

# The Effects of Breathing Ammonia in Cat Urine

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Ammonia is a colorless, pungent compound of hydrogen and nitrogen. Cat urine is composed of ammonia--a byproduct of metabolism--which imparts it its characteristic foul odor. Cats suffering from renal diseases often have urine high in ammonia content. Cat owners who are exposed to excessive amounts of cat urine inhale large quantities of ammonia vapors. Ammonia reacts with available moisture in the respiratory tract, oral cavity, eyes and the skin to produce ammonium hydroxide. Excessive ammonium hydroxide leads to cellular destruction by disrupting lipids in the cell membrane.

## Fainting & Vomiting

Inhalation of large quantities of ammonia causes immediate burning of the throat, respiratory tract and nose. As a person is exposed to larger quantities of ammonia, he or she may start to feel lightheaded and faint. Ammonia levels less than 1ppm (part per million) are deemed harmless. Levels greater than 25ppm cause nausea and headaches. Breathing in concentrations of ammonia greater than 300ppm can lead to death. However, ammonia in cat urine typically remains at lower levels.

## Eye & Skin Irritation

Excessive exposure to ammonia causes eye and skin irritation. Cat urine becomes embedded in furniture, baseboards, carpeting and other areas, and causes health hazards. Individuals with weak immune systems, allergies, asthma and other health conditions--such as migraines--are especially susceptible to the risks associated with ammonia inhalation. Low concentrations of ammonia (50ppm) also cause rapid eye and skin irritation. Prolonged exposure to a higher concentration of ammonia may cause permanent eye damage--or blindness--and skin burns. Children are most at risk for eye and skin problems resulting from ammonia inhalation

due to their lower body-weight ratio as compared to adults.

## Lung Irritation & Bronchitis

Inhalation of cat urine high in ammonia content causes tracheal burns, nasopharyngeal, alveolar edema, bronchiolar edema and airway damage--leading to respiratory distress or malfunction. Continual ammonia inhalation causes olfactory adaptation and fatigue. Presence of low levels of ammonia is difficult to detect accurately, delaying corrective action and medical care till serious damage has set in. Asphyxiation results in enclosed areas or those that are poorly ventilated.

Inhaling small to medium quantities of ammonia in cat urine causes cough, phlegm and leads to shortness of breath. Inhalation of ammonia irritates the airways of the lungs, making it difficult for an individual to breathe easily. Coughs that bring up phlegm are an indication of a respiratory infection.