



Companion Animal Influenza Information

Veterinarians should remain vigilant for suspect cases of influenza A in companion animals including:

- **H3N2 (and less commonly H3N8) strains of “canine” influenza A virus:** These strains are highly transmissible between dogs and can be a component of canine infectious respiratory disease complex (CIRDC). H3N2 continues to circulate and cause sporadic outbreaks in the US, and can also be found in imported dogs, particularly from Asia. Dogs with recent travel history (or who have contact with dogs that have travelled recently) and compatible clinical signs of CIRDC are considered highest risk. Oropharyngeal/nasal swabs are recommended for testing.
- **H5N1 highly pathogenic avian influenza (HPAI):** Spillover infections in mammals from infected wild birds (particularly migratory birds) are possible but rare, therefore testing should only be considered in high-risk animals with compatible clinical signs. Pets with known direct contact with sick or dead birds (e.g. hunting, scavenging) are considered highest risk. Clinical signs in acutely infected dogs and cats may involve neurological and/or respiratory signs. Oropharyngeal/nasal swabs are recommended for testing of live animals. If a pet dies or is euthanized due to suspect H5N1 infection, please contact the AHL to discuss sampling or submit the entire body for post-mortem examination.

Virus detection by PCR

PCR testing is recommended in acute cases. Swabs should be put in virus transport medium (VTM) - AHL has VTM and swabs available at cost. Alternatively, a dry sterile swab put in a red-top tube with a few drops of sterile saline can be used, see [AHL LabNote 36](#).

Note: Regular gel-based bacteriology swabs/transport media are not recommended for PCR testing.

Instructions for influenza swab sampling:

Oropharyngeal swabs are likely the most sensitive site for detection of H5N1 virus in live animals; therefore, this is the preferred sample if only 1 swab is submitted. Nasal swabs are typically collected to test for other influenza strains in dogs. Nasal swabs and fecal swabs can also be used to test for H5N1; however, the sensitivity may be lower than the oropharyngeal sample. Please submit 2 swabs per site if possible to ensure that there is sufficient sample for testing and scientific evaluation.

Gloves should be worn for sample collection. As pets may be prone to sneeze during or after the procedure, face protection (mask and glasses or goggles) is also recommended to reduce the risk of exposure to respiratory secretions.

1) Unwrap the swab, ensuring not to let the white cotton end or stem come in contact with any other surfaces, or with your hands.

- 2) Have a handler hold the muzzle of the pet and the rest of the body. Sometimes an open-ended muzzle is helpful.
- 3) To collect an oropharyngeal swab sample, insert the swab into the side of the mouth and direct it as far back into the throat as the pet will allow.
- 4) To collect a nasal swab sample (in dogs of sufficient size), insert the swab quickly up the nostril of the dog, twirling the swab. Depth: maximum 2" for an average dog or 1" for a very small breed or short-nosed dogs. It is important to get the swab into the nostril and not to just swab the outside of the nose. Remove the swab, and then with the same swab, swab the other nostril the same way. Speed is key for the dog's comfort here, as is good restraint.
- 4) Put the swab into the container provided, being careful not to let it touch any other surfaces or your hands. Label clearly with the dog's name, breed, and date (and owner if applicable).
- 5) Change gloves and wash your hands thoroughly before swabbing the next animal. Swab animals that appear well before swabbing dogs that appear sick.
- 6) Put all swabs into a box, wrapped in paper towel, with 2-3 icepacks.
- 7) Seal the box, and ship to the lab by Purolator using the return shipping label provided (available from AHL).

Antibody testing

AHL offers an influenza A virus ELISA that detects antibodies against all influenza A virus subtypes (including H3N2/H3N8 and H5N1) in serum samples from multiple animal species. However, the test is not recommended in acute cases. Test results will not provide "titers" but the result will be interpreted as positive or negative.

Serum neutralization (titer) testing is available for H3N8 and H3N2 "canine" influenza A virus as a send out to Cornell University. A change from negative to positive, or a 4-fold increase in titers between acute and convalescent samples (taken 3-4 weeks later) would indicate recent exposure. Vaccination will interfere with field virus titer testing for H3N8 and H3N2 strains.

Please note: There is currently no specific antibody testing available for H5N1 influenza A in animals.

Sample submission

If you are interested in submitting samples to the AHL for testing, please have a look at our website.

Submission forms: <https://www.uoguelph.ca/ahl/submissions/submission-forms>

Submission instructions: <https://www.uoguelph.ca/ahl/submissions/ahl-labnote-27-submission-instructions>

Note: Any influenza A virus in a companion animal is considered "novel", therefore any positive test result for an animal in Ontario will be reported by AHL to the Ministry of Health and the Ontario Ministry of Agriculture, Food and Rural Affairs. If testing is performed by a laboratory outside Ontario, it is the attending veterinarian's responsibility to report any positive test result upon receipt.

Note: H5 influenza is a CFIA reportable disease. Any non-negative test result for H5 influenza in any species will be reported immediately to the CFIA, and samples will be forwarded to the National Centre for Foreign Animal Disease for confirmation. If you suspect clinical disease due to influenza A in poultry, the district CFIA office in your area should be contacted immediately.

<https://inspection.canada.ca/about-cfia/contact-a-cfia-office-by-telephone/eng/1313255382836/1313256130232>

Testing for influenza A in companion animals is not subsidized; testing is performed at the discretion of the attending veterinarian and at the expense of the owner. Veterinarians who would like to discuss testing can contact the AHL directly, or OMAFRA through the Agricultural Information Contact Centre (AICC) 877-424-1300.

For additional information or to request VTM swabs please email AHL Client service at ahinfo@uoguelph.ca or call us 519-824-4120 extension 54530.