

# Infectious laryngotracheitis (ILT)

Extended Version

**Classic case:** Coughing, conjunctivitis, +/- bloodstained beaks, decreased egg production

## Presentation:

- ALL chickens > 4 weeks of age
- **Multiple strains** = a range of mild to severe lesions
- **Acute UPPER respiratory signs**
  - Neck extension during inspiration
  - Loud gasping, coughing, marked dyspnea
  - **Conjunctivitis, periorbital swelling**
  - Blood-stained mouth, beak (tracheal exudate)
  - **Decreased egg production**
- **Subacute**
  - Nasal and ocular discharge
  - Tracheitis
  - Conjunctivitis
  - Mild rales

## DDX:

Adenovirus, aspergillosis, avian influenza, avian pox, infectious bronchitis, Newcastle disease, Fowlpox virus, Turkey rhinotracheitis virus, infectious coryza, mycoplasmosis

## Test(s) of choice: Reportable disease

- **Necropsy**
  - Trachea – blood, mucus, yellow caseous exudates, hollow caseous cast
  - Conjunctivitis
- **Histopathology**
  - Intranuclear inclusion bodies
- **Virus Isolation**
  - Using chick embryos
- **Demonstration of viral antigen**
  - Fluorescent antibody, immunoperoxidase
  - Electron microscopy, DNA hybridization
  - Antigen capture ELISA
  - **PCR**
- **Serology**
  - AGID, serum neutralization, ELISA



Chicken on right shows signs of severe conjunctivitis, w/ swelling and redness of the conjunctiva and surrounding periorbital tissues and copious yellow ocular discharge.

Image courtesy of Cornell Univ., [Atlas of Avian Diseases](#)



The trachea and larynx are the most common areas to find gross lesions of ILT.

**Top** = milder diffuse inflammation, hemorrhages.

**Middle** = hemorrhagic exudate.

**Bottom** = severe caseous diptheritic changes

Images courtesy of Cornell Univ., [Atlas of Avian Diseases](#)

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## Rx of choice:

- **Immediate vaccination** of adults during an outbreak
  - Shortens course of disease
  - Modified live attenuated eye drop vaccine
- **Supportive Care**
  - Decrease stress
  - Lower dust levels
  - Mild expectorants

**Prognosis:** Economically important due to ↓ egg production

**Good:** Mild forms, high morbidity, low mortality

**Poor to Grave:** Severe forms with tracheal occlusion

## Prevention:

- **Vaccination**
  - Endemic areas
  - Farm outbreaks
    - Modified live attenuated vaccine (eye drop) often administered by coarse spray
    - ILT recombinant vaccines – *in ovo*, SQ, wing web
- **Strict biosecurity**
- **Strict sanitation protocols**

## Pearls:

- Highly contagious
- Alpha herpesvirus (Gallus herpesvirus-1) – double stranded DNA virus
- Transmission by direct contact, fomites
- **Clinically recovered birds (carriers) are most important vector**
- Pheasants and peafowl can get ILT, but less common in them

## Images worth a look

[Image library for Infectious laryngotracheitis](#) Cornell University Atlas of Avian Diseases

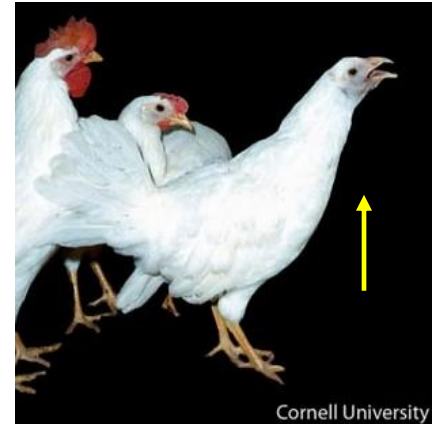
[14 key diseases of poultry](#), (images) Atlas of Avian diseases, Cornell University, Partners in Health website

[Image of bloody mucus in trachea](#). National Animal Disease Information Service

[Bloody tracheitis](#). Merck Manual 10<sup>th</sup> ed online

[Normal chicken necropsy anatomy, + many poultry disease images](#), Poster (pdf), Lohman Animal health

**Refs:** [Cornell Atlas of Avian Diseases Infectious Laryngotracheitis](#); and Merck Manual, 10<sup>th</sup> ed (online): [Infectious Laryngotracheitis](#)



*Milder forms of ILT manifest in dyspnea, open mouth breathing, neck extension, ↓ egg production*



*Severe epizootic forms of ILT may manifest with expectoration of bloody mucus.*

*Images courtesy of Cornell Univ., [Atlas of Avian Diseases](#)*