

This information is a professional communication for the equine industry. The OAHN group is a dedicated group of veterinarians from primary care practices, academia, government and laboratories, who meet regularly to discuss equine disease and health issues. It is the intent of this program to monitor and protect the health of horses in Ontario.



## Ontario Animal Health Network (OAHN) Equine Expert Network Quarterly Owner Report – January to March 2017

January—March 2017

Report #8

### Highlights

#### Key Points

*Is Vitamin E the new "Dr. Green"?*

*Looking Ahead—  
Groom, Pluck,  
Aspirate..How  
Your Veterinarian  
Diagnoses Skin  
Disease*



### Your OAHN Equine Network Team:

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## Ontario Equine Disease Surveillance (January to March) - Key points

- Outbreak of fever, low white cell count and soft manure in a stable. The manure from one horse cultured positive for *Salmonella* sp.
- Mild, recurring respiratory disease in Thoroughbred 2-year-olds.
- Clusters of foals with pharyngeal weakness.
- A miniature horse with parasitic cholangitis due to *Dicrocoelium dendriticum* and a 2 year old Standardbred filly with T cell lymphoma.
- Two cases of equine herpes myeloencephalopathy (EHM) due to EHV-1 (neuropathogenic) on a farm in Durham region.
- As of March 29, 2017 there were 303 rabies cases in Ontario (295 raccoon strain, 8 fox strain). Go [here](#) for more information. The total number of rabies cases for Ontario are reported on the CFIA website [here](#).

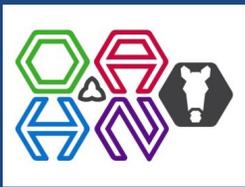
## Is Vitamin E the new “Dr Green”?

Sometimes when a horse “just isn’t right” turnout on green grass is just what the Dr. ordered. Sunshine and exercise certainly improve a horse’s mental well-being, but the green grass itself may be providing the most important ingredient on the road to optimal health.

Green grass is the greatest source of natural vitamin E for the horse, so when horses are stabled for long periods, muzzled to keep weight off or put on dry lots, they can become deficient in vitamin E. This vitamin is called an antioxidant as it combats products of oxidative stress that occurs during intense exercise, certain medical conditions, and aging. Vitamin E is one of the most important antioxidants in the body. Normal function of the nervous system is also dependent on appropriate vitamin E levels in the blood and cerebrospinal fluid and the body’s demand increases during inflammation, degeneration and trauma affecting the nervous system.

Vitamin E comes in two commercial forms; natural  $\alpha$ -tocopherol (RRR- $\alpha$ -tocopherol) made from seed oils and synthetic  $\alpha$ -tocopherol (all-rac- $\alpha$ -tocopherol) made from petrochemicals. The natural  $\alpha$ -tocopherol is more readily absorbed than the synthetic form. Natural  $\alpha$ -tocopherol is available in a powder/pellet acetate and a liquid (micellised water dispersible) form. The absorption of the liquid form results in a rapid increase in vitamin E levels in the blood and this is necessary when treating horses with nervous or neuromuscular problems. For these horses, doses of 1000 IU to 5000 IU/day provided to the horse will achieve rapid and appropriate vitamin E levels in the blood and cerebrospinal fluid. The liquid product can then be tapered down and, at the same time, the powdered form of natural vitamin E increased. Suddenly stopping the liquid vitamin E without providing the powdered form should be avoided as it will cause a rapid decrease in blood levels.





The National Farm and Facility Level Biosecurity Standard for the Equine Sector is available [here](#):

The *Equestrian Canada Emergency Planning and Action Plans—A Guide for event organizers*

outlines the development of action plans, communications, dealing with extreme weather and the health and welfare of horses at competition and is available [here](#)

Recent OAHN podcasts:

- *Equine Proliferative Enteropathy (Lawsonia) Part 1 and 2 with Dr. Nathan Slovis*
- *Equine Proliferative Enteropathy in Ontario with Dr. Memo Arroyo*

Are available [here](#)

Stay current with Social Media

OAHN offers a wide assortment of social media tools so that you can keep informed on equine disease. Follow us on Facebook & Twitter. Keep up to date with OAHN podcasts.

Maintaining vitamin E levels in healthy horses is accomplished by providing the natural  $\alpha$ -tocopherol acetate in powder form on a daily basis. Intense exercise will require a higher level of dosing in the range of 1000-5000 IU/day. Work with a veterinarian or equine nutritionist to determine the total amount of vitamin E that is being provided daily from all sources including the diet. Testing the blood can help determine if the horse has a deficiency and how often to monitor blood levels.



## Looking Ahead— Groom, Pluck, Aspirate...How Your Veterinarian Diagnoses Skin Disease.

For horses prone to skin disease, winter can provide relief. But, once the moisture, warmth and insects of spring appear, so do those annoying skin conditions that plague both pasture horses and athletes alike.

Equine veterinarians have a number of tools available to them to help investigate a skin problem. Parasites like lice and mites, some of which can be seen with the naked eye, can be collected through skin groomings using a small, stiff brush like a denture brush. Parasites as well as debris such as crusts and scales can be then deposited on a cardboard surface or glass slide and examined with a magnifying glass or microscope respectively.

For conditions such as ringworm (aka "Dermatophytosis" due to *Tricophyton equinum*/*Tricophyton mentagrophytes*) and rain scald (aka "Dermatophilosis" due to *Dermatophilus congolensis*) veterinarians may pluck hairs from the edges of the lesion or from lesions just beginning. Samples of hair are then sent in to a laboratory for culture or DNA analysis or, in the case of rain scald, the crust is stained and examined under a microscope. The organisms which causes rain scald will be visible in a formation that looks like railway tracks.



When the skin condition is lumpy and bumpy, the veterinarian will want to know what types of cells make up the lump. Cells are obtained by either using a procedure called fine-needle aspiration (FNA) or a biopsy. With FNA, a needle, often attached to a syringe, is inserted into the lump and moved back and forth or a syringe is attached and cells pulled into the needle using vacuum pressure. The cells are then expelled onto a glass slide which is submitted to a laboratory for identification. Cancer cells, inflammatory cells and organisms such as bacteria and fungi can be seen using this method. Biopsies are also used to understand why certain lesions aren't healing as they should and provides information about what is

going on in the deeper layers of the skin such as with stubborn cases of scratches/greasy heel (aka pastern dermatitis).

Newer tests such as serum allergy testing, that are done by submitting a blood sample, can help provide information for skin problems that have an allergic basis demonstrated by hives and wheals (large circular, pitting swellings).

Knowing what causes the skin condition before applying ointments, salves and sprays can reduce the length of time the problem exists, the discomfort it causes the horse and the costs of treatment.

Discuss these options with your veterinarians to find the optimal solution for your horse's skin problem.