

Test yourself: fill in the blanks:

| | Name | Description & Function | | |
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| # | Name | Function | | |
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| | | | | |
| 1 | nose | A nose is a nose is a nose. Smelling, tasting and breathing all start here. The size, location, mucous lining and tiny hairs (cilia) inside help prevent foreign objects to enter and to trap large air impurities before being drawn further into the respiratory system. Achooo! Out with the bad bugs and carbon dioxide. | | |
| 2 | mouth* | Mouth breathing can also be remembered as 'the big gulp', or 'plan 'B" for air entry. Like the nose, it has many functions. It is the starting point of the digestive system as well as a secondary inhaler and exhaler. | | |
| 3 | larynx* | The larynx has three main functions: 1) a passageway for air, 2) a valve to close off the air passage from the digestive one (the epiglottis) like a hinged trap door, and 3) as a voice box. | | |
| 4 | lung | The lungs are the essential organs of respiration. The main function of the lungs is to exchange carbon dioxide for oxygen and vice versa. Each lung is enclosed separately within two membranes, like a balloon inside a bag inside a bag. | | |
| 5 | right bronchus ^^ | There are 2 main bronchi (Latin plural of bronchus): the right and left, each leading to a lung. If you accidentally breathe, or aspirate, a very small piece of food that gets past the trachea, it is most likely to fall and be pulled into the right main bronchus. If a peanut gets this far, what do you think could happen? | | |
| 6 | diaphragm | This muscular structure acts as a floor to the chest (thoracic) cavity as well as a roof to the abdomen. It helps to expand and contract the lungs, forcing air into and out of them. | | |
| 7 | pharynx* | The pharynx is shared with the digestive system from the tongue down to the epiglottis. Food goes on down the esophagus and air passes on through the trachea - but never both at the same time! | | |
| 8 | trachea* ^^ | This armored tube allows air to pass beyond the larynx to where it divides into the left and right bronchi. The protective 'c's of cartilage also provide protection to the digestive system's esophagus right behind it. | | |
| 9 | left bronchus ^^ | The left one has a sharper bend due to the presence of the heart and major blood vessels directly underneath it. | | |
| 10 | bronchiole ^^ | Each bronchus divides and subdivides into smaller and smaller branches, the bronchioles, just like tree branches that get smaller as they grow up and out. By the time the air has | | |

| | | reached here from outside, it has been warmed up to body temperature, filtered and moisturized. |
|----|-------------------------------------|--|
| 11 | alveoli | These tiny air cells, or sacs, are the 'leaves' of our respiratory tree. They resemble bunches of grapes and are the link between the respiratory and circulatory systems. Gas exchange happens here - I'll trade you fresh oxygen (O2) for your used carbon dioxide (CO2). Now trace the route of the old air back out to the nose. |
| * | throat | The throat includes all the structures lying in front of the spinal column including the mouth, tongue, pharynx, tonsils, larynx and trachea. |
| ~~ | trachea, bronchi and bronchioles | These three portions of our airways also have rings of muscle along their length as well as glands lining them. These glands produce mucous that traps particles of dirt. Eventually, this sticky stuff and its trapped dirt are coughed up and cleared out. With asthma, these sensitive muscles tighten, making all the airways smaller and more difficult to breath through, and excessive mucus is produced, sometimes flooding the airways. |

Experiment: How do Your Lungs Work? Here is a simple project to show how your lungs work and how breathing happens. This lesson activity goes well with a study of anatomy, life science, and/or biology. http://www.lessontutor.com/km1.html

For further reading:

American Lung Association. Detailed diagram of the <u>Respiratory System</u> and Flash presentation of 'How your lungs work.' http://www.lungusa.org/learn/resp_sys.html The Lung Association of Canada. <u>Interactive games related to the Respiratory System</u> http://www.lung.ca/children/teachers/resources4_6.html#respiratory Asthma Society of Canada presents <u>AsthmaKids</u>. Games and information to learn more about living with asthma. http://asthmakids.ca/

Discovery.com presents <u>Your Gros and Cool Body</u>: The Respiratory System. http://yucky.kids.discovery.com/flash/body/pg000138.html

Submitted by: © Joanne Mikola I am a retired/expired Trauma O.R. Nurse who still thrives on blood, guts and crises. Give me a book, and I will relish every page. Give me a pen, and I can only stare hopelessly at the implications.



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