

# Exotic Newcastle Disease

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**What is it?** Exotic Newcastle Disease (END) is an infectious viral disease (Paramyxovirus) of many avian species, including chickens, turkeys, gamebirds, ratites, waterfowl, pigeons, pet birds and wild birds. Some bird species (parrots and some wild birds) can be carriers of the virus without showing signs of disease. END is a different type of virus from the milder form that is commonly seen and vaccinated for in the U.S.

**What's the big deal?** END is a very serious threat to all avian industries: commercial, game fowl, gamebird, exhibition, waterfowl, ratites, pigeons and pet birds. There is no effective cure for the disease and the only way to eradicate the disease is by strict quarantine, surveillance, and depopulation. If END breaks here, state bird shows, exhibitions and sales will close. Quarantined zones will restrict the movement of all avian and possibly livestock traffic. Other countries will ban receiving poultry exports from the U.S. The best way to reduce the risk of introducing the disease into your birds is by following **Biosecurity practices** – see below.

**How is the disease transmitted?** The virus is shed in nasal secretions and feces of infected birds. The virus can then be spread by bird-to-bird contact, through infected manure, contaminated equipment, vehicles, bird & egg crates and people whose clothing or shoes have come in contact with the virus. The virus can be killed with disinfectants and drying, but if protected by organic material (manure, feathers, eggs, debris, etc.) it can survive for weeks.

**What are the signs of disease?** Clinical symptoms of the disease can include: sudden death loss or increase in losses, gasping for air, coughing, sneezing, green watery diarrhea, depression, loss of appetite, droopy wings, twisting of the head and neck, circling, egg production loss, paralysis, and muscle spasms. The death rate varies with the viral strain and avian species infected; but may be high at the initial onset. Lesions observed with the disease include: nasal discharge, swelling in the neck tissues around the trachea (windpipe), swelling around the eyes and thin misshapen eggs. Hemorrhages (blood) can be seen on the tracheal surface, inside lining of the proventriculus, areas throughout the intestines and in the vent. Birds may die quickly without showing any of these lesions as well. These clinical signs and lesions are seen in quite a few viral and bacteria diseases, so a proper laboratory diagnosis is needed.

**How is the disease diagnosed?** Through flock history, clinical signs, gross lesions, and virus isolation from tracheal/cloacal swabs and bird organs performed at a diagnostic lab.

**How is the disease prevented?** Prevent introduction onto the farm by keeping a closed flock and practicing **Biosecurity** – disease prevention management – whether you have a commercial poultry or pet bird farm or own a few backyard chickens:

- **People** – Avoid visiting other bird farms, shows, swap meets, flea markets, auctions, etc. If you do, shower and change clothing and footwear before working with your birds. Don't allow people to visit your farm without showering and changing into clean clothes and shoes beforehand or have them wear protective clothing and footwear and do the same if you visit other bird premises. Permit only essential people onto your farm.
- **Equipment** – Do not loan or borrow equipment, trailers or vehicles from other farms. If you have to, wash and disinfect all equipment before and after use. Wash and disinfect vehicles at the entrance of your farm. Wash and disinfect your vehicle/trailers/crates (including tires and undercarriage) after leaving a bird farm, show or market. Keep your houses/pens, equipment and work areas clean and sanitary.
- **Birds** – Keep a closed flock. Do not bring birds from shows and markets back to the farm – this is a great way to introduce any disease. If you do, always separate new birds away from the flock for 2-4 weeks to see if they show any signs of disease. Protect loose backyard poultry from coming in contact with wild or migratory birds, which can be carriers of the virus. Take sick or fresh dead birds to a diagnostic lab to determine cause of illness/death.
- **Rodents, wild birds** – keep your rodents and wild birds away from your bird buildings/cages. Use rodent bait stations, keep the grass cut, pick up garbage piles and don't allow wild birds to build nests or feed around your bird pens.
- **International travel** – if you travel to another country you may not know what types of exotic diseases their birds may have that you may come into contact with and mistakenly bring back home to your own flock. If you have any contact with foreign flocks, you should not even go near any types of birds back home for at least 5 days. Thoroughly clean all travel clothing, shoes and equipment after returning home.

**For additional information or to report signs of disease, contact any of the following:**

**Your Local Veterinarian,**

**Clemson Veterinary Diagnostic Center** – ask for Drs. Parnell or Helm (803-788-2260). SC Birds may be submitted without charge if determined by a veterinarian through clinical signs or mortality to be suggestive of END.