

**CHAPTER XV**

**RESPIRATORY  
SYSTEM**

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## VOCABULARY

Alveolus: (plural: alveoli)	Air sac in the lung (adj: alveolar)
Apex of the lung: (pl: apices)	Uppermost portion of the lung (adj: apical)
Base of the lung: (Basis)	Lower portion of the lung (pl: bases) (adj: basal; basalis)
Bronchiole: (Bronchiolus) (pl: bronchioli)	One of the smaller subdivisions of the branched bronchial tree
Diaphragm: (Diaphragma) (adj: diaphragmatic)	Muscle separating the thoracic and abdominal cavities. It is the most important muscle of respiration
Exhalation: (Expiration)	Breathing out
Expectorant: (n: expectoration)	An agent that promotes the ejection of mucus or exudates from the lungs, bronchi and trachea
Expectoration:	The act of coughing up and spitting out materials from the lungs, bronchus and trachea
Hilum of the lung: (pl: hilia) (Hilus) (pl: hili)	The region where blood vessels, nerves, lymphatic vessels and bronchi enter or exit the lungs (adj: hilar)
Inhalation: (Inspiration)	Breathing in
Lobar bronchi:	Branches of the primary bronchi that pass to the lobes of the lungs (divisions of the lungs)
Mediastinum: (pl: mediastina) (adj: mediastinal)	The mass of tissues and organs separating the two pleural sacs (trachea, heart, aorta, esophagus and bronchi)
Pleura: (plural: pleurae) (adj: pleural)	The serous membrane investing the lungs (visceral pleura) and lining the thoracic cavity (parietal pleura)
Pleural cavity:	The potential space between the parietal and visceral pleurae

Pneumonia: (Pneumonitis) (adj: pneumonic)	Inflammation of the lungs
Primary bronchi: (Main bronchi) (adj: bronchial)	The right and left main divisions of the trachea (singular: bronchus) Each passes to a separate lung
Segmental bronchi:	Branches of the lobar bronchi that pass to segments of each lobe (divisions of the lobe)
Sputum:	Material expelled from the chest by coughing or clearing the throat
Trachea: (adj: tracheal)	Windpipe (pl: tracheae)

## COMBINING FORMS

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Bronchio__ Broncho__	Bronchus	__genic	Forming	Bronchiogenic (Bronchogenic)	Originating in a bronchus
Bronchio__	Bronchus	__ectasia (ectasis)	Dilatation	Bronchiectasia (bronchiectasis) (adj: Bronchiectatic; bronchiectatic)	Chronic dilatation of the bronchi marked by fetid breath and paroxysmal coughing
Bronchiolo__	Bronchiole	__itis	Inflammation of	Bronchiolitis	Inflammation of the bronchioles
Broncho__ Bronchio__	Bronchus (adj: bronchial)	__cele	Dilatation	Bronchocele (Bronchiocele)	Localized dilatation of a bronchus or bronchiole
Broncho__	Bronchus	constriction	Narrowing	Bronchoconstriction (opp: bronchodilatation)	Narrowing of the lumina of the air passages of the lungs
Broncho__	Bronchus	constrictor	Causing narrowing	Bronchoconstrictor (opp: bronchodilator)	An agent causing narrowing of the lumen of air passage
Broncho__	Bronchus	__gram	Record	Bronchogram	A radiogram obtained by bronchography
Broncho__	Bronchus	__graphy	Act of recording	Bronchography	Radiography of the lung after the instillation of an opaque medium in a bronchus
Broncho__	Bronchus	__plegia	Paralysis	Bronchoplegia	Paralysis of the muscles of the walls of the bronchial tubes
Broncho__	Bronchus	pneumonia	Inflammation of the lungs	Bronchopneumonia (Bronchopneumonitis) (adj: bronchopneumonic)	An inflammation of the lungs that begins in the terminal bronchioles
Broncho__	Bronchus	__itis	Inflammation of	Bronchitis (adj: bronchitic)	Inflammation of bronchus or bronchi
Broncho__ (Bronchio)	Bronchus	__spasm	Sudden involuntary contraction	Bronchospasm (Bronchiospasm)	Spasmodic contraction of the smooth muscles of the bronchi
Broncho__ (Bronchio)	Bronchus	__stenosis	Narrowing	Bronchostenosis (Bronchiostenosis)	Stricture of the caliber of a bronchial tube
Broncho__	Bronchus	__lith	Concretion	Broncholith	Bronchial calculus
Broncho__	Bronchus	__lithiasis	Concretion formation	Broncholithiasis	The presence of bronchololiths in the lumen of tracheobronchial tree

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Eroncho__	Bronchus	__malacia	Softening	Bronchomalacia	Deficiency in the cartilaginous wall of a bronchus
Eroncho__	Bronchus	__scope	A viewing instrument	Bronchoscope (noun: bronchoscopy) (adj: bronchoscopic)	An instrument for inspecting the interior of the tracheobronchial tree
Eroncho__	Bronchus	sinusitis	Inflammation of the paranasal sinuses	Bronchosinusitis	Coexisting infection of the paranasal sinuses and lower respiratory passages
Eroncho__	Bronchus	__rrhagia	Hemorrhage	Bronchorrhagia (bronchostaxis)	Hemorrhage from the bronchi
Eroncho__	Bronchus	__rhea	Discharge	Bronchorrhea	Excessive discharge of mucus from the bronchi
Tracheo__	Trachea	__malacia	Softening	Tracheomalacia	Deficiency in the cartilaginous wall of the trachea
Tussis__ (adj: tussive, tussal)	Cough	Anti__	Against	Antitussive	Preventing or relieving cough

## PREFIXES

PREFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
A__	Not	__pnea	Breathing	Apnea (adj: apneic)	Cessation of breathing
An__	Not	__osmia	Smell	Anosmia	Absence of the sense of smell
An__	Not	Oxia	State of oxygen	Anoxia (adj: anoxic)	Total lack of oxygen
Dys__	Difficult	__pnea	Breathing	Dyspnea (adj: dyspneic)	Difficult or labored breathing; breathlessness; shortness of breath
Endo__	Within	arteritis	Inflammation of an artery	Endoarteritis	Inflammation of the tunica intima of an artery
Endo__	Within	Tracheal	Pertaining to the trachea	Endotracheal	Within or through the trachea
Hyper__	Excess	capno__	Carbon dioxide	Hypercapnia (Hypercarbia) (adj: hypercapnic)	Excess of carbon dioxide (CO <sub>2</sub> ) in the blood
Hyper__	Excess	__pnea	Breathing	Hyperpnea (Polypnea) Hyperventilation (adj: hyperpneic; polypneic)	Abnormal increase in the depth and rate of breathing Opp: Hypopnea
Hyper__	Excess	Oxia	State of oxygen	Hyperoxia (adj: hyperoxic)	An excess of oxygen in the system
Hypo__	Deficiency	capno__	Carbon dioxide	Hypocapnia (adj: hypocapnic) (hypocarbia)	Deficiency of CO <sub>2</sub> in the blood
Hypo__	Deficient	Oxia	State of oxygen	Hypoxia (adj: hypoxic)	Deficiency of oxygen in the tissues
Ortho__	Straight	__pnea	Breathing	Orthopnea (adj: orthopneic)	Dyspnea that is relieved by assuming an upright position
Tachy__	Rapid	__pnea	Breathing	Tachypnea (adj: tachypneic)	Rapid and shallow breathing Opp: Bradypnea

## SUFFIXES

SUFFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
__centesis	Tapping operation	Thoraco__	Thorax	Thoracocentesis (Thoracentesis) (Pleuracentesis) (Pleurocentesis)	Tapping the pleural cavity for aspiration of fluids
__ectomy	Surgical removal	Adenoido__	Adenoids	Adenoidectomy	Excision of the adenoids
__ectomy	Surgical removal	Tonsillo__	Tonsil	Tonsillectomy	Surgical removal of tonsil or tonsils
__itis	Inflammation of	Mediastino__	Mediastinum	Mediastinitis	Inflammation of the mediastinum
__pathy	Disease	Broncho__	Bronchus	Bronchopathy	Any disease of a bronchus
__plasty	Surgical repair	Broncho__	Bronchus	Bronchoplasty	Plastic surgery of a bronchus
__ptysis	Spitting	Hemo__	Blood	Hemoptysis	Spitting of blood from the respiratory tract or lung
__scopy	Viewing with a scope	Mediastino__	Mediastinum	Mediastinoscopy	Viewing the mediastinum with a scope
__spasm	Sudden involuntary contraction	Laryngo__	Larynx	Laryngospasm	Spasmodic closure of the larynx
__stomy	Opening	Broncho__	Bronchus	Bronchostomy	The surgical creation of an opening into a bronchus
__stomy	Opening	Laryngo__	Larynx	Laryngostomy	Surgical creation of an opening in the larynx
__stomy	Opening	Thoraco__	Thorax	Thoracostomy	Surgical creation of an opening into the wall of the chest for drainage
__tomy	Incision	Laryngo__	Larynx	Laryngotomy	Incision of the larynx
__tomy	Incision	Thoraco__	Thorax (pl: thoraces)	Thoracotomy (Pleurotomy)	Surgical incision into the pleural space through the chest wall

**ACRONYMS**

AFB:	Acid Fast Bacilli (organism causing tuberculosis)
COPD	Chronic obstructive Pulmonary Disease
CPR:	Cardiopulmonary Resuscitation
CXR:	Chest X-Ray
DOE:	Dyspnea on Exertion
DPT:	Diphtheria, Pertussis, Tetanus
ICU:	Intensive Care Unit
LLL:	Left lower lobe (of lung)
LUL:	Left upper lobe (of lung)
pCO <sub>2</sub> :	Carbon dioxide partial pressure (Amount of CO <sub>2</sub> in arterial blood )
PFT:	Pulmonary Function Tests
PND:	Paroxysmal Nocturnal Dyspnea
pO <sub>2</sub> :	Oxygen partial pressure (amount of O <sub>2</sub> in arterial blood)
PPD:	Purified Protein Derivative (substance used in a tuberculosis test)
RLL:	Right lower lobe (of lung)
RML:	Right middle lobe (of lung)
RUL:	Right upper lobe (of lung)
SOB:	Shortness of breath
TB:	Tuberculosis
URTI:	Upper Respiratory Tract Infection

## VOCABULARY

Asphyxia: (adj: asphyxial)	A condition due to lack of O <sub>2</sub> in inspired air, resulting in impending or actual cessation of apparent life
Asthma: (adj: asthmatic)	Spasm and narrowing of the bronchi which lead to bronchial airway obstruction
Auscultation: (adj: auscultatory)	Listening to heart, breath, abdominal and fetal heart sounds using a stethoscope
Crepitation: (Crepitus) (adj: crepitant)	A sound like that made by rubbing the hairs between the fingers
Croup: (adj: croupy; croupous)	Acute respiratory syndrome in children and infants characterized by obstruction of the larynx, barking cough and stridor
Diphtheria: (adj: diphtheric; diphtherial; diphtheritic)	Acute infection of the throat and upper respiratory tract caused by diphtheria bacteria
Emphysema: (adj: emphysematous)	Pathological accumulation of air in tissues or organs
Epistaxis: (Nose bleed) (rhinorrhagia)	Hemorrhage from the nose
Exudate: (n. exudation) (adj: exudative)	Fluid high in proteins which has escaped from blood vessels as a result of inflammation
Percussion:	Tapping on a surface to determine the difference in density, dullness or resonance of the underlying structure (dull x resonant)
Pertussis:	Whooping cough due to bacterial infection of the pharynx, larynx and trachea; caused by Bordetella pertussis
Pleural effusion:	Escape of fluid into the pleural cavity
Pleural rub: (Friction rub)	Sound produced by thickened and inflamed pleural surfaces rubbing against each other
Pneumoconiosis: pneumo (lung) + coni(o) (dust) + osis (disease)	A disease condition caused by inhalation of dust with chronic inflammation and infection of the lungs

Purulent:	Containing pus (n: purulence; purulency)
Rales: (Crackles)	Abnormal crackling sounds heard during inspiration when there is fluid, blood or pus in the alveoli
Rhonchi: (single: rhonchus) (adj: rhonchal; rhonchial)	Coarse, loud rales caused by secretions in the bronchial tubes
Sarcoidosis: (Sarcoid)	Inflammatory disease in which small nodules (tubercles) develop in the lungs, lymph nodes, and other organs
Stridor: (adj: strident; stridulous)	A strained, high-pitched sound made on inspiration due to laryngeal, tracheal or bronchial obstruction
Tetanus: (adj: tetanic)	A generalized muscle spasm caused by toxin of clostridium tetani
Transudate: (n: Transudation)	Fluid that has passed through a membrane or been extruded from the blood as a result of hydrodynamic forces.
Tuberculosis: (adj: tuberculous; tuberculotic)	An infectious disease caused by Mycobacterium tuberculosis
Wheezes:	Musical sounds usually heard during expiration

## COMBINING FORMS

COMBINING FORM	DENOTING RELATIONSHIP TO	COMBINED WITH	MEANING	TERM	MEANING
Hemo__	Blood	thorax	Chest	Hemothorax	Collection of blood in the pleural cavity
Hydro__	Water	thorax	Chest	Hydrothorax (pleural effusion)	Collection of watery fluid in the pleural cavity
Laryngo__	Larynx	pharyngeal	Pertaining to the pharynx	Laryngopharyngeal	Pertaining to the larynx and pharynx
Laryngo__	Larynx	Pharyngitis	Inflammation of pharynx	Laryngopharyngitis	Inflammation of larynx and pharynx
Laryngo__	Larynx	__scopist	Specialist in scopy	Laryngoscopist	An expert in laryngoscopy
Naso__ (Rhino__)	Nose	pharyngitis	Inflammation of pharynx	Nasopharyngitis (Rhinopharyngitis)	Inflammation of the nasopharynx
Naso__	Nose	palatine	Pertaining to the palate	Nasopalatine	Pertaining to the nose and palate
Naso__	Nose	oral	Pertaining to the mouth	Naso-oral	Pertaining to the nose and mouth
Naso__	Nose	septal	Pertaining to the septum	Nasoseptal	Pertaining to the nasal septum
Pleuro__	Pleura	cele	Hernia	Pleurocele	Hernia of pleura
Pneumo__	Air	thorax	Chest	Pneumothorax	Accumulation of air or gas in the pleural cavity
Pneumo__ (pneumato)	Air	__cele	Hernia	Pneumocele (Pneumatocele)	Accumulation of air within a cyst in the lung
Pyo__	Pus	thorax	Chest	Pyothorax (empyema)	Collection of pus in the pleural cavity
Tracheo__	Trachea	bronchial	Pertaining to the bronchus	Tracheobronchial	Pertaining to the trachea and bronchi
Tracheo__	Trachea	esophageal	Pertaining to the esophagus	Tracheoesophageal	Pertaining to or communicating with both the trachea and esophagus
Tracheo__	Trachea	bronchoscopy	Viewing of the bronchi with a bronchoscope	Tracheobronchoscopy	Inspection of the interior of the trachea and bronchi
Tracheo__	Trachea	laryngeal	Pertaining to the larynx	Tracheolaryngeal	Pertaining to the trachea and larynx
Tracheo__	Trachea	laryngotomy	Incision of the larynx	Tracheolaryngotomy	Incision of the trachea and larynx
Tracheo__	Trachea	__phony	Sound	Tracheophony	A voice sound heard on auscultation of the trachea
Tracheo__	Trachea	pyosis	Process of pus formation	Tracheopyosis	Purulent tracheitis

## PREFIXES

PREFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
Anti__	Against	inflammatory	Pertaining to inflammation	Anti-inflammatory	Suppressing inflammation
Anti__	Against	microbial	Pertaining to or caused by microbes	Antimicrobial (Antimicrobic)	An agent that kills microorganisms or suppresses their growth
Anti__	Against	pneumococcic	Pertaining to pneumococci	Antipneumococcic	Destroying pneumococci
Anti__	Against	pyretic	Relating to fever	Antipyretic (antithermic)	Relieving or reducing fever
Anti__	Against	septic	Produced by microorganisms	Antiseptic	An agent that inhibit the growth and development of microorganisms without necessarily killing them
Anti__	Against	spasmodic	Pertaining to spasm	Antispasmodic	Relieving spasm specially of smooth muscles
Anti__	Against	spastic	Characterized by spasm	Antispastic	Antispasmodic with specific reference to skeletal muscles
Anti__	Against	toxic	Relating to poison	Antitoxic	Effective against poison
Anti__	Against	toxin	Poison	Antitoxin	Antibody to the toxin of a microorganism
Anti__	Against	tuberculous	Pertaining to tuberculosis	Antituberculous (antituberculotic)	Effective against tuberculosis
Anti__	Against	viral	Pertaining to virus	Antiviral (antivirotic)	Destroying viruses or suppressing their replication
Dys__	Difficult	phonia	Sound	Dysphonia (adj: dysphonic)	Difficulty in speaking
Para__	Beside	tracheal	Pertaining to the trachea	Paratracheal	Beside the trachea
Peri__	Around	tracheal	Pertaining to the trachea	Peritracheal	Around the trachea
Pre__	Before	tracheal	Pertaining to the trachea	Pretracheal	In front of the trachea
Retro__	Behind	bronchial	Pertaining to the bronchi	Retrobronchial	Behind the bronchi
Retro__	Behind	pharyngeal	Pertaining to the pharynx	Retropharyngeal	Behind the pharynx
Retro__	Behind	pharyngitis	Inflammation of the pharynx	Retropharyngitis	Inflammation of the posterior part of the pharynx

## SUFFIXES

SUFFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
__algia (dynia)	Pain	Tracheo__	Trachea	Trachealgia (tracheodyn timer)	Pain in the trachea
__dynia __algia	Pain	Pleuro__	Pleura	Pleurodynia, Pleuralgia	Pain in the pleura
__ectasis	Expansion	Atelo__	Incomplete	Atelectasis (adj: atelectatic)	Collapsed, functionless, airless lung or portion of a lung
__ectasy (Ectasia)	Dilatation	Tracheo__	Trachea	Tracheaectasy (tracheaectasia)	Dilatation of the trachea
__genic	Originating in	Tracheo__	Trachea	Tracheogenic	Originating in the trachea
__genic __genous	Originating in	Pleuro__	Pleura	Pleurogenic Pleurogenous	Originating in pleura
__itis	Inflammation of	Sinuso__	Paranasal sinuses	Sinusitis	Inflammation of the paranasal sinuses
__itis	Inflammation of	Tracheo__	Trachea	Tracheitis (trachitis)	Inflammation of the trachea
__itis	Inflammation of	Pleuro__	Pleura	Pleuritis (pleurisy)	Inflammation of the pleura (adj: pleuritic)
__oma	Tumor	Mesothelio__	Mesothelium: the epithelium that covers the surfaces of the pleura	Mesothelioma	A malignant tumor arising in the pleura
__osis	Disease process	Anthraco__	Coal	Anthracosis (adj: anthracotic)	Deposition of coal dust in the lungs (pneumoconiosis)
__osis	Disease process	Asbesto__	Asbestos: a fibrous, incombustible magnesium and calcium silicate	Asbestosis	Pneumoconiosis due to inhalation of asbestos
__osis	Disease process	Silico__	Silicon: dust of stone or sand	Silicosis (adj: silicotic)	Pneumoconiosis due to inhalation of silicon dioxide
__plegia	Paralysis	Laryngo__	Larynx	Laryngoplegia	Paralysis of the larynx
__rrhagia	Hemorrhage	Tracheo__	Trachea	Tracheorrhagia	Hemorrhage from the trachea
__rrhaphy	Suturing	Tracheo__	Trachea	Tracheorrhaphy	The suturing of the trachea
__rrhea	Discharge	Pyo__	Pus	Pyorrhoea (adj: pyorrhoeal)	Discharge of pus

SUFFIX	MEANING	COMBINED WITH	MEANING	TERM	MEANING
__scope	An electrically lighted instrument	Naso__	Nose	Nasoscope (rhinoscope)	An electrically lighted instrument for inspecting the nasal cavity
__scopy	The process of viewing with a scope	Laryngo__	Larynx	Laryngoscopy	Viewing of the larynx with a scope
__scopy	The process of viewing with a scope	Tracheo__	Trachea	Tracheoscopy	The inspection of the interior of the trachea
__stoma	Opening	Tracheo__	Trachea	Tracheostoma	An opening into the trachea through the neck

### ASSIGNMENT # 21

PREFIXES	SUFFIXES	COMBINING FORMS/ROOTS
Dys__ : difficult	__cele= hernia	Naso = nose
	__dynia = pain	Pharyngo = pharynx
	__genous = originating in	Phono = sound
	__ia = state or condition	Pleuro = pleura
	__itis = inflammation of	Pneumo = air; lung
	__ostomy = opening	Pyo = pus
	__tomy = incision	Sinuso = sinus, cavity
		Thorax = chest
		Tracheo = trachea

**Use the above prefix, suffixes and combining forms/roots to produce a medical term for each of the following meanings:**

1. Inflammation of the paranasal sinuses: \_\_\_\_\_
2. Difficulty in speaking: \_\_\_\_\_
3. Accumulation of pus in the thorax: \_\_\_\_\_
4. Pain in the intercostals muscle due to irritation of pleural surfaces: \_\_\_\_\_
5. Accumulation of air in the pleural cavity: \_\_\_\_\_
6. The surgical creation of an opening in the trachea through the neck: \_\_\_\_\_
7. Inflammation of the nasopharynx: \_\_\_\_\_
8. Hernia of lung tissue or pleura: \_\_\_\_\_
9. Incision of the trachea through the skin and muscles of the neck: \_\_\_\_\_
10. Originating in pleura: \_\_\_\_\_

## Answers to Assignment 21

1. Sinusitis
2. Dysphonia
3. Pyothorax (empyema)
4. Pleurodynia
5. Pneumothorax
6. Tracheostomy
7. Nasopharyngitis
8. Pleurocele
9. Tracheotomy
10. Pleurogenous