Avian Encephalomyelitis (AE)

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Avian encephalomyelitis (AE) is a worldwide viral disease caused by a virus from the Hepatovirus family. It has been reported from virtually all developed countries, including New Zealand, Australia, USA and New Caledonia.

Susceptible are ...

- It affects young chicken, Japanese quail, turkeys, and pheasants. The disease does not affect humans or other mammals.

- Even though chickens of all ages are susceptible, clinical signs of encephalitis only develop in those younger than four weeks. The disease progression is similar in turkeys and chickens.

Transmission:

- Transmitted both through the egg and by direct contact. Eggs laid by hens with sub-clinical infection will carry the virus. While hatchability drops, eggs will hatch and chicks will develop clinical disease soon after. Affected chicks shed virus in feces and will infect other chicks.

- Can also be introduced through the import of sub-clinically infected adult breeding stock, infected day-old chicks or hatching eggs.

Typical Symptoms:

- It is characterized by an initial dull expression of the eyes followed by ataxia (a neurological sign and symptom consisting of gross lack of coordination of muscle movements), tremor of the head, neck and limbs.

- Progressive ataxia - losing control of legs, sitting on its haunches and falling onto its side.

- Muscular tremors are best seen after exercising the bird; holding the bird on its back in the cupped hand helps in detection.

- Tremor of the head and neck

- Eventually paralysis and death from inability to feed or drink, or through being trampled.

- Some birds recover, and others may survive with persistent clinical signs.

- In susceptible adult birds, infection is usually sub-clinical, although there
may be a transient drop in egg production.

Signs commonly appear at 7-10 days of age, although they may be present at hatching or delayed for several weeks.

Typically, about 5% of the flock is affected, although morbidity and mortality may be much higher.

The disease in adult birds is inapparent except for a transient drop in egg production. The disease in turkeys is often milder than in chickens.

Similar Diseases / Conditions:

- **Nutritional Deficiencies:**
  - Avian encephalomyelitis (vitamin E deficiency)
  - Vitamin A deficiency
  - Riboflavin deficiency
  - Rickets (caused by a lack of vitamin D, calcium or phosphate)
- **Marek's Disease**
- **Newcastle disease**
- Eastern encephalitis (transmitted by the bite of an infected mosquito)
- Encephalitis caused by bacteria, fungi (eg, aspergillosis)
- Mycoplasmas

Prevention and Treatment:

- Sick birds should be isolated and potentially (humanly) destroyed as few of them recover.
- Good supportive care may be helpful in some cases.
- Sanitize the premises
- Immunization of breeder pullets 10-15 wk old with a commercial live vaccine is advised to prevent vertical transmission of the virus to progeny and to provide them with maternal immunity against the disease.
- A combination vaccine for fowlpox and avian encephalomyelitis is widely used. Breeder chickens are vaccinated at 10-16 weeks of age. Pheasants are vaccinated at 5-10 weeks of age and bobwhite quail at 6-10 weeks of age virus is administered to breeding pullets before they come into lay, their progeny will be protected by maternal antibody. Vaccination of table-egg flocks is advisable to prevent a temporary drop in egg production.

Even though the disease can be eliminated from flocks by immunisation, but sometimes it recurs after several years.

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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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