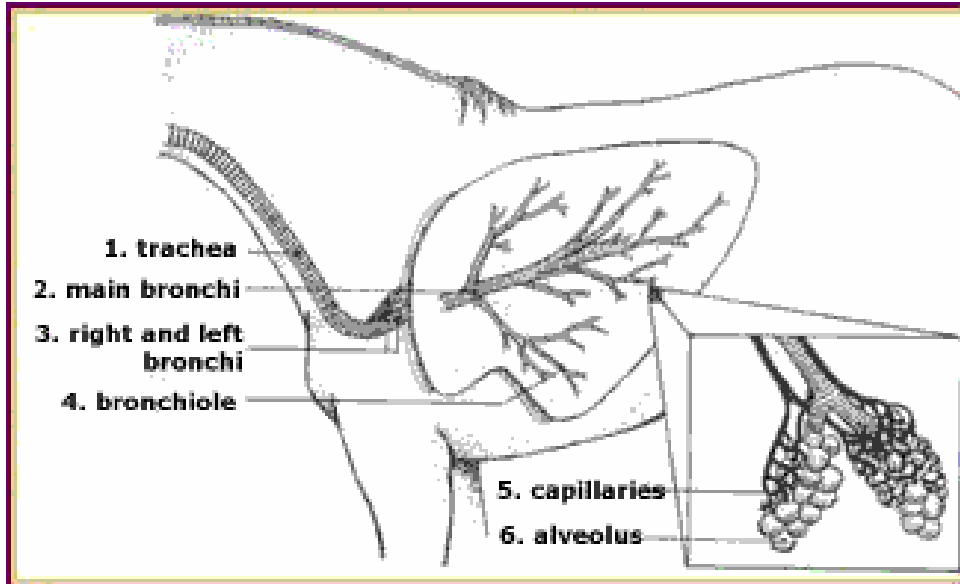


## Respiratory System



[http://www.equinecentre.unimelb.edu.au/\\_images/health\\_resp\\_preventing\\_fig1.gif](http://www.equinecentre.unimelb.edu.au/_images/health_resp_preventing_fig1.gif)

Respiration is the movement of air into and out of the lungs. Muscles in the chest of the horse help move air in and out when they contract. The muscles are the diaphragm, a sheet of muscle at the bottom of the ribcage and intercostal muscles, muscles between the ribs.

The normal respiration rate of a horse is approximately 8-16 times in every minute. Just like the heart rate, the respiration rate can change due to things like exercise, environmental temperature, and sickness.

The respiratory tract is extremely important in horses and is primarily used to bring oxygen molecules to blood to oxygenate the body. It works with the respiratory tract. It also functions to help regulate temperature and for the horse to make noise.

The respiratory system begins at the nostrils where air is taken in through breathing or inspiration. The air travels down the trachea which leads to the lungs. The larynx helps the air flow through the trachea and prevents foreign objects from entering. The larynx also has the vocal cords which are used by the horse for vocalization.

The trachea is made of cartilage rings that are mostly on the inside and contain little tiny hairs. The little hairs help trap foreign objects and beat them out into the mucus and out of the tract. The trachea then divides into 2 bronchi for the left and right lung. The bronchi continue to get smaller, just like arteries, until they lead to alveoli where blood oxygen exchange occurs. The alveoli are little air sacs. Each lung contains different lobes. The right lung has three lobes and the left has 2.