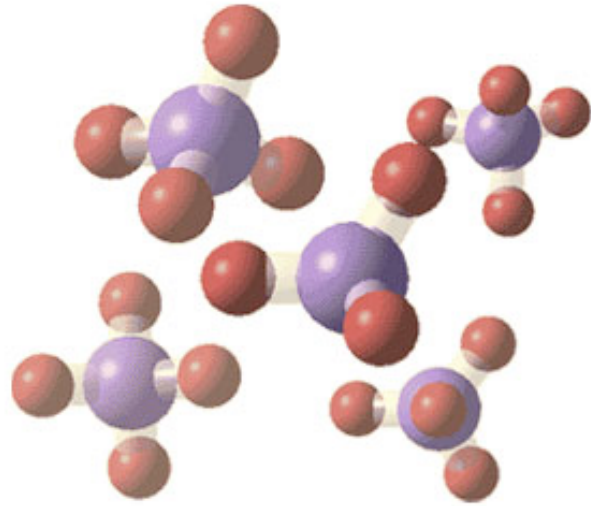


## Ammonia end Effects to Horse Health

Ammonia is a gas that is highly irritating, colorless and very soluble. It is absorbed in the superior part of the breathing path through the mucous membrane. Its presence alters the defense mechanisms of the animal, allowing the accumulation of pathogenic bacteria in the breathing tract and the presence of illnesses.

It has also been reported that ammonia can reduce the capturing of oxygen by the hemoglobin due to its impact in the blood pH. This could explain the rate of reduction of oxygenation and its inability to comply with the metabolic demand for the oxygenation of the tissue. Upon increasing, the heart cannot simply adjust itself to such demands. Ascitis and cardiac failures take hold as well as the disruption of the negative effects of ammonia in birds and hogs begin when the concentrations exceed 20-ppm. Ammonia is considered extremely harmful at levels of 50 ppm.



The symptoms of irritation by ammonia in birds include: ocular damage, sensitivity to light, ulcers in connecting tissue, pulmonary congestion, edema, hemorrhage, a decrease in food consumption, ascitis. In very high levels ammonia damage causes death.

In hogs, ammonia provokes susceptibility to breathing illnesses such as atrophic rinitis and nasal congestion, nose and mouth irritation, and pneumonia. It has been reported at ammonia levels of 50 ppm a loss of weight gain by 10% or more.

In summary, ammonia generated in livestock operations increases the susceptibility to breathing illnesses, causing a general health deterioration. This reflects is negatively reflected in the decrease of productive parameters such as the weight gain, the conversion and the reproduction.

Lastly, ammonia affects worker's health and performance, increases ventilation energy costs, provokes corrosion in metallic farm or operations equipment, and generates unpleasant smells.

Source <http://www.yucca.com.mx/nh4en.html>