

# EQUINE INFECTIOUS DISEASE SURVEILLANCE

EIDS is based at the University of Cambridge and collaborates with equine industry stakeholders to control equine infectious diseases in the UK. Our dedicated team oversees multiple surveillance schemes, aiding in the identification and reporting of specific infectious disease occurrences. We provide crucial disease control advice services for veterinary surgeons and actively collate and share information. To find out more, including how to sign up for our subsidised equine influenza testing scheme and view infectious disease reports, visit our website, [www.equinesurveillance.org](http://www.equinesurveillance.org).

## FREE VETERINARY ADVICE SERVICE

### DIAGNOSTIC ADVICE

how to make a diagnosis, the best samples to take and tests to run

### OUTBREAK CLEARANCE

when is it required and when and how to apply it



[www.equinesurveillance.org](http://www.equinesurveillance.org)

### OUTBREAK CONTROL

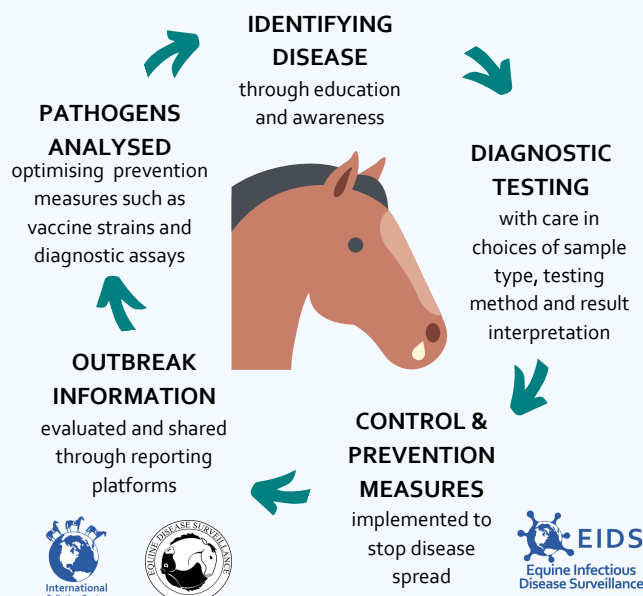
tailormade guidance to the population and premises set up

### FUTURE PREVENTION

what measures to consider for the owner and premises

Call us for **FREE** advice - 01223 766 496

## THE SURVEILLANCE WHEEL



## DIAGNOSTIC SAMPLING AND TESTING FOR EQUINE INFECTIOUS DISEASES BY UK BASED EQUINE VETERINARY SURGEONS: CRIB SHEET

Equine influenza, equine herpes and strangles are endemic diseases in the UK, although early distinction between them based on clinical signs alone, may be unreliable. West Nile fever, caused by West Nile virus (WNV), is a notifiable equine disease in the UK; since 2018 it has emerged in more northerly regions of Europe, heightening concerns of it spreading to the UK.

- Equine influenza virus: highly contagious, with rapidly spreading signs, including hacking cough, among susceptible individuals; signs may be mild and self-limiting in vaccinated/previously exposed horses; but potential for large outbreaks/epidemics affecting equestrian sports/events make this a significant global pathogen
- Equine herpes virus-1/-4: respiratory signs include nasal discharge and/or coughing, but infection may be subclinical, with potential for neurological (EHV-1) and abortion/neonatal foal death (EHV-1 & EHV4) presentations make these very significant equine pathogens
- *Streptococcus equi*: signs of equine strangles include pyrexia, nasal discharge, inappetence, cough, +/- lymphadenopathy/abscessation, as well as fatal complications. Given endemic nature, prior exposure and partial immunity is possible, reducing the severity of clinical signs if horses are re-exposed
- WNV: mosquitoes naturally transmit WNV between birds, with horses (and humans) also infected if bitten by infected insects but without sufficient virus in their blood to act as sources of infection for other animals

For further information on equine infectious diseases and their prevention and control, see the HBLB International Codes of Practice at <https://codes.hblb.org.uk/>

Use the table on the back of this page to assist in determining the best samples to take and tests to run in cases/outbreaks of respiratory or neurological disease presentations

# DIAGNOSTIC SAMPLING AND TESTING FOR EQUINE INFECTIOUS DISEASES: CRIB SHEET

PRESENTATION	CLINICAL SIGNS	INFECTIONS TO CONSIDER	DIAGNOSTIC SAMPLES TO TAKE	DIAGNOSTIC TESTS TO RUN
RESPIRATORY	Any combination of cough, nasal discharge, pyrexia, inappetence, exercise intolerance and lethargy	Equine influenza virus	Nasopharyngeal swab*	<ul style="list-style-type: none"> <li>Equine influenza virus PCR<sup>^</sup></li> <li>Equine herpes virus-1/-4 PCR<sup>^</sup></li> <li><i>Streptococcus equi</i> PCR<sup>^</sup></li> <li><i>Streptococcus zooepidemicus</i> PCR</li> </ul>
		Equine herpes virus-1/-4 <i>Streptococcus equi</i> (Strangles) <i>Streptococcus zooepidemicus</i>	Clotted blood/serum (plain blood tube)	<ul style="list-style-type: none"> <li>Equine influenza haemagglutination inhibition (HI) test</li> <li>Equine herpes virus complement fixation (CF) test</li> <li>Strangles ELISA</li> </ul> <p><i>Alternatively, separate off serum (either by centrifuge or leave sample upright to clot) and store in fridge (for up to a few weeks) or freezer (for longer periods, lasting years). Sample then available if additional diagnostics are required or to run alongside a second (convalescent) serum sample taken 14 days after disease onset</i></p>
NEUROLOGICAL	Any combination of ataxia, limb paresis, urine dribbling, recumbency (EHV-1 more likely) <b>OR</b> mild depression to head pressing and a state of drowsiness, behavioural changes, facial twitching, impaired vision, inability to swallow, heightened sensitivity, muscle fasciculations, weakness (paresis) or paralysis of front and/or hind limbs, loss of bodily function (ataxia), aimless wandering, recumbency, coma and death (West Nile virus should be considered)	Equine herpes virus-1	Nasopharyngeal swab*	<ul style="list-style-type: none"> <li>Equine herpes virus-1 PCR<sup>^</sup></li> </ul>
		West Nile virus (notifiable)	Clotted blood/serum (plain blood tube)	<ul style="list-style-type: none"> <li>Equine herpes virus-1 complement fixation (CF) test</li> <li>West Nile virus ELISA – submitted through Defra’s testing to exclude (TTE) process, info available at: <a href="http://apha.defra.gov.uk/vetgateway/tte/wnv.htm">http://apha.defra.gov.uk/vetgateway/tte/wnv.htm</a></li> </ul>
			Whole blood (heparin blood tube) x3	<ul style="list-style-type: none"> <li>Equine herpes virus-1 PCR<sup>^</sup> (to test for a viraemia)</li> </ul>
			Cerebrospinal fluid (CSF)	<ul style="list-style-type: none"> <li>Macroscopic and microscopic (cytological) examinations</li> <li>Equine herpes virus-1 PCR<sup>^</sup></li> </ul>
			Post mortem examination (PME)	<ul style="list-style-type: none"> <li>Strongly consider PME if case dies or is euthanased and should include PCR<sup>^</sup> for EHV-1 on spinal cord tissues with evidence of suspected thrombotic pathology</li> </ul>

\*If horse not amenable to a nasopharyngeal swab, consider a nasal swab as an alternative | <sup>^</sup> or other molecular detection methods such as LAMP or iiPCR