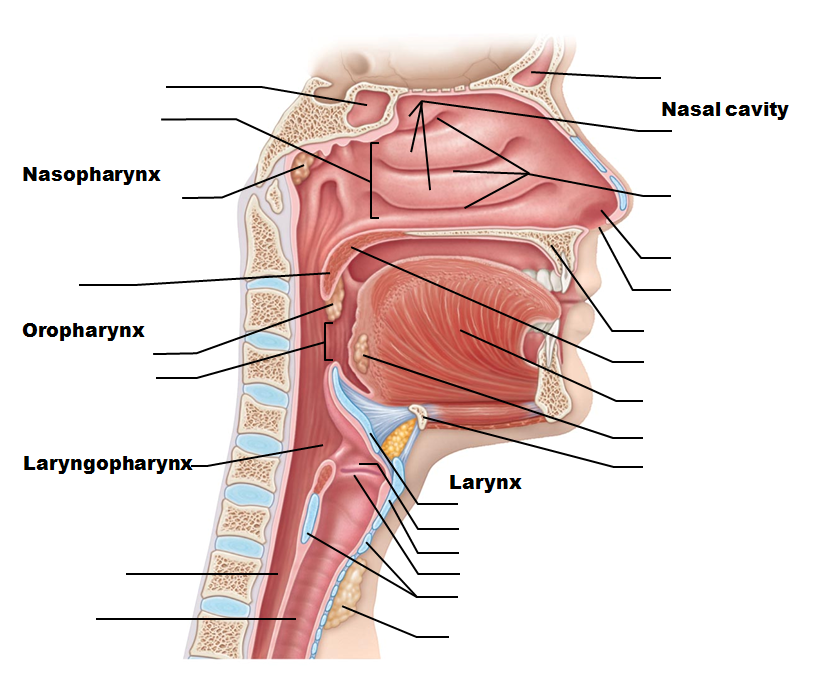
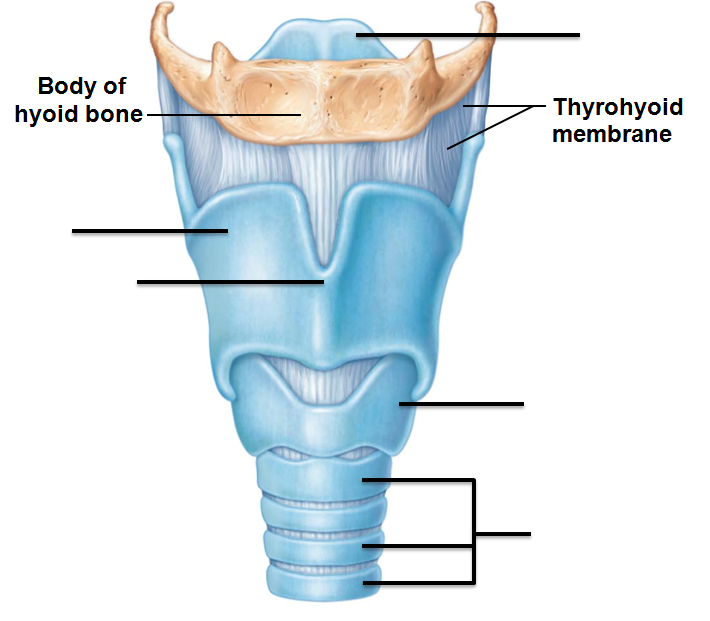


Pages 802 –809 Respiratory Anatomy

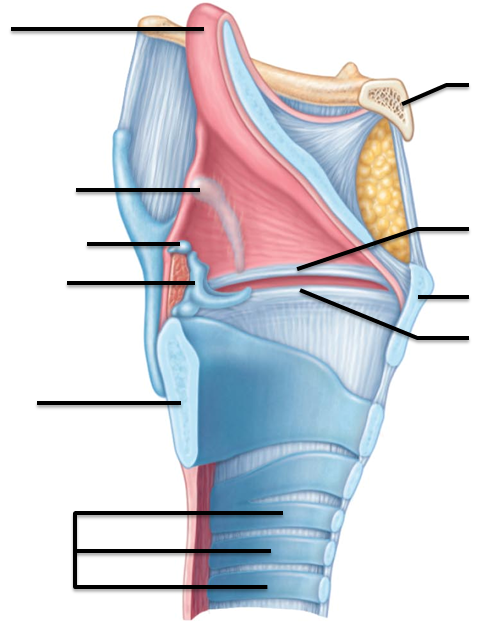
1. Label the structures indicated
2. Compare internal respiration to external respiration. What’s the difference?
3. Compare the respiratory zone to the conducting zone. What’s the main, significant difference between them?
4. What are the regions of the nose?
5. What does “choanae” mean?
6. What are the two types of membranes within the nasal cavity? How do they differ?
7. Indentify the structures indicated:



1. What are the conchae? What benefit do they provide?
2. What are the three regions of the pharynx?
3. What is the function of the uvula? In which pharyngeal division is it located?
4. What is the “isthmus of the fauces”?
5. What are the three functions listed for the larynx?
6. Identify the structures indicated:



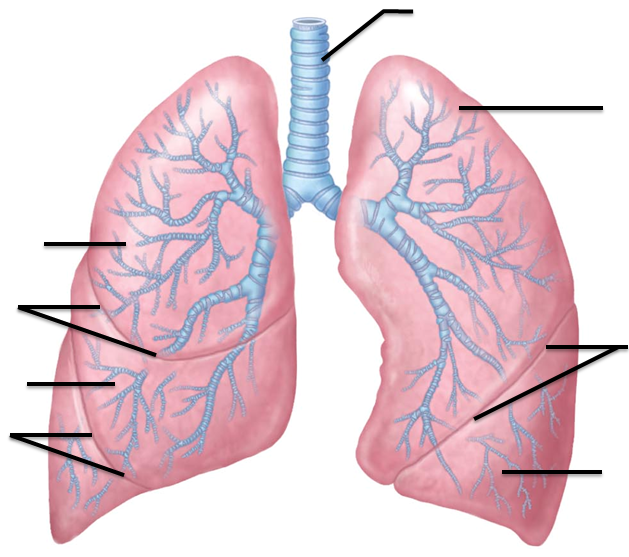
1. Identify the structures indicated:



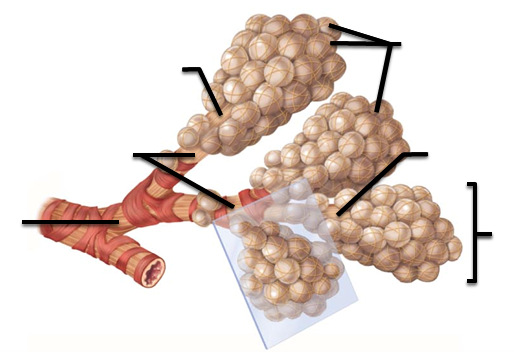
1. Which of the laryngeal cartilages are paired? Singular?
2. Which is the ONLY laryngeal structure made of elastic cartilage rather than hyaline?
3. What structure makes the “Adam’s Apple”?
4. Compare the true vocal folds to the false vocal folds. What are some of the functions of each?
5. What is the Valsalva Maneuver?
6. What advantage does the C-shaped rings of cartilage provide for the larynx? For the esophagus?

**Pages 810-816 Bronchi and subdivisions**

1. What is the bronchial tree?
2. Based on the orientation of the bronchi, which lung is more likely to receive an inhaled foreign object? Why?
3. As the bronchi branch and eventually transition into bronchioles, what (3) structural changes can be seen?
4. What structures make up the respiratory membrane?
5. What’s the difference between the alveoli and alveolar sacs?



1. Identify the structures indicated.
2. Indentify the structures indicated



1. How do the right and left lungs differ structurally?
2. Pulmonary arteries come from which side of the heart? And carry what type of blood?
3. What’s the difference between a pulmonary artery and a bronchial artery?
4. What does the name
   1. Visceral pleura tell you?
   2. Parietal pleura?
5. What’s the function of the pleural fluid?
6. What is pleurisy?

Pages 816 – 819 Mechanisms of breathing

1. What is our reference pressure for breathing? (Which pressure are we comparing the changing lung pressures to?)
2. Describe and compare intrapulmonary pressure to intrapleural pressure.
3. How does a negative intraplerual pressure help to keep the lungs open?
4. What is atelectasis?
5. Discuss the events of inspiration. Which muscles are involved? What movement is seen in the thorax? How does that alter the pressure within the lungs?
6. Discuss the events of expiration. Which muscles are involved? What movement is seen in the thorax? How does that alter the pressure within the lungs?

Pages 820-823 Pulmonary ventilation and volumes

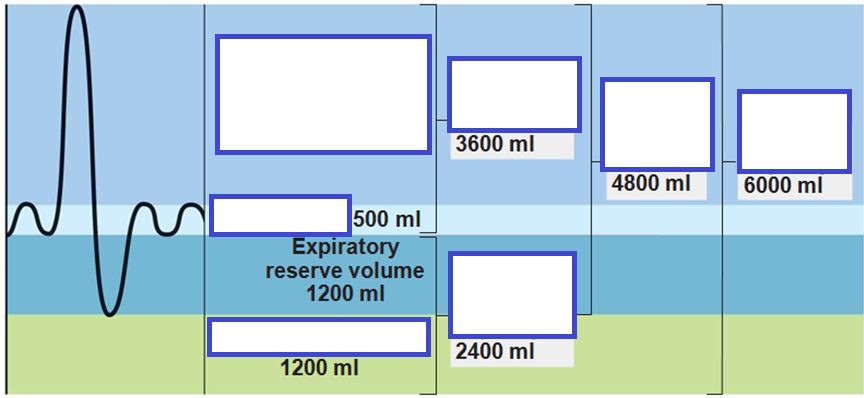
1. What changes take place during an asthma attack?
2. How would surface tension affect the alveoli in the absence of surfactant? Which cells produce surfactant and how does this help?
3. What does “lung compliance” mean?
4. What are the four respiratory **volumes**? Give a description of each(not calculations or volumes, but put it in common terms how the volumes are determined)

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1. What are the four **capacities**? Describe how they are determined. You may want to include which respiratory volumes are used to determine them.

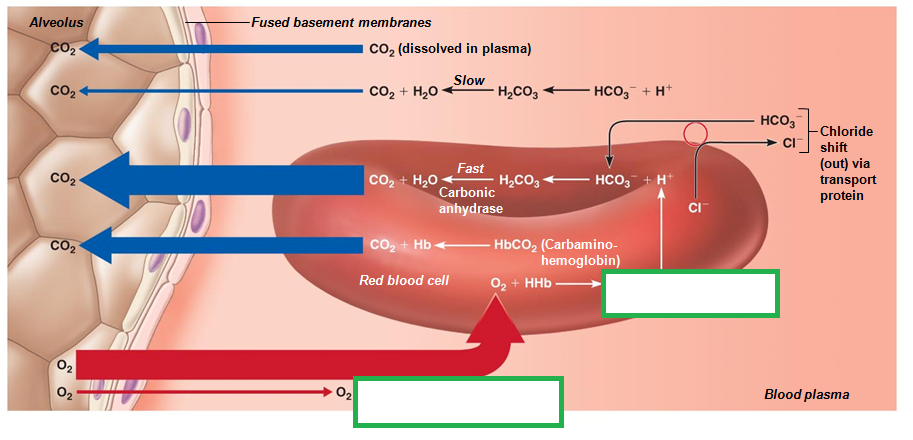
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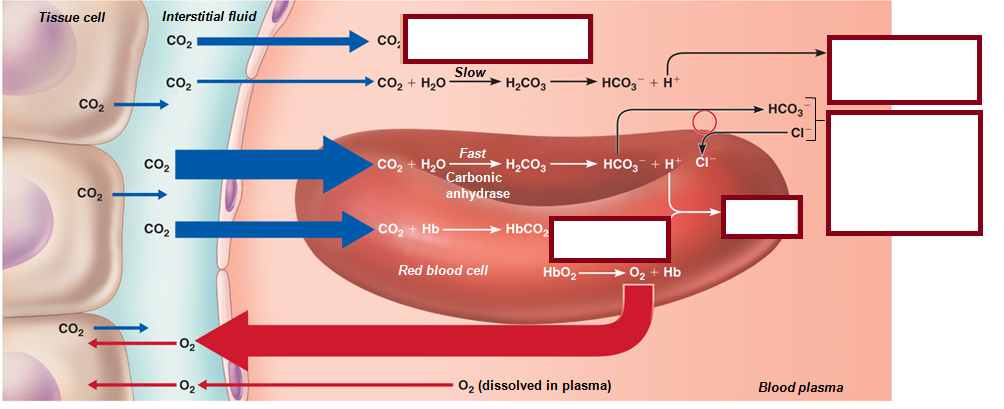
1. What contributes to “dead space?”



**Pages 825 – 834 Gas Exchange**

1. During pneumonia and left heart failure, the respiratory membrane changes. How does it change and how do those changes alter their functions?
2. Which gas has a steeper partial pressure gradient in the lungs? Oxygen or Carbon Dioxide?
   1. What makes the oxygen diffuse quickly?
   2. What makes the carbon dioxide diffuse quickly?
3. What does perfusion mean?
4. During internal respiration, where is the oxygen partial pressure higher? The blood or the cells? Which way do you expect the O2 to diffuse?
5. What two means do we use to transport O2 in the blood?
6. What is BPG? Where does it form, and what does it do to O2 affinity to hemoglobin?
7. How does Carbon Monoxide cause hypoxia? (What is hypoxia?)
8. What are the three ways in which Carbon Dioxide is transported in the blood?
9. Where is the most efficient place to transform CO2 into a bicarbonate ion? What enzyme makes this possible?
10. What is the point of the chloride shift?





**Pages 835 - 841 Factors that control respiration**

1. Where are the central chemoreceptors located?
   1. What are they most sensitive to?
2. Where are the peripheral chemorecptors located?
   1. What are they most sensitive to?
3. What is hyercapnia?
4. What is the relationship between elevated CO2 levels and H+ ions?
5. Outline the sequence of events that happens when a person with anxiety hyperventilates. How do the changing gas levels trigger which changes?
6. What is “apnea”
7. The Limbic System includes the hypothalamus as well as other brain regions; it gives us some of our emotional responses. How does the hypothalamus/Limbic region cause us to alter our breathing?
8. What is hyperpnea? How does it differ from hyperventilation?
9. Which disorders are included in COPD? (What does COPD stand for?)
10. What is dyspnea?
11. What symptoms are seen with Asthma? What contributes to those symptoms?
12. List the three types of lung cancers. Identify where and how they form.

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Review/Read p 843 which outlines the interrelationships between the Respiratory system and the other body systems.