

# Chapter 4 Pulmonology

## Chapter 4 Assignments

1. Read Chapter 4, "Pulmonology" in the text "Medical Language: Immerse Yourself".
2. Complete **ONLY** the **textbook exercises listed below by the due date** for **5 points** toward your grade. (The other exercises do NOT need to be completed).  
Chapter exercises will be checked on the due dates on the class Schedule. Homework turned in after the due date will receive **50%** credit.

**Textbook Exercises** – Complete **ONLY** the following:

Labeling	Labeling, p 161
Building Medical Words	Combining Forms, p 162
	Combining Form and Suffix, p 163
	Prefix p 164
	Multiple Combining Forms and Suffix, p 164
Building Medical Words	Combining Forms, p 192
	Multiple Combining Forms and Suffix, p 192
	Combining Form and Suffix, p 193-4
	Related Combining Forms, p 194
	Prefix, p 194
Abbreviations	Matching, p 195

1. **Pearson MyMedicalTerminologyLab Website Assignments**  
Each of these exercises must be completed to **90% or greater to get credit** for the activities. You may repeat online activities **as many times as necessary** in order to obtain 90%.  
You **are allowed** to consult your textbook and medical dictionary for homework assignments.  
Each chapter must be **completed by the due date** for full credit (**5 points for required activities and 2 points for extra credit**).  
**"Save and Exit"** must be clicked before leaving each activity to be added to the Gradebook. View your grades in the Gradebook on the MyMedicalTerminologyLab Course Home page.

**Required** online activities at: MyMedicalTerminologyLab:

**"Matching"**

**"Word Surgery"**

See directions in Chapter 1 Assignments / Word List

**"Spelling Challenge"**

**Optional** (extra credit)

**"Popping Words"**

## Chapter 4 Study Guide:

1. **Review all previous word lists and study guides as we move ahead through the remaining course. You may find questions on a test from a previous chapter.** You will need to know all of these terms from memory. The midterm and final exam are "closed book" exams.
2. Learn the combining forms, prefixes, suffixes and any additional medical terms from the Word List below. Recognize, pronounce, build, and correctly spell medical terms related to the above system.

## Chapter 4 Word List

### Combining Forms

Combining Form	Medical Meaning	Combining Form	Medical Meaning
aden/o-	gland	metabol/o-	change; transformation
alveoli/o-	alveolus (air sac)	muc/o-	mucus
anthrac/o-	coal	mucos/o-	mucous membrane
arteri/o-	artery	nas/o-	nose
asbest/o-	asbestos	obstruct/o-	blocked by a barrier
aspir/o-	to breathe in; to suck in	or/o-	mouth
asthm/o-	asthma	orth/o-	straight
atel/o-	incomplete	ox/i-	oxygen
auscult/o-	listening	ox/o-	oxygen
bacteri/o-	bacterium	ox/y-	oxygen; quick
bi/o-	life; living organisms; living tissue	pariet/o-	wall of a cavity
bronch/o-	bronchus	paroxysm/o-	sudden, sharp attack
bronchi/o-	bronchus	pector/o-	thorax (chest)
bronchiol/o-	bronchiole	percuss/o-	tapping
capn/o-	carbon dioxide	pharyng/o-	pharynx (throat)
carbox/y-	carbon monoxide	phil/o-	attraction to; fondness for
carcin/o-	cancer	phren/o-	diaphragm; mind
cardi/o-	heart	phys/o-	inflate; distend; grow
cellul/o-	cell	pleur/o-	pleura (lung membrane)
chron/o-	time	pne/o-	breathing
cocc/o-	spherical bacterium	pneum/o-	lung; air
coni/o-	dust	pneumon/o-	lung; air
cortic/o-	cortex (outer region)	pulmon/o-	lung
cost/o-	rib	purul/o-	pus
cyan/o-	blue	py/o-	pus
cyst/o-	bladder; fluid-filled sac; semisolid cyst	radi/o-	radius (forearm bone); x-rays; radiation
diaphragmat/o-	diaphragm	resect/o-	to cut out; remove
dilat/o-	dilate; widen	resuscit/o-	revive; raise up again
effuse/o-	a pouring out	sensiv/o-	affected by; sensitive to
embol/o-	embolus (occluding plug)	sept/o-	septum (dividing wall)
fibr/o-	fiber	spir/o-	breathe; a coil
fus/o-	pouring	steth/o-	chest
gen/o-	arising from; produced by	therap/o-	treatment
glob/o-	shaped like a globe; comprehensive	thorac/o-	thorax (chest)
glott/o-	glottis (of the larynx)	trache/o-	trachea (windpipe)
hal/o-	breathe	tract/o-	pulling
hem/o-	blood	tubercul/o-	nodule; tuberculosis
hil/o-	hilum (indentation in an organ)	tuber/o-	nodule
infect/o-	disease within	tub/o-	tube
laryng/o-	larynx (voice box)	turbin/o-	scroll-like structure; turbinate
kal/i-	potassium	tuss/o-	cough
lingu/o-	tongue	ventil/o-	movement of air
lob/o-	lobe of an organ	vir/o-	virus
log/o-	word; the study of	viscer/o-	large internal organs
malign/o-	intentionally causing harm; cancer		

### Suffixes

Suffix	Medical Meaning	Suffix	Medical Meaning
-al	pertaining to	-ion	action; condition
-ant	pertaining to	-ism	process; disease from a specific cause
-ar	pertaining to	-ist	one who specializes in
-ary	pertaining to	-isy	condition of inflammation or infection
-ate	composed of; pertaining to	-itis	inflammation of; infection of
-ator	person or thing that produces or does	-ity	state; condition
-ated	pertaining to a condition; composed of	-ive	pertaining to
		-logy	the study of
-atic	pertaining to	-meter	instrument used to measure
-ation	a process; being or having	-metry	process of measuring

-atory	pertaining to	-ole	small thing
-centesis	procedure to puncture	-oma	tumor; mass
-cle	small thing	-or	person or thing that produces or does
-drome	a running	-osis	condition; abnormal condition; process
-eal	pertaining to	-pharynx	pharynx (throat)
-ectasis	condition of dilation	-pnea	breathing
-ectomy	surgical excision	-ptysis	abnormal condition of coughing up
-ema	condition	-scope	instrument used to examine
-emia	condition of the blood; substance in the blood	-scopy	process of using an instrument to examine
-ent	pertaining to	-spasm	sudden, involuntary muscle contraction
-graphy	process of recording	-steroid	steroid
-ia	condition; state; thing	-stomy	surgically created opening
-ic	pertaining to	-thorax	thorax (chest)
-in	a substance	-tic	pertaining to
		-tomy	process of cutting or making an incision

## Prefixes

Prefix	Medical Meaning	Prefix	Medical Meaning
a-	away from; without	ex-	out; away from
an-	without; not	hyper-	above; more than normal
anti-	against	hypo-	below; deficient
brady-	slow	in-	in; within; not
circum-	around	inter-	between
dys-	painful; difficult; abnormal	pan-	all
em-	in	per-	through; throughout
endo-	innermost; within	re-	again and again; backward; unable to
epi-	upon; above	syn-	together
eu-	normal; good	tachy-	fast

## Additional Medical Terms (know the highlighted terms)

Term	Medical Meaning
alveolus (pl. alveoli)	a hollow sphere of cells that expands and contracts with each breath
Ambu bag	a hand-held device that is used to manually breathe for the patient on a temporary basis
anoxic	a patient with a complete lack of oxygen in the arterial blood and body tissues
apex (pl. apices)	the rounded top of each lung
asphyxia	an abnormally high level of carbon dioxide and an abnormally low level of oxygen
asthma	hyperactivity of the bronchi and bronchioles with bronchospasm
atelectatic	incomplete expansion or collapse of part or all of a lung due to mucus, tumor, trauma or a foreign body that blocks the bronchus
bronchus (pl. bronchi)	either of the two primary divisions of the trachea that lead respectively into the lungs
cancer	any type of malignant growth or tumor, caused by abnormal and uncontrolled cell division
cannula	a small tube for insertion into a body cavity, duct, or vessel
carbon dioxide	a colorless, odorless, incombustible gas formed during respiration and organic decomposition
cilia	small hairs that flow in coordinated waves to move mucus and trapped particles toward the throat
concha (pl. conchae)	any of various structures, such as the external ear, that resemble a shell in shape.
diaphragm	a sheet of skeletal muscle, lies along the inferior border of the thoracic cavity
edema	fluid collection in tissue
embolus	a blood clot or fat globule in the circulatory system
epiglottis	a lid-like structure
Heimlich maneuver	procedure to assist a choking victim with an airway obstruction
hilum (pl. hila)	an indentation on the medial surface of the lung where a bronchus enters the lung
hypoxic	very low level of oxygen in the cells
influenza	acute viral infection of the upper and lower respiratory system with fever, aches and a cough
larynx	voice box
Legionnaire's disease	severe, sometimes fatal, bacterial infection with flu-like symptoms, aches and fever
<i>Legionella pneumophila</i>	bacteria responsible for Legionnaire's disease
lobe	large divisions of the lung, whose dividing lines are visible on the outer surface of the lung
lumen	the cavity of a tubular organ or part, as in <i>lumen</i> of a blood vessel
Mantoux	test to determine if a patient has been exposed to tuberculosis
mediastinum	an irregularly shaped area that contains the trachea, heart and esophagus
mucosa	a mucous membrane that humidifies the air and produces mucus
oxygen	an element, normally a gas, that makes up about one-fifth of the atmosphere of the Earth

parenchyma	the functional part of the lung
pharynx	throat
pleura	the thin serous membrane that envelops each lung and folds back to make a lining for the chest cavity
<i>Pneumocystis jiroveci</i>	a fungus causing severe pneumonia
rales	irregular crackling or bubbling sounds during inspiration
rhonchi	humming, whistling, or snoring sounds during inspiration or expiration
Reye's syndrome	vomiting, seizures, liver failure, sometimes fatal condition from the use of aspirin to treat the flu
septum	a wall or partition
sputum	mucus production
status asthmaticus	a prolonged, extremely severe, life-threatening asthma attack
stridor	high-pitched, harsh, crowing sound due to edema or obstruction in the trachea or larynx
surfactant	a protein-fat compound that reduces surface tension and keeps the walls of the alveolus from collapsing with each exhalation
thorax	a bony cage that consists of the sternum, the ribs and spinal column
trachea	windpipe
wheezes	high-pitched whistling or squeaking sounds during inspiration or expiration

### Abbreviations (know the highlighted abbreviations)

Abbreviation	Medical Meaning	Abbreviation	Medical Meaning
ABG	arterial blood gasses	MDI	metered-dose inhaler
AFB	acid-fast bacillus	O <sub>2</sub>	oxygen
A&P	auscultation and percussion	PA	posteroanterior (view on chest x-ray)
AP	anterioposterior (view on chest x-ray)	PCO <sub>2</sub>	partial pressure of carbon dioxide (also p CO <sub>2</sub> )
ARDS	adult respiratory distress syndrome, acute respiratory distress syndrome	PCP*	<i>pneumocystis carinii</i> pneumonia
BS	breath sounds	PFT	pulmonary function test
CAS	culture and sensitivity	PND	paroxysmal nocturnal dyspnea
CF	cystic fibrosis	PO <sub>2</sub>	partial pressure of oxygen (also pO <sub>2</sub> )
CO	carbon monoxide	PPD	protein purified derivative (TB test), packs per day (of cigarettes)
CO <sub>2</sub>	carbon dioxide	RA	room air (no supplemental oxygen)
COPD	chronic obstructive pulmonary disease	RDS	respiratory distress syndrome
CPAP	continuous positive airway pressure	RLL	right lower lobe (of the lung)
CPR	cardiopulmonary resuscitation	RML	right middle lobe (of the lung)
CXR	chest x-ray	RRT	registered respiratory therapist
DOE	dyspnea on exertion	RUL	right upper lobe (of the lung)
ETT	endotracheal tube	SARS	severe acute respiratory syndrome
FEV <sub>1</sub>	forced expiratory volume (in one second)	SIDS	sudden infant death syndrome
FiO <sub>2</sub>	fraction (percentage) of inspired oxygen	SOB	shortness of breath
FVC	forced vital capacity	TB	tuberculosis
HMD	hyaline membrane disease	TPR	temperature, pulse and respiration
LLL	left lower lobe (of the lung)	URI	upper respiratory infection
LUL	left upper lobe (of the lung)	V/Q	ventilation-perfusion (scan)

### CHAPTER 4 Pronunciation Checklist

Read each word and its pronunciation. Practice pronouncing each word.

Pronunciation help can be found at: <http://www.merckmanuals.com/home/resources/pronunciations/index/a.html> or <http://dictionary.reference.com/>

- |  |  |
|--|--|
| <input type="checkbox"/> adenocarcinoma (AD-eh-noh-KAR-sih-NOH-mah)                        | <input type="checkbox"/> antitussive drug (AN-tee-TUS-iv DRUHG)                |
| <input type="checkbox"/> alveolar (al-VEE-oh-lar)  | <input type="checkbox"/> apex (AA-peks)  |
| <input type="checkbox"/> alveoli (al-VEE-oh-lie)   | <input type="checkbox"/> apices (AA-pih-sees)                                  |
| <input type="checkbox"/> alveolus (al-VEE-oh-lus)  | <input type="checkbox"/> apnea (AP-nee-ah)                                     |
| <input type="checkbox"/> Ambu bag (AM-boo BAG)   | <input type="checkbox"/> apneic (AP-nee-ik)                                    |
| <input type="checkbox"/> anoxia (an-AWK-see-ah)  | <input type="checkbox"/> arterial blood gases (ar-TEER-ee-al BLUD GAS-ez)      |
| <input type="checkbox"/> anoxic (an-AWK-sik)   | <input type="checkbox"/> asbestosis (AS-bes-TOH-sis)                           |
| <input type="checkbox"/> anthracosis (AN-thrah-KOH-sis)                                    | <input type="checkbox"/> asphyxia (as-FIK-see-ah)                              |
| <input type="checkbox"/> antibiotic drug (AN-tee-by-AWT-ik DRUHG) (AN-tih-by-AWT-ik DRUHG) | <input type="checkbox"/> aspiration pneumonia (AS-pih-RAY-shun noo-MOH-nee-ah) |
| <input type="checkbox"/> antitubercular drug (AN-tee-too-BER-kyoo-lar DRUHG)               | <input type="checkbox"/> asthma (AZ-mah)                                       |
|  | <input type="checkbox"/> asthmatic (az-MAT-ik)                                 |

- atelectasis (AT-eh-LEK-tah-sis)
- atelectatic (AT-eh-lek-TAT-ik)
- auscultation (AWS-kul-TAY-shun)
- bacterial pneumonia (bak-TEER-ee-al noo-MOH-nee-ah)
- bradypnea (BRAD-ip-NEE-ah)
- bronchi (BRONG-kigh)
- bronchial (BRONG-kee-al)
- bronchiectasis (BRONG-kee-EK-tah-sis)
- bronchiolar (BRONG-kee-OH-lar)
- bronchiole (BRONG-kee-ohl)
- bronchitis (brong-KY-tis)
- bronchodilator drug (BRONG-koh-DY-lay-ter DRUHG)
- bronchopneumonia (BRONG-koh-noo-MOH-nee-ah)
- bronchopulmonary (BRONG-koh-PUL-moh-NAIR-ee)
- bronchoscope (BRONG-koh-skohp)
- bronchoscopy (brong-KAWS-koh-pee)
- bronchospasm (BRONG-koh-spazm)
- bronchus (BRONG-kus)
- cancer (KAN-ser)
- cannula (KAN-yoo-lah)
- carbon dioxide (KAR-bon dy-AWK-side)
- carboxyhemoglobin (kar-BAWK-see-HEE-moh-glohbin)
- carcinoma (KAR-sih-NOH-mah)
- cardiopulmonary (KAR-dee-oh-PUL-moh-NAIR-ee)
- cardiopulmonary resuscitation (KAR-dee-oh-PUL-moh-NAIR-ee ree-SUS-ih-TAY-shun)
- cardiothoracic surgeon (KAR-dee-oh-thoh-RAS-ik SER-jun)
- chronic obstructive pulmonary disease (KRAW-nik awb-STRUK-tiv PUL-moh-NAIR-ee dih-ZEEZ)
- cilia (SIL-ee-ah)
- circumoral cyanosis (SIR-kum-OR-al SY-ah-NOH-sis)
- concha (CON-kah)
- conchae (CON-kee)
- corticosteroid drug (KOR-tih-koh-STAIR-oyd DRUHG)
- costal (KAWS-tal)
- cough (KAWF)
- culture and sensitivity (KUL-chur and SEN-sih-TIV-ih-tee)
- cyanosis (SY-ah-NOH-sis)
- cyanotic (SY-ah-NAWT-ik)
- cystic fibrosis (SIS-tik fy-BROH-sis)
- diaphragm (DY-ah-fram)
- diaphragmatic (DY-ah-frag-MAT-ik)
- dyspnea (DISP-nee-ah)
- dyspneic (DISP-nee-ik)
- effusion (ee-FYOO-zhun)
- emphysema (EM-fih-SEE-mah)
- empyema (EM-py-EE-mah)
- endotracheal intubation (EN-doh-TRAY-kee-al IN-too-BAY-shun)
- epiglottic (EP-ih-GLAWT-ik)
- epiglottis (EP-ih-GLAWT-is)
- eupnea (YOOP-nee-ah)
- eupneic (YOOP-nik)
- exhalation (EKS-hah-LAY-shun)
- expectorant (ek-SPEK-toh-rant)
- expectoration (ek-SPEK-toh-RAY-shun)
- expiration (EKS-pih-RAY-shun)
- external (eks-TER-nal)
- Heimlich maneuver (HYM-lik mah-NOO-ver)
- hemoptysis (hee-MAWP-tih-sis)
- hemothorax (HEE-moh-THOR-aks)
- hila (HY-lah)
- hilar (HY-lar)
- hilum (HY-lum)
- histamine (HIS-tah-meen)
- hypercapnia (HY-per-KAP-nee-ah)
- hypoxemia (HY-pawk-SEE-mee-ah)
- hypoxia (hy-PAWK-see-ah)
- hypoxic (hy-PAWK-sik)
- influenza (IN-floo-EN-zah)
- inhalation (IN-hah-LAY-shun)
- inspiration (IN-spih-RAY-shun)
- intercostal retraction (IN-ter-KAWS-tal ree-TRAK-shun)
- internal (in-TER-nal)
- intubation (IN-too-BAY-shun)
- laryngeal (lah-RIN-jee-al)
- laryngoscope (lah-RING-goh-skohp)
- larynx (LAIR-ingks)
- Legionella pneumophila* (LEE-jeh-NEL-ah NOO-moh-FIL-ee-ah)
- Legionnaires' disease (lee-jen-AIRS dih-ZEEZ)
- leukotriene (LOO-koh-TRY-een)
- lobar (LOH-bar)
- lobe (LOHB)
- lobar pneumonia (LOH-bar noo-MOH-nee-ah)
- lobectomy (loh-BEK-toh-mee)
- lumen (LOO-men)
- malignant (mah-LIG-nant)
- Mantoux test (man-TOO TEST)
- mediastinal (MEE-dee-as-TY-nal)
- mediastinum (MEE-dee-as-TY-num)
- metabolic (MET-ah-BAWL-ik)
- metabolism (meh-TAB-oh-lizm)
- mucosa (myoo-KOH-sah)
- mucosal (myoo-KOH-sal)
- mucous (MYOO-kus)
- mucus (MYOO-kus)
- nasal cavity (NAY-zal KAV-ih-tee)
- obstructive apnea (awb-STRUK-tiv AP-nee-ah)
- opportunistic infection (AWP-or-too-NIS-tik in-FEK-shun)
- orthopnea (or-THAWP-nee-ah)
- orthopneic (or-THAWP-nee-ik)
- oximeter (awk-SIM-eh-ter)
- oximetry (awk-SIM-eh-tree)
- oxygenated (AWK-see-jen-AA-ted)
- oxyhemoglobin (AWK-see-HEE-moh-GLOH-bin)
- panlobar pneumonia (pan-LOH-bar noo-MOH-nee-ah)
- parenchyma (pah-RENG-kih-mah)
- parietal (pah-RY-eh-tal)
- paroxysmal nocturnal dyspnea (PAIR-awk-SIZ-mal nawk-TER-nal DISP-nee-ah)
- pectus excavatum (PEK-tus EKS-kah-VAH-tum)
- perfusion (per-FYOO-zhun)
- pharyngeal (fah-RIN-jee-al)
- pharynx (FAIR-ingks)
- phrenic nerve (FREN-ik NERV)

- pleura (PLOOR-ah)
- pleural effusion (PLOOR-al ee-FYOO-zhun)
- pleurisy (PLOOR-ih-see)
- pleuritic (ploo-RIT-ik)
- pleuritis (ploo-RY-tis)
- pneumococcal pneumonia (NOO-moh-KAW-kal noo-MOH-nee-ah)
- pneumoconiosis (NOO-moh-KOH-nee-OH-sis)
- Pneumocystis jiroveci* (NOO-moh-SIS-tis YEE-roh-VET-zee)
- pneumonectomy (NOO-moh-NEK-toh-mee)
- pneumonia (noo-MOH-nee-ah)
- pneumothorax (NOO-moh-THOR-aks)
- pulmonary (PUL-moh-NAIR-ee)
- pulmonary edema (PUL-moh-NAIR-ee eh-DEE-mah)
- pulmonary embolism (PUL-moh-NAIR-ee EM-boh-lizm)
- pulmonary embolus (PUL-moh-NAIR-ee EM-boh-lus)
- pulmonologist (PUL-moh-NAWL-oh-jist)
- pulmonology (PUL-moh-NAWL-oh-jee)
- purulent (PYOOR-yoo-lent)
- pyothorax (PY-oh-THOR-aks)
- radiography (RAY-dee-AWG-rah-fee)
- rales (RAWLZ)
- resection (ree-SEK-shun)
- respiration (RES-pih-RAY-shun)
- respirator (RES-pih-RAY-tor)
- respiratory therapist (RES-pih-rah-TOR-ee THAIR-ah-pist)
- resuscitation (ree-SUS-ih-TAY-shun)
- retraction (re-TRAK-shun)
- Reye's syndrome (RYZ SIN-droh-m)
- rhonchi (RONG-kigh)
- septal (SEP-tal)
- septum (SEP-tum)
- spirometer (spih-RAWM-eh-ter)
- spirometry (spih-RAWM-eh-tree)
- sputum (SPYOO-tum)
- status asthmaticus (STAT-us az-MAT-ih-kus)
- sternal (STER-nal)
- sternal retraction (STER-nal ree-TRAK-shun)
- sternum (STER-num)
- stethoscope (STETH-oh-skohp)
- stridor (STRY-dor)
- surfactant (ser-FAK-tant)
- tachypnea (TAK-ip-NEE-ah)
- tachypneic (TAK-ip-NEE-ik)
- therapist (THAIR-ah-pist)
- thoracentesis (THOR-ah-sen-TEE-sis)
- thoracic (thoh-RAS-ik)
- thoracic cavity (thoh-RAS-ik KAV-ih-tee)
- thoracotomy (THOR-ah-KAWT-oh-mee)
- thorax (THOR-aks)
- tomography (toh-MAWG-rah-fee)
- trachea (TRAY-kee-ah)
- tracheal (TRAY-kee-al)
- tracheobronchial (TRAY-kee-oh-BRONG-kee-al)
- tracheostomy (TRAY-kee-AWS-toh-mee)
- tracheotomy (TRAY-kee-AW-toh-mee)
- tubercle (TOO-ber-kl)
- tuberculosis (too-BER-kyoo-LOH-sis)
- turbinate (TER-bih-nayt)
- ventilation (VEN-tih-LAY-shun)
- ventilator (VEN-tih-LAY-tor)
- viral pneumonia (VY-ral noo-MOH-nee-ah)
- visceral (VIS-eh-ral)
- wheezes (WHEE-zes)