



DEPARTMENT: AGRICULTURE

Nervous conditions in poultry

WHAT ARE NERVOUS CONDITIONS?

Nervous signs occur when the brain, spinal cord or specific nerves are affected. Different organisms or poor feed can cause nervous signs in chickens. The most frequent nervous signs seen, are:

- Chickens lying down because they are unable to stand.
- Walking with difficulty as if in pain.
- Necks twisted or turned to the side.
- Staring into the air and not knowing where they are.
- Shivering.

WHAT CAUSES THESE CONDITIONS?

The following diseases cause nervous conditions in poultry. They are listed in order of how frequently they occur.



- Newcastle disease
- Epidemic tremor
- Marek's disease (range paralysis)
- Botulism

Poor feed can also cause nervous signs. Usually this is because of a lack of vitamin B2 or vitamin E. Poison can also cause nervous signs. There are many pesticides that should not be used on or near poultry.

Newcastle disease (NCD)

Cause

A virus which is present in droppings from sick birds and in the air (sneezing of sick birds). If these droppings contaminate food or water then healthy chickens will get sick. Healthy chickens also get sick by breathing in contaminated air. This virus can survive in the environment and can be transmitted by people, machines or equipment.

Signs in live poultry

Chickens often have turned heads when suffering from NCD. They also walk in circles or may have difficulty in walking. Other frequent signs are green diarrhoea, difficulty in breathing, depression and ruffled feathers. Birds usually die.

Signs in dead poultry

Windpipe (trachea) may be very red. Heart and/or stomach and intestines may have red spots. Otherwise the carcass is usually in good condition.

Treatment

There is no treatment for NCD.

Control

NCD is controlled by vaccination. Use either eye drop vaccine, sprays or vaccine in drinking water depending on how large your production system is.

IF YOU SUSPECT THAT YOU MAY HAVE NCD ON YOUR FARM IT IS VERY IMPORTANT THAT YOU CONTACT YOUR LOCAL STATE VETERINARIAN OR ANIMAL HEALTH TECHNICIAN. THEY WILL HELP YOU CONTROL THE DISEASE AND PREVENT IT FROM SPREADING TO NEIGHBOURING FARMS.

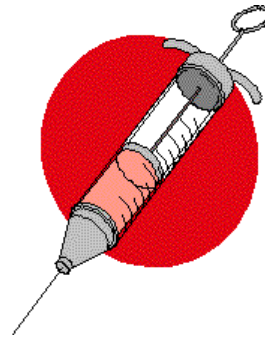
Epidemic tremor

Cause

A virus which is present in droppings of infected birds. Healthy birds are infected by eating food or drinking water contaminated by droppings. The virus is also passed from hens to their small chicks. This is the most important way that chicks get infected.

Signs in live poultry

Adult chickens that get infected do not show any serious signs. However, hens will produce fewer eggs than they normally do. The chicks that hatch from these infected eggs will show nervous signs, usually at 5 to 7 days of age. If one of these chicks is held in the hand, then shivers and tremors will be felt and seen. Also, chicks will show difficulty in walking, lie on their sides, become paralysed and will eventually die of starvation.



Signs in dead poultry

No specific signs are seen.

Treatment

There is no treatment for epidemic tremor.

Control

Epidemic tremor is controlled by vaccination. Young birds less than 8 weeks of age should not be vaccinated. Laying hens should also not be vaccinated. Vaccinating at these times could cause the disease. The best time to give the vaccine is between 8 and 16 weeks of age.

Marek's disease (range paralysis)

Cause

A virus which is present in feathers and can survive in feather dust in chicken houses. If these cages/houses are not cleaned regularly, new chickens that are placed in them will get sick.

Signs in live poultry

Birds become paralysed in one or both legs or the wings and lie down. They will eat normally but there may be considerable weight loss. Few birds die.

Signs in dead poultry

Carcasses are very thin. Nerves are thick and yellow in colour (normally thin and ivory white).

Treatment

There is no treatment for Marek's disease.

Control

Vaccinations are available. If possible try to buy vaccinated birds.

Botulism

Cause

A toxin that is produced by a germ causes botulism.

This toxin is usually present in dead and rotting poultry and other carcasses. It can also be present in maggots or beetles that have fed on these carcasses. Chickens get sick when they peck at these carcasses, maggots or beetles, or drink water or eat feed contaminated by carcasses.

Signs in live poultry

Chickens are weak and unable to walk, which eventually leads to paralysis. The head may be twisted or hang down. They may also lose feathers around the neck region.

Signs in dead poultry

No specific signs are seen.

Treatment

Drinking large quantities of fresh, clean water may help to flush out the

toxin and/or bacteria. Treatment with penicillin sometimes also helps.

Control

Management plays an important role.

FEED AS A CAUSE OF NERVOUS CONDITIONS

- A lack of vitamin E causes crazy chick disease. This occurs in chickens 2 to 3 weeks of age. Typical signs are muscular weakness: frequent falling, head and neck pulled towards the back, paralysis and eventual death because of starvation.
- A lack of vitamin B2 (riboflavin) causes curled toe paralysis. This occurs in 10 to 14 day old chicks. A lack of this vitamin affects the nerves of the wings and legs. Typical signs are reduced growth rate: legs are stretched out, curling-in of toes, drooping head, wings and tail feathers. Birds are still alert. The paralysis leads to death as a result of starvation. In early cases giving vitamin B2 in water leads to a rapid recovery.

In order to prevent these conditions you must make sure that you are feeding your poultry correctly (properly formulated chicken food).

HOW CAN I PREVENT MY CHICKENS FROM GETTING NERVOUS CONDITION?

- Vaccinating your chickens against diseases such as Newcastle disease can help in preventing them from getting sick.
- Good management is also very important:

- Chickens should not be overcrowded. Keep the correct number of birds for the space available.
- There should be enough air circulation in cages/houses
- Cages/houses should be washed, dried and disinfected regularly between batches.
- Control other birds and rats. They can also spread diseases.
- Clean and disinfect machines and equipment used. Also try not to let too many people onto your farm.
- Dead poultry should be removed as soon as possible.
- Feed a balanced diet.

**For further information consult your animal health technician, state or private veterinarian
or
Animal Health for Developing Farmers
ARC-Onderstepoort Veterinary Institute
Private Bag X05, Onderstepoort 0110
Tel. (012) 529 9158
or**

Resource Centre, Department of Agriculture

Tel. 319 7141/7085

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