Infectious laryngotracheitis (ILT) is a contagious respiratory disease which is characterised by gasping, neck extension and conjunctivitis (inflammation of the membrane around the eye).

Cause

ILT is caused by a virus which may live for 8 to 10 days in droppings and up to 70 days in carcasses, hence correct disposal is essential. It is believed that the virus may survive for up to 80 days in tracheal exudate (throat exudate) if not disturbed. This shows the importance of sound clean-up procedures and high pressure hosing.

Susceptible Species:

Fowls, pheasants and turkeys. Water fowl, such as ducks and geese, show no signs, but ducks are known to carry ILT. Wild birds may act as carriers.

Symptoms

Early symptoms may include bouts of hard swallowing, ruffled feathers on the back of the head, squinting and watering of one or both eyes, known as conjunctivitis.

After the incubation period of 3 to 14 days, there is increased mucus formation in the trachea, frequently followed by tracheal haemorrhage. This causes the bird to cough and to extend its head in a characteristic manner in order to breathe. In some cases only mild respiratory signs are seen but one eye may completely close.

The classical signs are gasping, coughing and sticking the neck forward and upwards with each breath in an effort to clear the mucus which builds up in the trachea (windpipe) – in fact, many birds die from the disease due to suffocation, ie, the windpipe becomes completely blocked. In acute cases, there has been up to 70% mortality.
There is a marked variation in the pathogenicity (potency) of various strains of the virus. Three major forms – the peracute, the subacute and mild or chronic forms are known.

Three broad forms are seen:

- **Peracute form** – high mortality of up to 70%. Severe respiratory signs of rales (rattles in the throat), gasping, coughing with expulsion of blood or blood-stained mucus are seen. The birds are very depressed. On post mortem, acute haemorrhagic inflammation of the trachea and larynx is present and the lumen (centre) of the trachea is blocked by mucoid blood clots and sometimes yellow caseous exudate (cheesy plug-hard pus). Death is normally by suffocation.

- **Subacute form** – A high morbidity (sickness) rate but a lower mortality (10-30%) occurs. There are less severe respiratory signs of rales, coughing with expulsion of caseous matter, mucoid nasal discharge, gasping and infra-orbital sinus swelling. There is often conjunctivitis with severe lacrimation (eye discharge) and the eyelids matted together. On post mortem, mucus which may be bloodstained is found with membranes in the upper respiratory tract. Death is normally by suffocation.

- **Mild or chronic form** – This shows as a low morbidity (sickness) rate (5%), the birds are drowsy with signs of conjunctivitis, squinting eyes, and bronchitis combined with a cough. There is often a concurrent infection with coryza. Egg production may drop 10%. On post mortem, false membranes are seen in the upper respiratory tract which may cause death.

**Transmission**

The ILT virus is released from the respiratory tract and there is rapid airborne transmission among birds in close contact such as cage or pen mates. The virus enters the bird through the eye, the nose or the mouth. The coughed-up mucus and blood contains virus and is another means of quick spread of the disease.

Most outbreaks in the past have been traced to the movement of poultry, people and equipment, however if environmental conditions are suitable windborne spread must be considered.

The virus depends on a transporting agent to get around. The virus is not transmitted through the egg so chickens are not infected at the time of hatching.

- **Introduction of infected birds** – A major means of spread of the disease is by the introduction of affected birds, carrier birds or birds which are incubating the disease at the time of introduction. Carriers of the wild strains of ILT can shed virus at times of stress thus infecting susceptible in-contact birds.

- **People and contaminated equipment** – these can also introduce infection into any flock. Contaminated crates and feed trucks are known sources of infection. People in contact with infected birds and on the same day contacting susceptible flocks may transfer the disease if suitable precautions are not taken.
• **Airborne spread** – ILT airborne spread depends on the prevailing conditions. There is rapid airborne transmission among birds in close contact. The virus often requires mechanical transfer to cover even short distances such as from one building to another.

• However, it is recognized that birds in sheds close to roads may be infected by diseased birds being transported down the road. Under conditions of cloud cover, humidity or showers and gusting winds, it would appear that the ILT virus can easily cover 500 metres and possibly much further. Small feathers and shed dust are ideal transporting agents.

• **Litter and manure** – ILT virus may survive in the birds' environment for periods of time, and transmission may occur when susceptible birds are placed in a recently contaminated but uncleaned environment.

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**Infectious period**

Eye vaccinated birds usually start to show signs on days 3 to 5 and have normally finished shedding virus by days 11 or 12.

It is generally accepted that wild or field strains cause the birds to shed virus over a longer period than vaccine strains. Again the period of shedding would depend on the incubation time which is usually longer than for vaccine strains (up to 14 days). The length of the shedding period will depend on when the last birds in the building became infected.

This situation can be short circuited by vaccination however a resultant carrier state (bird appears normal but may shed virus when stressed) is established in many birds.

The virus can survive for 10 days or more in droppings and up to 70 days in carcasses. The virus lasts longer in winter when it is cooler. It appears the virus may survive up to 80 days in tracheal mucus on non-conductive material such as wood. One percent lysol or three percent cresol will inactivate ILT virus in less than a minute.

Sunlight, heat and desiccation (drying) appear to be the three natural enemies of the ILT virus.

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**Diagnosis**

Acutely (severely) affected birds will show free blood in the trachea, generally associated with a mucus plug which inhibits normal breathing. The symptoms will rapidly spread throughout the flock.

Birds with subacute and mild infections may show only slight difficulty in breathing and perhaps a mild watering of one or both eyes. However, the disease can still be easily transmitted from one bird to another. Mild ILT infection may look like any other respiratory or virus infection.
Laboratory diagnosis will always be required to determine whether ILT virus is present.

**Control**

**ILT may be controlled by:**

- management practices: quarantine, isolation of introduced birds, no introduction of stock to farm (not practical for show poultry). Does not guarantee protection.
- vaccination: annual vaccination will result in protection for all birds. Eye drop vaccination is normally carried out at 7-10 days and again at 8-12 weeks.

**Treatment**

Antibiotics have no effect against the virus. Vaccination and the short incubation period of the vaccine is used to halt an outbreak.

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**NEED A VET?**

**USA:** [Find Your Local Avian Veterinarian](#)

Information contained on this website is provided as general reference only. For application to specific circumstances, professional advice should be sought.

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