

Name _____

Date Due _____

Mechanisms of Ventilation Homework

Fill in the blanks with the following words. You may use words more than once.

Intercostal, surfactant, ventilation, abdominal, atmospheric, decreases, increases, elastic, phrenic, visceral.

1. Breathing can also be called _____.
2. The weight of air causes a force called _____ pressure.
3. If the pressure inside the lungs _____, outside air is pushed into the airways by atmospheric pressure.
4. Nerve impulses are carried to the diaphragm by the _____ nerve.
5. When the diaphragm contracts, the size of the thoracic cavity _____.
6. The ribs are raised by the contraction of the _____ muscles, which increases the size of the thoracic cavity.
7. Only a thin film of lubricating serous fluid separates the parietal pleura from the _____ pleura of a lung.
8. A mixture of lipoproteins, called _____, acts to reduce the tendency of alveoli to collapse.
9. The force responsible for normal expiration comes from _____ recoil and from surface tension.
10. Muscles that help to force out more than the normal volume of air by pulling the ribs downward and inward include the _____ muscles.
11. The diaphragm can be forced to move higher than normal by the contraction of the _____ muscles.

Match each factor with the way it effects breathing rate.

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| _____ 12. Medullary respiratory center | A. Basic rhythms of breathing |
| _____ 13. Neurons of the pons | B. Detect levels of carbon dioxide and adjust breathing rate accordingly |
| _____ 14. Chemoreceptors | C. Increased lung volume and therefore reduced breathing rate |
| _____ 15. Inflation reflex | D. Stimulate the muscles of inspiration |
| _____ 16. Emotions | E. Prevents overinflation |
| _____ 17. Increased physical fitness | F. During the fight or flight response results in increased breathing rate |