

The Ferret Respiratory System

Unlock the mysteries of what the ferret respiratory system does and what can go wrong with it.

By Jerry Murray, DVM

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Although a ferret's respiratory system is similar to that of a human, differences do exist.

The main function of a ferret's respiratory system is to breathe in oxygen and to exhale out carbon dioxide. The respiratory system includes the nose, nasal cavity, pharynx, larynx, trachea, bronchi, and lungs. Unfortunately several diseases and conditions can cause problems with a ferret's respiratory system.

The Upper Respiratory System

A ferret's upper respiratory system contains the nose, nasal cavity and the pharynx, which is sometimes called the throat. The nose and nasal cavity filters, warms and humidifies the air. Filtering the air helps to remove viruses, bacteria, and other infectious agents before these reach the lungs and cause infections. The pharynx is a short tube that transports air into the larynx. Like the nasal passages, the pharynx helps to filter the air. In addition, the pharynx contains the tonsils, which also help to prevent infectious organisms from entering the lungs.

The Lower Respiratory System

A ferret's lower respiratory system contains the larynx, trachea, bronchi and lungs. The larynx is often referred to as the voice box, but its main role is to transport air into the trachea. It also prevents food and liquids from entering the ferret's trachea and lungs, and it helps to filter the air.

Air passes from the larynx into the trachea. The trachea is often called the windpipe. The trachea is made of C-shaped rings of cartilage. A ferret's trachea contains from 60 to 70 rings; humans have only 15 to 20 rings in the trachea.

The trachea splits into the left and right bronchi. The bronchi further divide into even smaller tubes called bronchioles. The trachea, bronchi and bronchioles help move mucus upward toward the pharynx.

The ferret has six lung lobes while humans only have five lobes. A ferret's left lung is composed of two lobes, but the right lung is made up of four lobes. Within the lung lobes, the bronchioles continue to divide into smaller passages and eventually into tiny alveolar sacs. These sacs are made up of very tiny alveoli.

The alveoli are where oxygen is delivered to the bloodstream and where carbon dioxide enters the respiratory system. The oxygenated blood goes back to the heart and is pumped out to the rest of the ferret's body, and the carbon dioxide is exhaled out through the nose or mouth.

Diseases Of The Respiratory System

Ferrets are susceptible to many viruses that can cause infections in the respiratory system. The human influenza virus is the most common virus involved in ferret respiratory infections.

Ferrets are quite susceptible to most human influenza viruses, including the seasonal type A, the new 2009 H1N1 flu (swine) and the avian flu. Because ferrets can get the human flu and their lungs are similar to humans, ferrets are frequently used in human flu research. Ferrets can get the flu from people who have the flu or from other ferrets that have the flu. In a very recent case, a pet ferret in the Portland, Oregon, area got the swine flu from its owner. Thus, it is very important to avoid playing with or handling your ferret if you have the flu.

Most seasonal type A flu cases are mild in adult ferrets, but type A flu may cause more serious illness in young or old ferrets. H1N1 (swine) flu and avian flu can cause mild to fatal disease in ferrets regardless of age.

Ferrets with the flu usually have a fever, sneeze or cough, are lethargic, have a discharge from the nose and eyes, and eat less than normal. Treatment of the flu can include anti-influenza medications such as Tamiflu, along with an antibiotic for secondary bacterial infections, fluid therapy and supportive care.