

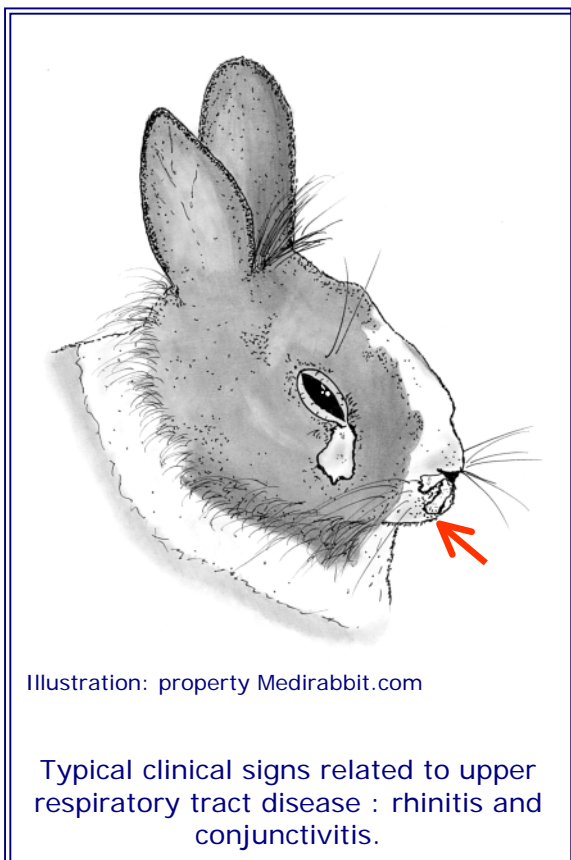
Ammonia intoxication in rabbits

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Ammonia (NH₃) is a heavy gas, whose presence in greater concentration is toxic. It is formed during the degradation of litter, urine, excrements, and takes place in warm conditions. It is thus more likely to observe NH₃ intoxication during the summer months, rather than in the winter.

NH₃ is rapidly absorbed by the mucosal cells lining the respiratory tract of the rabbit, where it will be transformed into an alkaline molecule with aggressive properties. This leads to the destruction of the mucociliary epithelial cells lining the respiratory tract, whose role is to protect the respiratory tract against bacterial aggressions.

Although NH₃ is a toxic molecule, intoxication is often ignored, maybe as it is not fatal issue. The problem is seen more often in commercial rabbitries, seldom in private homes where a rabbit is kept in good hygienic conditions.



The prevention of NH₃ intoxication is done by regular cleaning of the litter boxes, and a good aeration.

Symptoms

The disease is characterized by different stages, depending on the length of exposure and the concentration of ammonia in the air.

In the very beginning, typical problems related to upper respiratory disease are observed: nasal and ocular discharge, swollen eyelids and irritation of the corneal surface of the eye, sneezing and snoring, rarely fever.

If the problem is not treated, pharyngeal and tracheal



inflammation is observed, followed by lower respiratory tract disease. At this stage, secondary bacterial infection is possible, due to the destruction of the mucociliary barrier and depression of the immune system. At this stage, the disease develops in an acute form, with difficult respiration and sometimes coughing. The rabbit is often anorexic, depressed, shows signs of dyspnoea (abnormal or difficult breathing) and cyanosis (blue discoloration of tongue, lips, gums, due to shortage of oxygen), fever or hypothermia.

The disease is difficult to treat and often becomes chronic, even when the rabbits are transferred to a clean well-aerated environment.

For information of the treatment of bacteria induced respiratory diseases, see: [Upper respiratory tract disease in rabbits](#)

Acknowledgement

Thanks are due to Katleen Hermans, DVM, (Kliniek voor Pluimvee en Bijzondere Dieren, Universiteit Gent, Belgium) for the permission to use her pictures.

Further Information

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JUNE 2005

