



What is Marek's Disease?

Marek's disease (MD) is a common disease of backyard chickens that is caused by a herpesvirus. The virus causes proliferation of lymphocytes, a type of white blood cell found in various tissues of the body, and is often described as a virally induced cancer. MD primarily affects young birds (6-20 weeks) and mortality can be high. The virus is very contagious and is spread through direct contact (bird-to-bird aerosols and secretions) and indirect contact (contaminated material). The virus concentrates in feather follicles and can also be shed in dander. Marek's disease-causing virus particles can survive for months in chicken house dust and litter. It is very easy for the virus to be moved through contaminated shoes, clothing and equipment.

What are the symptoms of Marek's Disease?

The signs and symptoms of Marek's Disease vary depending on the form of disease present. Even within one form of the disease, signs can vary depending on how the disease manifests in each individual bird.



MD infected birds commonly present with unilateral (one-sided) paralysis and can cause the bird to sit in a splay legged position, described as the bird "doing the splits". Tumors can develop in internal organs including the heart, ovary, liver and lung, as well as in the eyes, in the feather follicles, or in the nervous system. Affected birds can have symptoms of general depression, weight loss and lethargy due to generalized illness.

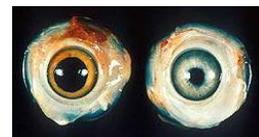
There are four forms of Marek's Disease:

Cutaneous form: Swollen feather follicles (bumps) on the skin that can form crusty scabs.

Neural form: Characterized by one, all, or none of the following symptoms:

- Progressive paralysis, usually of the leg, a typical leg-paralysis affected bird will have one leg extended forward and one leg tucked under the bird. This is the result of infiltration of lymphocytes in the sciatic nerve.
- Weight loss, labored breathing, diarrhea.
- Starvation and death due to an inability to reach feed and water and/or trampling by other birds.

Ocular form: Gray eye color and misshapen iris due to infiltration of lymphocytes in the eye.



Visceral Form: Tumors in internal organs including heart, ovary, liver, kidney and lung.

How is Marek's Disease spread?

Marek's is highly contagious and spreads through bird-to-bird contact, by contact with contaminated soil, clothes, shoes, equipment and dander. Chickens are commonly exposed to Marek's by contact with residual



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dust and dander in previously infected houses, by aerosol (air) contamination from a nearby house, or by virus particles carried by personnel and equipment.

How do I prevent Marek's Disease in my flock?

- Only purchase poultry that have been vaccinated.
 - Ensure that all chicks are vaccinated in ovo (in the egg before hatch) or at one day of age. Keep chicks from other birds until immunity has developed (minimum 2 weeks).
- Good sanitation and ventilation in the poultry house.
- Practice good biosecurity.
- Observe the flock for any signs of the disease, and isolate any bird that is suspected of being affected to an area away from other chickens.
 - When tending to your flock, visit the isolated birds *after* tending to the healthy flock. Use delegated clothes and shoes with affected birds.

How do I determine if my flock has Marek's Disease?

Marek's disease can be diagnosed based on testing or, more commonly, necropsy (autopsy) of a dead bird (examination of a bird that has died, flock history, and symptoms).

Will my birds die if they have Marek's Disease?

Vaccinated flocks usually do not experience large outbreaks of MD and few birds will be infected. In unvaccinated flocks, mortality can be high, sometimes exceeding 50% of the flock. However, depending on the form and the manifestation, some birds may live longer with the disease than others.

How do I treat Marek's Disease?

There is no treatment available. Prevention is key—it is best to vaccinate all birds for Marek's at one day of age or purchase pre-vaccinated birds from hatcheries.

My flock tested positive for Marek's Disease, now what do I do?

- Work with a veterinarian.
- Quarantine the flock—do not move birds out of flock. This quarantine will need to be long-term.
- Do not put young and/or unvaccinated chickens in a pen in which affected birds were previously housed without thoroughly cleaning, disinfecting and allowing the facility to remain empty for several weeks.
 - Before introducing a new flock of chickens, remove dust, feathers, and fecal material from the infected pen. Clean thoroughly. Follow up by sanitizing with 10% chlorine solution on all cleaned non-porous surfaces such as roosts, wire enclosures, nests, feed pans, and waterers.
 - Ideally, a new site would be selected for the coop because the virus can survive in the dirt for a long time.
- Some flock owners will chose to cull infected flocks and start over with vaccinated birds.