

## The Respiratory System: Anatomy Review

1. Fill in the missing organs of the respiratory system:

\_\_\_\_\_ (air enters) → nasal cavity → \_\_\_\_\_ (both air and food move through) → trachea → \_\_\_\_\_ (large tubes leading to both lungs) → lungs.

2. Each lung is surrounded by two layers of serous membrane known as pleurae. These are:

\_\_\_\_\_ pleura; covers the surface of the lung

\_\_\_\_\_ pleura; lines the thoracic wall

The space in between is called the \_\_\_\_\_ cavity and it is filled with \_\_\_\_\_ fluid.

This fluid assists breathing movements by acting as a \_\_\_\_\_.

3. Bronchial tree:

Air flows from the trachea through the \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ bronchi to smaller and smaller bronchi. The trachea and bronchi contain \_\_\_\_\_ to keep the airways open.

Bronchi branch into \_\_\_\_\_, which do not contain \_\_\_\_\_ but do contain more \_\_\_\_\_ muscle. This allows for regulation of airflow.

4. Airways from the nasal cavity through the terminal bronchioles are called the \_\_\_\_\_ zone.

The function of this zone is to \_\_\_\_\_ and \_\_\_\_\_ the air.

Is there gas exchange in this zone? \_\_\_\_\_

5. The respiratory zone contains \_\_\_\_\_ where gas is exchanged. This zone consists of the \_\_\_\_\_ bronchioles, \_\_\_\_\_ ducts and \_\_\_\_\_ sacs.

6. The pulmonary \_\_\_\_\_ carries blood which is (high or low) in oxygen to the lungs.

Pulmonary \_\_\_\_\_ exchange gases with the alveoli.

Blood leaves the lungs in the pulmonary \_\_\_\_\_, which carry \_\_\_\_\_ blood back to the heart.

7. Name the three types of cells in the alveolus:

1. \_\_\_\_\_; simple squamous epithelium
2. \_\_\_\_\_; removes debris and microbes
3. \_\_\_\_\_; secretes surfactant. Surfactant (decreases or increases) surface tension which prevents the alveoli from collapsing.
  
8. The thin respiratory membrane consists of the \_\_\_\_\_ epithelium and the \_\_\_\_\_ membrane of both the alveolus and the capillary.
  
9. In congestive heart failure (Quiz section), there is an accumulation of fluid in the lungs (known as \_\_\_\_\_). This increases the thickness of the respiratory membrane, resulting in (more or less) gas exchange.