

Mycoplasma felis, canis & cynos

In dogs and cats, 'mucosal' mycoplasma infections typically cause ocular and respiratory disease, and less frequently neurological or joint disease. These *Mycoplasma* species are distinct to the **haemotropic mycoplasmas** (i.e. the haemoplasmas) that target red blood cells, causing haemolytic anaemia in dogs and cats.

We currently test for the following mucosal *Mycoplasma* species by quantitative (q)PCR in dogs and cats:

- *Mycoplasma canis* (dogs)
- *Mycoplasma cynos* (dogs)
- *Mycoplasma felis* (cats)



FAQs

Are mucosal mycoplasmas pathogenic in dogs and cats?

Mycoplasmas are cell-wall deficient bacteria and many species infect dogs and cats. In both dogs and cats, *Mycoplasma* spp. have been associated with lower respiratory tract disease (*M. cynos* in the dog and *M. felis* in the cat), joint disease (*M. felis* and *Mycoplasma gatae* in the cat; *Mycoplasma spumans* and *Mycoplasma edwardii* in the dog) and meningoencephalitis (*M. felis* in the cat; *M. edwardii* and *M. canis* in the dog). Keratoconjunctivitis and upper respiratory tract disease has also been reported in cats associated with *M. felis* infection. Mycoplasma are also occasionally cultured from the urinary tract in association with clinical signs.

Mycoplasma infections can be found in healthy animals, so diagnostic findings must be interpreted in conjunction with the clinical signs observed as well as any other disease processes or infections found to be present (e.g. feline calicivirus, *Chlamydia felis*).

What clinical signs may be seen with *Mycoplasma* spp. infections?

Clinical signs will depend on where in the body the infection is located. Lower respiratory tract infections can result in pneumonia with fever, cough, tachypnoea, and lethargy. This may progress to the development of pyothorax with shallow breathing and further respiratory compromise. Upper respiratory tract infections are associated with conjunctivitis, ocular and nasal discharge and sneezing. Joint pain and swelling, with pyrexia, may be seen with (poly)arthritis, and neurological signs may occur with meningoencephalitis.

Reception Hours

Mon-Fri 9am - 5pm

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How do I diagnose *Mycoplasma* spp. infections?

Culture of mycoplasmas can be used to demonstrate infection, but some species are hard to grow and rapid transport of samples to the laboratory is required. Demonstration of organisms via qPCR is increasingly being used to circumvent the difficulties with culture, and can be performed on ocular swabs, oropharyngeal (throat) swabs, bronchoalveolar lavage (a.k.a. BAL or 'lung wash'), tracheal washes, synovial fluid, cerebrospinal fluid (CSF), and pleural fluid.

The qPCR assays run by the Molecular Diagnostic Unit include an internal amplification control to ensure that a valid diagnostic result is produced for every submitted sample. Interpretation of PCR results must be done in conjunction with the clinical signs the animal is showing as well as other clinicopathological results. We offer species-specific qPCR assays to detect *M. felis* (cats) and *M. canis* and *M. cynos* (dogs) on submitted samples.

How do I treat mucosal *Mycoplasma* spp. infections?

Mucosal *Mycoplasma* spp. infections are typically treated with doxycycline (10 mg/kg once daily orally for at least 2 weeks). Care must be taken to follow doxycycline with food or water to prevent oesophagitis as a result of the medication lodging in the oesophagus, as some preparations cause oesophageal ulceration. Longer treatment courses (of 4-weeks or more) may be required for lower respiratory tract infections. Alternative treatments include fluoroquinolones (e.g. marbofloxacin, pradofloxacin). Clinical response and follow up qPCR analysis can help monitor response to treatment.

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