

Exotic Newcastle Disease

Exotic Newcastle disease (END) is a contagious and fatal viral disease affecting all species of birds. Previously known as velogenic viscerotropic Newcastle disease (VVND), END is probably one of the most infectious diseases of poultry in the world. END is so virulent that many birds die without showing any clinical signs. A death rate of almost 100 percent can occur in unvaccinated poultry flocks. Exotic Newcastle can infect and cause death even in vaccinated poultry.

Clinical Signs

END affects the respiratory, nervous, and digestive systems. The incubation period for the disease ranges from 2 to 15 days. An infected bird may exhibit the following signs:

- Respiratory: sneezing, gasping for air, nasal discharge, coughing;
- Digestive: greenish, watery diarrhea;
- Nervous: depression, muscular tremors, drooping wings, twisting of head and neck, circling, complete paralysis;
- Partial to complete drop in egg production;
- Production of thin-shelled eggs;
- Swelling of the tissues around the eyes and in the neck;
- Sudden death;
- Increased death loss in a flock.

How END Spreads

END is spread primarily through direct contact between healthy birds and the bodily discharges of infected birds. The disease is transmitted through infected birds' droppings and secretions from the nose, mouth, and eyes. END spreads rapidly among birds kept in confinement, such as commercially raised chickens.

High concentrations of the END virus are in birds' bodily discharges. Therefore, the disease can be spread easily by mechanical means. Virus-bearing material can be picked up on shoes and clothing and carried from an infected flock to a healthy one. The disease is often spread by vaccination and debeaking crews, manure haulers, rendering truck drivers, feed delivery personnel, poultry buyers, egg service people, and poultry farm owners and employees.

The END virus can survive for several weeks in a warm and humid environment on birds' feathers, manure, and other materials. It can survive indefinitely in frozen material. However, the virus is destroyed rapidly by dehydration and by the ultraviolet rays in sunlight.

Smuggled pet birds, especially Amazon parrots from Latin America, pose a great risk of introducing exotic Newcastle into U.S. poultry flocks. Amazon parrots that are carriers of the disease but do not show symptoms are capable of shedding END virus for more than 400 days.

How Poultry Producers Can Help Control and Prevent END

The only way to eradicate END from commercial poultry is by rapidly destroying all infected flocks and imposing strict quarantine and in-depth surveillance programs. Poultry producers should strengthen biosecurity practices to prevent the introduction of the disease to their flocks. Biosecurity is also important to protect backyard and hobby flocks. The following are tips on proper biosecurity practices:

- Permit only essential workers and vehicles on the premises.
- Provide clean clothing and disinfection facilities for employees.
- Clean and disinfect vehicles (including tires and undercarriages) entering and leaving the premises.
- Avoid visiting other poultry operations.
- Maintain an "all-in, all-out" philosophy of flock management with a single age flock.
 - Control the movement of all poultry and poultry products from farm to farm.
 - Do not "skim" mature birds from a flock for sale to a live-poultry market.
 - Clean and disinfect poultry houses between each lot of birds.
- Do not keep pet birds on the farm. Do not hire employees who own pet birds.
- Exclude vaccination crews, catching crews, and other service personnel who may have been in contact with other poultry operations within 24 hours.
- Protect flocks from wild birds that may try to nest in poultry houses or feed with domesticated birds.
- Control movements associated with the disposal and handling of bird carcasses, litter, and manure.
- Take diseased birds to a diagnostic laboratory for examination.

How Pet Bird and Backyard Poultry Enthusiasts Can Help Control and Prevent END

END is also a threat to the caged-bird industry and poultry hobbyists. Birds illegally smuggled into the United States are not quarantined and tested by APHIS and therefore may carry the END virus.

Owners of pet birds should:

- Request certification from suppliers that birds are legally imported or are of U.S. stock, are healthy prior to shipment, and will be transported in new or thoroughly disinfected containers.
- Maintain records of all sales and shipments of flocks.
- Isolate all newly purchased birds for at least 30 days. Restrict movement of personnel between new and old birds.

Amazon parrots are difficult to raise domestically. Anyone who is offering to sell a large number of young parrots should be suspected of smuggling or purchasing smuggled birds.

U.S. Department of Agriculture's (USDA) Role

To prevent END from being introduced into U.S. poultry flocks, USDA's Animal and Plant Health Inspection Service (APHIS) requires that all imported birds (poultry, pet birds, birds exhibited at zoos, and ratiites) be tested and quarantined for diseases before entering the country.

In addition to international import restrictions, APHIS has increased surveillance efforts to detect END if it is accidentally introduced into the United States. APHIS and State veterinarians trained to diagnose foreign animal diseases regularly conduct field investigations of suspicious disease conditions. This surveillance is enhanced by efforts from university personnel, State animal health officials, USDA-accredited veterinarians, and industry representatives.

If END were detected in domestic poultry or pet birds, APHIS would work quickly with its State and industry counterparts to implement aggressive measures, including quarantine, control, and cleanup, to prevent opportunities for the disease to spread.

Reporting Suspicious Cases

Poultry or pet bird owners or veterinarians who suspect a bird may have END should immediately contact State or Federal animal health authorities.

Additional Information

For more information, contact:
USDA, APHIS, Veterinary Services
Emergency Programs
4700 River Road, Unit 41
Riverdale, MD 20737-1231
Telephone (301) 734-8073
Fax (301) 734-7817

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