

2.3 THE CIRCULATORY AND RESPIRATORY SYSTEMS

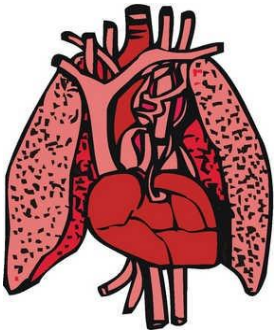
(PART 2)

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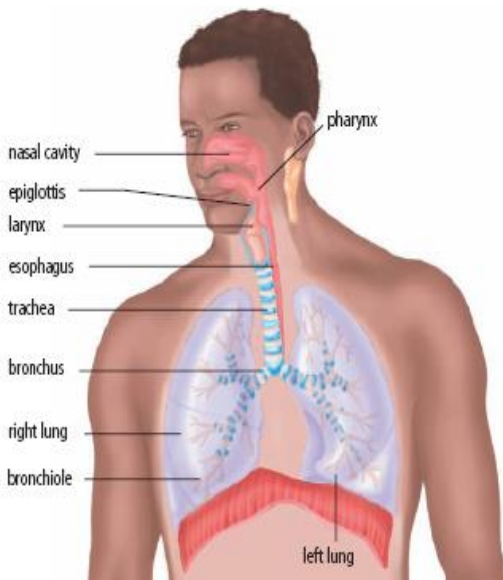
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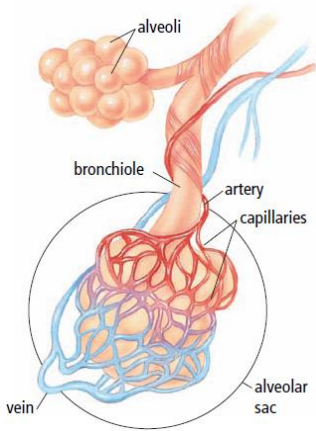
(Refer to pp. 90 - 95 of BC Science 8)



The Respiratory System



- **respiratory system:** the body system that supplies blood with oxygen and removes carbon dioxide from the blood.
- The two lungs are important organs in this system
 - They bring in oxygen for cellular respiration
 - They excrete carbon dioxide.
- Breathing is the process that brings oxygen into your nose or mouth.
- When you inhale, air is filtered by tiny hairs called cilia.
 - Cilia and mucus trap dirt and other particles.
 - The particles are either pushed back out the nostrils or flushed down into the digestive system.
- Air passes through your larynx (voice box) and continues down your trachea towards your lungs.

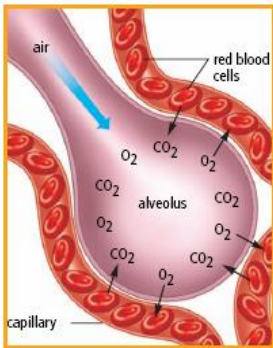


*the circulatory + respiratory systems work together.

- At the base of the trachea are two tubes called bronchi.
- Bronchi branch into smaller air tubes called bronchioles.
- Finally, the air reaches tiny, thin-walled sacs called alveoli.

GAS EXCHANGE IN THE ALVEOLI

- There are millions of alveoli at the ends of the bronchioles, and this is where gas exchange takes place.
 - Oxygen and carbon dioxide move back and forth between the alveoli and the surrounding capillaries.



SMOKING

- Smoking may cause both respiratory disease and heart disease.
- Respiratory diseases could include emphysema and lung cancer.
 - Emphysema causes the alveoli walls to lose their elasticity. This may make breathing very difficult.
- Smoking also destroys the cilia lining in your respiratory system.



SUMMARY: