



AgroLogic

Coventry Chemicals

Diamond V

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Hyline

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Interheat

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## Introduction

There are few areas of the world that have not been affected by Newcastle disease and the disease occurs quite frequently in Africa, Asia and the Middle East. Recently, cases have been seen in western Europe. The Newcastle disease virus is capable of infecting many bird species – not just poultry.

## Transmission, vectors and spread

Newcastle disease virus leaves infected birds via their oropharyngeal secretions and faeces. These can become contaminated dust or the former can leave the bird as an aerosol. The main route of infection is via the ingestion of contaminated materials. Spread by man is mediated by the transportation of contaminated fomites, such as boots, clothes (overalls) and equipment. Other fomites include feed, water, poultry products, birds (wild and poultry) and insects. Control is centred around strict quarantine procedures and vaccination.

## Clinical signs

Mortality can be as high as 100% in susceptible chickens infected by virulent viscerotropic strains of the Newcastle disease virus. With oculonasal infections, conjunctivitis and some facial swelling may be seen. The faeces of infected birds can be green and watery and the comb becomes blue as the bird becomes cyanotic. If the viral strain involved is neurotropic, nervous sign such as tremors, torticollis and paralysis of a wing or a leg may be seen. In well vaccinated layers the only clinical sign may be an egg drop, followed by misshapen and/or white eggs.

## Pathology

Lesions are often absent in vaccinated birds. Necrotic and haemorrhagic lesions are seen in areas with lymphoid tissues (lower eyelids, caecal tonsils and Peyer's patches). An enlarged spleen and haemorrhagic thymus and proventriculus are also often commonly seen. Egg yolk peritonitis and atrophied ovarian follicles are often seen in birds in lay.

## Diagnosis

Diagnosis is made on the basis of clinical and post mortem findings, coupled with virus isolation and serology. Newcastle disease is a notifiable disease that is reportable to the OIE.

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