



THE WORLD LEADER



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## Introduction

Hepatitis-splenomegaly syndrome is seen in egg layers and broiler breeders. Typically egg drop and increased mortality are seen and the syndrome is caused by avian hepatitis E virus. The condition is also referred to as 'big liver and spleen disease'. The condition was first seen in western Canada and California in 1991, but has now been reported in other countries including the USA, UK and Australia. In Australia at one time it was thought that half of broiler breeder flocks were affected, with an estimated loss of 8-10 eggs per hen.

## Transmission

Avian hepatitis E virus is easily transmitted between flocks via the faecal route. Rodents can act as a mechanical carrier.

## Clinical signs

The incubation period ranges from one to three weeks and in the field both morbidity and mortality are relatively low. Hepatitis E virus infections can be widespread in chicken flocks in some countries, for example the USA. No clinical signs are seen in birds with hepatitis-splenomegaly syndrome prior to death.

In broiler breeders in Australia, which were particularly badly affected, a 20% egg drop was reported with a weekly <1% mortality over a period of a month. Internal egg quality, fertility and hatchability were not affected. Affected flocks produce small eggs with thin, poorly pigmented shells.

## Post mortem findings

Regressing ovary, red fluid in the abdominal cavity and enlarged liver and spleen are typically seen. The livers are enlarged due to haemorrhage and clotted blood can be seen in the abdominal cavity. Livers are friable, mottled and contain red, yellow and/or tan coloured foci and can contain subcapsular haematomas.

## Immunity

A humoral antibody response occurs one to four weeks post infection.

## Diagnosis

Diagnosis is based on clinical and post mortem findings. The differential diagnosis should consider haemorrhagic fatty liver syndrome and trauma.

## Control

Currently, no vaccine is available so control centres around strict biosecurity measures.