. -logy | etiology |
| 6. -ious | infectious |
| 7. -ary | hereditary |

2.3 Medical Specialties and Specialists

Matching Exercise

12, 11, 9, 1, 5, 14, 10, 3, 2, 13, 7, 4, 6, 8

Fill in the Blank

- | | |
|-----------------|------------------|
| 1. obstetrician | 3. dermatologist |
| 2. orthopedist | 4. gynecologist |

Pronounce and Spell Medical Words

- | | |
|---------------|---------------|
| 1. cardiology | 4. gynecology |
| 2. neurology | 5. geriatrics |
| 3. pediatrics | 6. psychiatry |

2.4–2.5 Healthcare Professionals and Settings

Matching Exercise

4, 5, 6, 1, 7, 2, 3, 9, 8

True or False Exercise

- | | |
|------|------|
| 1. F | 5. F |
| 2. T | 6. F |
| 3. T | 7. T |
| 4. F | |

Divide Medical Words

- | | | |
|--------|------------|--------|
| 1. | palliat/o- | -ive |
| 2. re- | habilit/o- | -ation |
| 3. | ambulat/o- | -ory |
| 4. | physi/o- | -ician |
| 5. | therap/o- | -ist |

2.6–2.7 Physical Examination and Electronic Health Records

Matching Exercise

3, 5, 6, 2, 1, 4

Chapter Review Exercises: Chapter 2

Dive In: Medical Language Exercises

2.1 The Body in Health

Matching Exercise

6, 8, 9, 7, 10, 4, 2, 1, 5, 3

Circle Exercise

- | | |
|-------------|-------------------|
| 1. thoracic | 3. left and right |
| 2. distal | 4. dorsal supine |

True or False Exercise

- | | | |
|------|------|------|
| 1. F | 2. T | 3. T |
|------|------|------|

2.2 The Body in Disease

Matching Exercise

10, 8, 7, 1, 6, 2, 3, 9, 5, 4

Circle Exercise

- | | |
|---------------|-----------------|
| 1. etiology | 3. exacerbation |
| 2. refractory | 4. prognosis |

True or False Exercise

- | | | | |
|------|------|------|------|
| 1. T | 2. F | 3. T | 4. F |
|------|------|------|------|

Divide Medical Words

- | | | |
|--------|-------------|--------|
| 1. | remiss/o- | -ion |
| 2. a- | symptomato- | -ic |
| 3. de- | gener/o- | -ative |
| 4. | nosocomi/o- | -al |

True or False Exercise

1. T 2. T 3. F 4. F

Fill in the Blank Exercise

1. It can be accessed by more than one healthcare professional at a time.
2. It cannot be lost or damaged.
3. It can be retrieved quickly.

Define Abbreviations

1. Health Insurance Portability and Accountability Act
2. blood pressure
3. chief complaint
4. diagnosis
5. emergency department
6. electronic patient record
7. history and physical
8. intensive care unit
9. nurse practitioner
10. primary care provider
11. physical therapy
12. registered nurse
13. skilled nursing facility
14. temperature, pulse, respirations

Immerse Yourself: Introduction to Medical Reports

You Create the Electronic Health Record

- | | |
|-------------------|----------------|
| 1. gynecology | 6. pulmonology |
| 2. obstetrics | 7. neonatology |
| 3. otolaryngology | 8. radiology |
| 4. neurologist | 9. orthopedics |
| 5. dermatology | |

Chapter 3: Dermatology

3.1 Practice Laps

A. Label Structures

Skin and Subcutaneous Tissues

1. hair shaft
2. pore
3. sebaceous gland
4. sudoriferous gland duct
5. vein
6. artery

7. nerve
8. sudoriferous gland
9. epidermis
10. dermis
11. hair follicle
12. subcutaneous tissue

Nail

- | | |
|--------------|----------------|
| 1. nail bed | 4. lunula |
| 2. nail root | 5. nail plate |
| 3. cuticle | 6. finger bone |

B. Give the Meaning of Combining Forms

1. follicle
2. fat
3. alkaline; base of a structure
4. fibers that hold together
5. skin
6. skin
7. skin
8. skin
9. skin
10. flexing; stretching
11. stand up
12. away from; external; outward
13. bear
14. leaf
15. saclike structure
16. sweat
17. skin
18. cornea; hard, fibrous protein
19. fat; lipid
20. moon
21. black
22. fingernail; toenail
23. bear; carry; range
24. hair
25. oil; sebum
26. breathe; coil
27. scalelike cell
28. sweat
29. cellular layer
30. hair
31. fingernail; toenail

C. Build Medical Words

- | | |
|---------|---------|
| 1. -al | ungual |
| 2. -cle | cuticle |

- 3. -gen collagen
- 4. -ose adipose
- 5. -cyte melanocyte
- 6. -ous cutaneous
- 7. -ous sebaceous
- 8. -cyte lipocyte
- 9. -ary integumentary
- 10. -ula lunula
- 11. -in melanin

3.2 Practice Laps

A. Give the Meaning of Combining Forms

- 1. defend; protect
- 2. skin
- 3. same
- 4. hospital
- 5. control
- 6. feeling
- 7. put together
- 8. heat

B. Build Medical Words

- 1. -al nosocomial
- 2. -ation sensation
- 3. -tome dermatome
- 4. -stasis homeostasis

3.3 Practice Laps

A. Give the Meaning of Combining Forms

- 1. body as a whole
- 2. scrape off
- 3. rays of the sun
- 4. white
- 5. blood vessel; lymphatic vessel
- 6. cancer
- 7. cancer
- 8. cell
- 9. bruising
- 10. blue
- 11. skin
- 12. blood in the tissue
- 13. redness
- 14. feeling; sensation
- 15. take out skin
- 16. splitting
- 17. gangrene
- 18. blood
- 19. blood
- 20. sweat

- 21. hairy
- 22. jaundice
- 23. jaundice
- 24. tumor
- 25. cornea; hard, fibrous protein
- 26. tearing
- 27. fat; lipid
- 28. cancer
- 29. fungus
- 30. dead body; dead tissue
- 31. new
- 32. fingernail; toenail
- 33. elevated structure
- 34. lice
- 35. pigment
- 36. bear; carry; region
- 37. itching
- 38. itching
- 39. nose
- 40. connective tissue
- 41. hard; sclera
- 42. oil; sebum
- 43. old age
- 44. sun
- 45. scalelike cell
- 46. blood vessel; vas deferens
- 47. bladder; fluid-filled sac
- 48. fluid-filled sac
- 49. dry

B. Build Medical Words

- 1. -iasis psoriasis
- 2. -osis pediculosis
- 3. -itis dermatitis
- 4. -oma lipoma
- 5. -osis necrosis
- 6. -ia alopecia
- 7. -plasm neoplasm
- 8. -oma melanoma
- 9. -cle vesicle
- 10. -osis cyanosis
- 11. -rrhage hemorrhage
- 12. -ism hirsutism
- 13. -ous erythematous
- 14. -derma xeroderma

3.4 Practice Laps

A. Give the Meaning of Combining Forms

1. skin
2. allergy
3. skin
4. oozing fluid
5. immune response
6. tongue
7. affected by; sensitive to

3.5 Practice Laps

A. Give the Meaning of Combining Forms

1. scrape off
2. other; strange
3. self
4. living organism; living tissue
5. eyelid
6. cut
7. cortex; outer region
8. cold
9. skin
10. skin
11. skin
12. dry up
13. electricity
14. feeling; sensation
15. spark of electricity
16. fungus
17. fat; lipid
18. one millionth; small
19. light
20. itching
21. wrinkle
22. cut
23. operative procedure
24. specific area
25. virus

B. Build Medical Words

1. -opsy biopsy
2. -plasty dermatoplasty
3. -ectomy lipectomy
4. -ation fulguration
5. -graft autograft
6. -ectomy rhytidectomy
7. -tome dermatome

Chapter Review Exercises: Chapter 3

Dive In: Medical Language Exercises

3.1 Anatomy

Matching Exercise

5, 4, 9, 7, 6, 8, 1, 3, 2

Circle Exercise

- | | |
|-------------|----------------|
| 1. nail bed | 4. exfoliation |
| 2. keratin | 5. nail |
| 3. hair | |

True or False Exercise

- | | | | |
|------|------|------|------|
| 1. F | 2. F | 3. T | 4. F |
|------|------|------|------|

Divide Medical Words

- | | | |
|---------|---------------|--------|
| 1. dia- | phor/o- | -esis |
| 2. | integument/o- | -ary |
| 3. | melan/o- | -cyte |
| 4. | derm/o- | -al |
| 5. ex- | foli/o- | -ation |
| 6. | coll/a- | -gen |
| 7. | cut/i- | -cle |
| 8. | adip/o- | -ose |
| 9. sub- | cutane/o- | -ous |
| 10. | lip/o- | -cyte |

Pronounce and Spell Medical Words

- | | |
|----------------|-----------------|
| 1. cutaneous | 6. ungual |
| 2. epidermal | 7. subcutaneous |
| 3. melanocyte | 8. adipose |
| 4. sebaceous | 9. lipocyte |
| 5. diaphoresis | |

3.2 Physiology

Matching Exercise

4, 5, 6, 1, 2, 3

True or False Exercise

- | | |
|------|------|
| 1. T | 4. T |
| 2. F | 5. F |
| 3. T | 6. T |

Divide Medical Words

- | | |
|----------------|---------|
| 1. sens/o- | -ation |
| 2. derm/a- | -tome |
| 3. home/o- | -stasis |
| 4. nosocomi/o- | -al |

Pronounce and Spell Medical Words

- | | |
|---------------|---------------------|
| 1. protection | 3. thermoregulation |
| 2. nosocomial | 4. homeostasis |

3.3 Diseases

Matching Exercise

6, 9, 1, 10, 12, 4, 11, 3, 5, 2, 8, 7

Circle Exercise

- | | |
|--------------|-------------------|
| 1. papule | 6. pustule |
| 2. vesicle | 7. eschar |
| 3. cyst | 8. feet |
| 4. dermatome | 9. jaundice |
| 5. flat | 10. onychomycosis |

True or False Exercise

- | | |
|------|------|
| 1. F | 5. F |
| 2. F | 6. F |
| 3. T | 7. T |
| 4. T | |

Plural Noun and Adjective Exercise

- | | |
|---------------|--------------------------|
| 1. bullae | |
| 2. cancers | cancerous (or) malignant |
| 3. | cyanotic |
| 4. | diaphoretic |
| 5. ecchymoses | |
| 6. | erythematous |
| 7. | gangrenous |
| 8. | necrotic |
| 9. | pruritic |
| 10. vesicles | vesicular |

Divide Medical Words

- | | | |
|------------|--------------|----------|
| 1. dia- | phor/o- | -esis |
| 2. an- | esthes/o- | -ia |
| 3. an- | hidr/o- | -osis |
| 4. an- | icter/o- | -ic |
| 5. de- | pigment/o- | -ation |
| 6. | erythemat/o- | -ous |
| 7. extra- | vas/o- | -ation |
| 8. | hem/o- | -rrhage |
| 9. | hemat/o- | -oma |
| 10. | hirsut/o- | -ism |
| 11. | immun/o- | -therapy |
| 12. intra- | derm/o- | -al |
| 13. | ne/o- | -plasm |
| 14. | pedicul/o- | -osis |
| 15. | psor/o- | -iasis |
| 16. | sarc/o- | -oma |

- | | | |
|----------|----------|--------|
| 17. sub- | lingu/o- | -al |
| 18. | xer/o- | -derma |

Pronounce and Spell Medical Words

- | | |
|-----------------|------------------|
| 1. laceration | 6. onychomycosis |
| 2. cicatrix | 7. polydactyly |
| 3. erythematous | 8. pruritus |
| 4. hemangioma | 9. psoriasis |
| 5. neoplasm | 10. vitiligo |

English and Medical Word Equivalents Exercise

- senile lentigo
- alopecia
- decubitus ulcer (or pressure ulcer)
- comedo
- abrasion
- eczema
- onychomycosis
- pediculosis
- scabies
- nevus
- tinea capitis
- verruca

3.4 Laboratory and Diagnostic Procedures

Matching Exercise

3, 6, 2, 4, 1, 5

Divide Medical Words

- | | | |
|-----------|-------------|----------|
| 1. | sensitiv/o- | -ity |
| 2. intra- | derm/o- | -al |
| 3. | allerg/o- | -gen |
| 4. epi- | cutane/o- | -ous |
| 5. | allerg/o- | -ist |
| 6. | immun/o- | -therapy |

Pronounce and Spell Medical Words

- | | |
|------------|----------------|
| 1. Tzanck | 3. sensitivity |
| 2. exudate | 4. intradermal |

3.5 Medical Procedures, Drugs, and Surgical Procedures

Matching Exercise

2, 6, 7, 5, 3, 4, 1, 8

Circle Exercise

- | | |
|-----------------|--------------------------|
| 1. debridement | 5. incisional biopsy |
| 2. curet | 6. incision and drainage |
| 3. intradermal | 7. antifungal drugs |
| 4. rhytidectomy | 8. laceration |

Chapter 2: Health Care Today

ANSWER KEY

Medical Language —It All Starts with Word Parts

Complete the worksheet without the use of your textbook or other materials. Afterward, use your textbook to identify the correct answer.

- | | |
|------------------|---------------------|
| 1. abdomin/o- | abdomen |
| 2. antero/o- | before; front part |
| 3. caud/o- | tail bone |
| 4. extern/o- | outside |
| 5. lumb/o- | lower back |
| 6. spin/o- | backbone; spine |
| 7. congenit/o- | present at birth |
| 8. heredit/o- | genetic inheritance |
| 9. idi/o- | individual; unknown |
| 10. infect/o- | disease within |
| 11. prevent/o- | prevent |
| 12. termin/o- | boundary; end; word |
| 13. therapeut/o- | therapy; treatment |
| 14. dermat/o- | skin |
| 15. gastr/o- | stomach |
| 16. hemat/o- | blood |
| 17. intestin/o- | intestine |

18. pharmac/o-	drug; medicine
19. vascul/o-	blood vessel
20. surg/o-	operative procedure
21. therap/o-	treatment
22. inspect/o-	look at
23. nos/o-	disease
24. radi/o-	forearm bone; radiation; x rays
25. laryng/o-	larynx; voice box

Medical Language — Pronouncing, Spelling, and Dissecting

Use the pronunciations to correctly spell the medical word. Then rewrite the medical word and dissect it into its word parts.

See-and-Say Pronunciation

Spelling

Dissection

1. AN-ah-TAW-mih-kal

anatomical

ana- tom/o -ical

2. KAR-dee-AW-loh-jee

cardiology

cardi/o -logy

3. SEF-ah-lad

cephalad

cephal/ -ad

4. EP-ih-GAS-trik

epigastric

epi- gastr/ -ic

5. HY-poh-CON-dree-ak

hypochondriac

hypo- chondr/ -iac

6. HY-poh-GAS-trik

hypogastric

hypo- gastr/ -ic

7. ING-gwih-nal

inguinal

inguin/ -al

8. LUM-bar

lumbar

lumb/ -ar

9. MUS-kyoo-lar

muscular

muscul/o -ar

10. PRAWK-sih-mal

proximal

proxim/ -al

11. SAJ-ih-tal

sagittal

sagitt/ -al

12. um-BIL-ih-kal

umbilical

umbilic/ -al

13. VEN-tral

ventral

ventr/ -al

Medical Language — Body Directions

Fill in the blanks to complete the sentences.

1. Going in a cephalad direction from the lips brings you to the next facial feature of the nose.
2. Going inferiorly from the knee, the next joint you come to is the ankle.
3. The abdominal wall is located anterior or superficial to the intestines.
4. Sawing your body into top and bottom halves would correspond to dividing it with a transverse plane.
5. Going from the elbow to the shoulder is moving in a proximal direction.
6. Moving your arm sideways away from your body is moving it in a lateral direction.
7. Putting your leg in the air behind you like an ice skater or dancer is moving it in both a posterior and a superior direction.
8. Going from the elbow to the fingers is moving in a distal direction.
9. Moving from inside your body toward your back is moving in a/an dorsal, posterior, or external direction.
10. Moving your arm forward to point at something in front of you is moving it in a/an anterior or ventral direction.
11. The intestines are located posterior or internal to the abdominal wall.
12. The lips are located anterior to the teeth.
13. Swinging your arm backward is moving it in a posterior direction.
14. Raising your hand to answer a question is moving it in a superior direction.
15. Your spinal column is medial compared to your shoulders.