



## Rat Respiratory Disease

### What causes respiratory disease in rats?

The most commonly involved bacteria is *Mycoplasma pulmonis*. This bacteria is very resistant to medication and often requires lifelong medication.

Following *Mycoplasma* infection, rats become more susceptible to other bacteria and viruses. These multiple infectious organisms form a respiratory disease complex. Because there are multiple organisms involved, numerous medications are often required.

### What clinical signs are seen?

- Sneezing, wheezing, coughing, grunting
- Reduced activity levels
- Excess nasal discharge and tears which may be red in colour (porphyrin stained discharge in a pet rat can be normal)
- Weight loss and reduced appetite
- Respiratory effort

### What treatment is involved?

- Most rats will first be treated with oral antibiotics and then a combination of medications may be used as the disease progresses.
- 'Pulse-therapy' (periods on medication followed by periods off the medication) is often used to provide long-term relief from symptoms. Sometimes oxygen therapy may be required
- Bronchodilators (drugs to make breathing easier) may be required in the early to mid stages of disease.
- Anti-inflammatory medications are often used when activity levels and appetite are reduced
- Regular rechecks are required as the treatment regime may need to be frequently updated to suit the individual rat.

### What is the prognosis?

Very few rats completely recover from respiratory disease. Medications are used to slow the progression of disease and improve the quality of life for as long as possible.

Many rats will decline after a number of months or years despite an initial response to medications.

X-rays may assist in determining the severity of the respiratory disease, may help to establish expected prognosis.

### How can we prevent respiratory disease in rats?

- Many rats will contract *Mycoplasma* at a very young age. Newly acquired rats are often already in the early non-symptomatic stages of the disease.
- Prevent disease spread by making sure there is no contact between diseased and healthy rats.
- Quarantine for at least 2 months all new rats that are brought into a household.
- Aiming for lean body condition lifelong and encouraging daily physical activity is very important in general health, and especially for respiratory health. Overweight rats have more trouble coping with disease than those at a healthy weight. Feed a well balanced low fat diet. We recommend Vetafarm Rodent Origins Pellets, or Oxbow Garden Rat Pellets, as well as daily fresh vegetables. Treats and fruits should be fed in lower quantities.
- High levels of ammonia in the urine and odour from uncleaned urine, as well as dust in the air will predispose rats to developing respiratory problems. To maintain good air quality, clean out enclosures daily, make sure they have good ventilation, and do not use wood shavings as litter. Newspaper, blankets and yoga matting may be good alternatives to dusty substrates, or many dust-free options are available such as "Pure Comfort" through Oxbow Animal Health.
- We encourage regular steaming (e.g. 3-5 times weekly), or nebulisation as maintenance to help clear the chest and to assist in the delivery of medications to the lungs.