

Anatomy and Physiology II MED 165

Respiratory System Study Guide

1. What are the six functions of the respiratory system?
2. What is ventilation?
3. What is respiration?
4. Are they the same thing?
5. Where does external respiration occur?
6. Where does internal respiration occur?
7. Where does cellular respiration occur?
8. What form of energy results from cellular respiration?
9. Where does the upper respiratory system begin? End?
10. Where does the lower respiratory system begin? End?
11. What does the conducting respiratory system do?
12. What does the gas exchange respiratory system do?
13. What are the nares?
14. What is the function of nasal conchae?
15. What are the paranasal sinuses?
16. What is the difference between the nasopharynx, oropharynx, and laryngopharynx?
17. Which structure protects the trachea from food during swallowing?
18. What is the trachea? What is it commonly called?
19. What is the name of the point where the trachea bifurcates into the bronchi?
20. What is the shape of the hyaline cartilage that makes up part of the trachea?
21. Which bronchi is wider and more vertical?
22. What is the name of the region where the primary bronchi enter the lung tissue?
23. How many secondary bronchi are in the left lung? Right lung?
24. What happens to the diameter of all bronchi as they progress deeper into the lungs?
25. How wide is a bronchiole?
26. What is the function of an alveoli?
27. How many are present in each lung?
28. What is made by a type II pneumocyte?
29. What is the purpose of surfactant?
30. What is the name of the tissue that covers the inside of the chest cavity and the surface of the lungs?
31. What artery supplies lungs with their oxygen and nutrients?
32. What artery carries blood to the lungs for exchange of oxygen and carbon dioxide?
33. What vein carries blood from the lungs back to the heart?
34. What are the two phases of pulmonary ventilation?
35. Which direction does air move in inhalation (inspiration)?

36. Which direction does air move in exhalation (expiration)?
37. What is the driving force of air movement?
38. What is the normal atmospheric pressure?
39. How do the intrapleural and intrapulmonary pressures relate?
40. What is the primary muscle of inspiration?
41. Is the muscle contracted or relaxed during inspiration?
42. What happens to the intrapulmonary pressure during inspiration?
43. What happens to the primary muscle of ventilation during expiration?
44. What happens to intrapulmonary pressure during expiration?
45. What happens if lung tissue loses elasticity?
46. How does the diameter of an airway affects its resistance?
47. Where is airway resistance the highest?
48. What happens if the bronchioles become inflamed? How does that affect resistance?
49. What is compliance?
50. What factors affect lung compliance?
51. What diseases cause increased compliance?
52. What diseases cause decreased compliance?
53. How are the alveoli affected by COPD?
54. How much air can be held by a normal healthy adult lung?
55. What is the definition of tidal volume?
56. What percentage of tidal volume actually reaches the alveoli and is used for gas exchange?
57. What is the amount of air that can be inhaled above the normal tidal volume called? What is its normal value?
58. What is the amount of air that can be exhaled above normal tidal volume called? What is its normal value?
59. What is residual volume?
60. How do you calculate the inspiratory capacity?
61. How do you calculate the vital capacity?
62. How do gases move in nature?
63. What factors affect gas exchange?
64. How is oxygen carried in blood?
65. What is the oxygen reserve?
66. How is carbon dioxide transported in blood?
67. What is the primary mechanism used by humans to transport carbon dioxide?
68. In what region of the brain is the respiratory center located?
69. What is the primary mechanism that drives respiration?
70. What chemical causes hydrogen ions to accumulate?
71. Where are the peripheral chemoreceptors located?
72. What chemical do they sense?
73. What percentage of COPD patients rely on this back up mechanism?
74. What can happen if too much oxygen is given to individuals that rely on the hypoxic drive?

75. Is it more dangerous to knock out their hypoxic drive or allow all of their cells to become hypoxic?