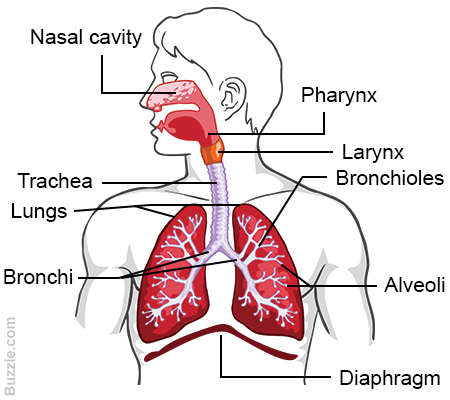
Core Competency Theme 2: Respiratory Assessment and Management



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|  | Brief description | Functions |
| A  Nasal Cavity | The nasal cavity is a hollow space within the nose and skull that is lined with hairs and mucus membrane. | The nasal cavity has four functions:   * Warms and humidifies the inspired air. * Removes and traps pathogens and particulate matter from the inspired air. * Responsible for sense of smell. * Drains and clears the paranasal sinuses and lacrimal ducts |
| B  Pharynx | The pharynx, also known as the throat, is a muscular funnel that extends from the posterior end of the nasal cavity to the superior end of the [esophagus](http://www.innerbody.com/image_dige01/dige03-new2.html) and larynx. The pharynx is divided into 3 regions: the nasopharynx, oropharynx, and laryngopharynx. | The pharynx is also used to swallow food, the epiglottis ensures that air passes into the trachea by covering the opening to the esophagus. During the process of swallowing, the epiglottis moves to cover the trachea to ensure that food enters the esophagus and to prevent choking. |
| C  Larynx | The [larynx](http://www.innerbody.com/anatomy/respiratory/head-neck/larynx) is a short section of the airway that connects the laryngopharynx and the trachea. Several cartilage structures make up the larynx and give it its structure.   * The epiglottis serves as the cover of the larynx during swallowing. * The [thyroid cartilage](http://www.innerbody.com/image_cardov/card60-new.html) (which is often referred to as the Adam’s apple), holds open the anterior end of the larynx and protects the vocal folds. * Cricoid cartilage which holds the larynx open and supports its posterior end. * In addition to cartilage, the larynx contains special structures known as vocal folds, which allow the body to produce the sounds of speech and singing. | The primary function of the larynx is producing speech through the vocal folds. It also houses the epiglottis which covers the larynx during swallowing to ensure food goes into the oesophagus. |
| D  Trachea | The trachea connects the larynx to the bronchi and allows air to pass through the neck and into the thorax. The rings of cartilage making up the trachea allow it to remain open to air at all times. The open end of the cartilage rings faces posteriorly toward the esophagus, allowing the esophagus to expand into the space occupied by the trachea to accommodate masses of food moving through the esophagus. | The main function of the trachea is to provide a clear airway for air to enter and exit the lungs. In addition, the epithelium lining the trachea produces mucus that traps dust and other contaminants and prevents it from reaching the lungs. |
| E  Lungs | The [lungs](http://www.innerbody.com/anatomy/respiratory/lungs) are a pair of large, spongy organs containing many capillaries and around 30 million tiny sacs known as [alveoli](http://www.innerbody.com/image/card07.html). The left lung is slightly smaller than the right lung due to the position of the heart and is made up of 2 lobes while the right lung has 3 lobes.  Each lung is surrounded by a pleural membrane that provides the lung with space to expand and allows the lungs to passively fill with air as they relax. | The alveoli are capillary rich and are responsible for gaseous exchange – transfer of oxygen to red blood cells and absorption of carbon dioxide which is then exhaled. |
| F  Bronchioles | The tiny branch of air tubes within the lungs that are a continuation of the [bronchus](http://www.medicinenet.com/script/main/art.asp?articlekey=20385). The bronchioles connect to the alveoli (air sacs). In order to reach is alveoli the bronchioles must reduce in size, bronchioles range in diameter from several millimeters to less than half a millimeter. The tip of each bronchiole, called a terminal bronchiole, it ends at a cluster of alveoli that it feeds. | The function of the bronchioles is to ensure that incoming air is supplied to each alveolus. |
| G  Bronchi | Bronchi are the main passageway into the lungs which divide from the trachea that then lead respectively into the right and the left lung. | To transfer air into the lungs from the trachea |
| H  Alveoli | Alveoli (pleural) or Alveolus (singular) are small, balloon-like sacs at the end of the small air passages in the lungs (the bronchiole). Oxygen is inhaled and absorbed into the bloodstream through the thin walls of each alveolus, by way of the pulmonary veins. Carbon dioxide from the pulmonary artery is exhaled as a waste product of the lungs. | This is where gaseous exchange occurs, inhaled air containing oxygen is absorbed through the capillaries surround the alveoli and circulated throughout the body and waste carbon dioxide is transferred out of the capillaries and exhaled. |
| I  Diaphragm | The diaphragm is a dome-shaped structure of [muscle](https://en.wikipedia.org/wiki/Muscle_tissue) and [fibrous tissue](https://en.wikipedia.org/wiki/Fibrous_tissue) that separates the [thoracic cavity](https://en.wikipedia.org/wiki/Thoracic_cavity) from the abdomen. The dome curves upwards. The superior surface of the dome forms the floor of the thoracic cavity, and the inferior surface the roof of the abdominal cavity. | During inhalation the diaphragm contacts and is flatten allowing the volume and pressure in the chest to increase causing air to be pushed into the lungs through the nose and mouth. During exhalation the diaphragm relaxes and returns to its dome-like stricture reducing volume and pressure in the lungs forcing air out of the lungs. |