

# Medical Terminology

**Lesson 5:**

***RESPIRATORY SYSTEM TERMS***

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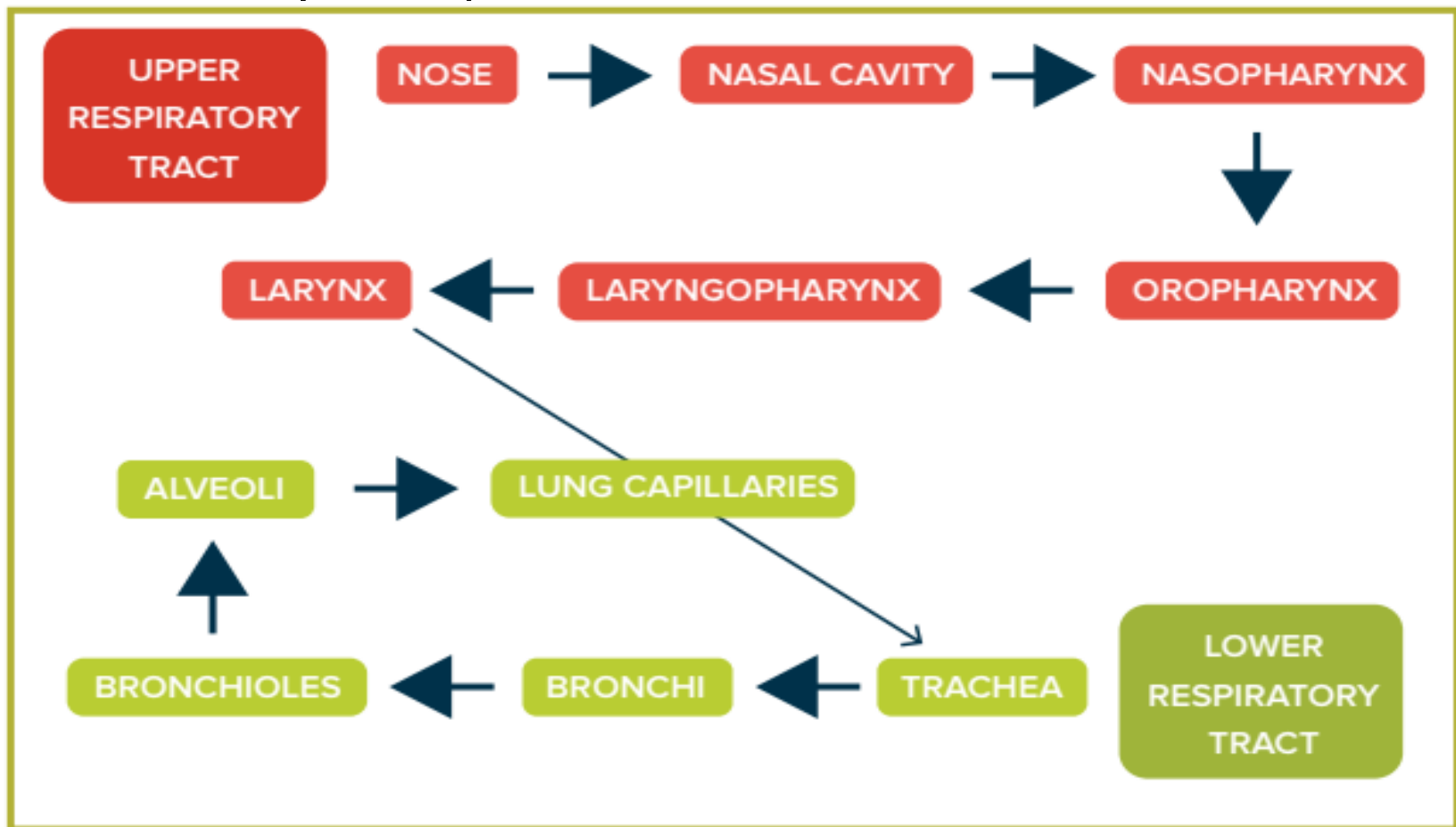
# RESPIRATORY SYSTEM

- Otherwise known as the *pulmonary system*, the *respiratory system* (*spir/o* = to breathe) functions primarily to deliver *oxygen* to the body tissues and get rid of *carbon dioxide*.
- This function is achieved through *breathing* or *ventilation*.
- There are two processes involved in *ventilation*:
  - >> ***Inspiration/inhalation***: movement of air into the lungs
  - >> ***Expiration/exhalation***: movement of air out of the lungs

A *pulmonologist* (*pulmon/o* + *-logist*) is a specialist in the anatomy, physiology, and pathology of the lungs, while a *respiratory therapist* evaluates and treats respiratory disorders at the direction of a physician.

# STRUCTURES OF THE RESPIRATORY SYSTEM

- The respiratory system consists of the upper and lower respiratory tracts.



The following respiratory structures are important to note:

- *Diaphragm*

- serves as the main muscle of respiration
- separates the abdominal cavity from the *thoracic* (*thora/o* = chest) cavity

- *Pleura*: membrane that surrounds the lungs

- *Lungs*

- a pair of large, spongy organs used for gas exchange
- the right lung has three lobes while the left lung has two lobes

- *Sinuses*

- lighten the weight of the skull
- Four sinuses: frontal, ethmoid, maxillary, sphenoid
  - *para + nasal sinuses*
    - (*para* = beside, *nas/o* = nose, *-al* = pertaining to)
    - the frontal and maxillary sinuses are air-filled paired cavities located around the nose

- *Pharynx*: throat

- *Larynx*: voice box

Combining Form	Meaning	Word Association
<i>alveol/o</i>	alveolus/alveoli	<i>Alveolar</i> ventilation refers to the volume of gas expired from the alveoli.
<i>bronch/o,</i> <i>bronchi/o</i>	bronchus/bronchi	A <i>bronchodilator</i> is a medication that opens up the bronchioles.  <i>Bronchitis</i> is the inflammation of the bronchial tubes.
<i>bronchiol/o</i>	bronchiole	Inflammation of the bronchioles is known as <i>bronchiolitis</i> .
<i>epiglott/o</i>	epiglottis	<i>Epiglottitis</i> is a life-threatening condition in which the epiglottis swells.
<i>laryng/o</i>	larynx (voice box)	<i>Laryngospasm</i> is the uncontrolled and involuntary muscular contraction of the vocal folds.
<i>lob/o</i>	lobe	The surgical removal of a lobe of an organ is referred to as <i>lobectomy</i> .
<i>nas/o, rhin/o</i>	nose	The <i>nasopharynx</i> refers to the upper part of the throat behind the nose.

Combining Form	Meaning	Word Association
<i>phren/o</i>	diaphragm	The <i>phrenic</i> nerve supports the movement of the diaphragm.
<i>pleur/o</i>	pleura	<i>Pleuritis</i> or <i>pleurisy</i> is the inflammation of the pleura or the lining of the lungs.
<i>pharyng/o</i>	pharynx (throat)	<i>Pharyngitis</i> is the inflammation of the pharynx, otherwise known as "sore throat."
<i>pneu/o, pneumon/o, pulm/o, pulmono/o</i>	lung	<p><i>Pneumonia</i> is the infection of one or both lungs.</p> <p>The medical specialty that deals with diseases involving the respiratory tract is known as <i>pulmonology</i>.</p>
<i>trache/o</i>	trachea	<i>Tracheostomy</i> is a surgical procedure that creates an opening in the trachea.

# DISEASES, DISORDERS, AND DIAGNOSTIC

## TERMS

Two of the most common noninvasive measurements used to collect data about a client's respiratory status are oximetry and spirometry.

### ■ *Oximetry*

- measurement of the blood oxygen saturation in the arteries
- *oximeter*: a device used to measure oxygen saturation of the blood

### ■ *Spirometry (spiro + metry)*

- measurement of airflow taken in and exhaled from the lungs
- *spirometer*: instrument used for measuring air inhaled to and exhaled out of the lungs

<i>eupnea</i>	<i>eu-</i> (normal)	eu + pnea	normal respirations
<i>dyspnea</i>	<i>dys-</i> (bad)	dys + pnea	labored and difficult breathing
<i>apnea</i>	<i>a-</i> (absence)	a + pnea	temporary absence of breathing
<i>orthopnea</i>	<i>orth/o-</i> (straight)	ortho + pnea	difficulty breathing in any position other than upright or sitting position
<i>bradypnea</i>	<i>brady-</i> (slow)	brady + pnea	abnormal breathing, less than 12 breaths per minute

<i>tachypnea</i>	<i>tachy-</i> (fast)	tachy + pnea	respirations more than 20 breaths per minute
<i>hyperpnea</i>	<i>hyper-</i> (more than normal)	hyper + pnea	abnormally deep or rapid respiration



- The following terms are frequently used in relation to the respiratory system:
  - >> **hyperventilation** (*hyper + ventilation*): excessive ventilation of the lungs
  - >> **hypoventilation** (*hypo + ventilation*):- insufficient exchange of oxygen and carbon dioxide in the lungs
  - >> **hypoxia** (*hyp + ox + ia*): diminished oxygenation to the tissues
  - >> **anoxia** (*an + ox + ia*): extreme form of hypoxia, severe lack of oxygen in the tissues

# Activity; Review the definitions of the

following respiratory disorders:

- Adult respiratory distress syndrome
- Asthma
- Atelectasis
- Bronchiectasis
- Bronchography
- Lung carcinoma
- Chronic obstructive pulmonary disease
- Emphysema
- Influenza
- Nasal polyp
- Pleuritis
- Pneumoconiosis
- Pulmonary embolism
- Severe acute respiratory syndrome
- Silicosis
- Sudden infant death syndrome
- Tuberculosis

# SURGICAL AND THERAPEUTIC INTERVENTIONS

*Asphyxia* denotes a severe decrease in the supply of oxygen in the body secondary to abnormal breathing. Methods used to address this problem may include the use of the *Heimlich maneuver* or, in severe cases, *endotracheal intubation*.

- *Heimlich maneuver*
  - otherwise known as *abdominal thrust*
  - first-aid procedure used to remove airway foreign body obstruction, such as in the case of *choking*
- *Endotracheal intubation* (*endo* = *inside* + *trache/o* + *al*): insertion of artificial airway into the trachea
  - *nasotracheal* intubation (*nas/o* = nose)
    - insertion of an airway tube through the nose
  - *orotracheal* intubation (*or/o* = mouth)
    - insertion of an airway tube through the mouth
- *Ventilator*
  - an apparatus used to administer artificial respiration in cases of respiratory failure

## The most common surgical procedures related to the respiratory system.

Surgical Procedure	Word Parts	Definition
<i>tracheotomy</i>	trach/o + tomy	creation of an opening in the trachea
<i>tracheostomy</i>	trach/o + ostomy	creation of artificial airway in the trachea
<i>biopsy</i>	bi + o + o/psy	removal of small tissue for examination
<i>percutaneous</i>	per + cutane/o	puncturing the skin to obtain a sample of the tissue
<i>pneumectomy</i>	pneumon/o + ectomy	removal of all or part of the lungs
<i>lobectomy</i>	lob/o + ectomy	removal of a lobe of the lung
<i>rhinoplasty</i>	rhin/o + plasty	surgical repair of the nose
<i>pneumocentesis</i>	pneum/o + centesis	puncture of the lungs to remove fluid
<i>thoracentesis</i>	thorac/o + centesis	puncture of the chest cavity to drain fluid



ANY  
Questions?

Thank You