

## Horse News and Views



Animals have two parts to their immune system; the ability to produce protective antibodies (immunoglobulins) and cell mediated immunity, composed of leukocytes circulating in the blood engulfing foreign material in a “packman” manner.

Foals are born immunocompetent (able to produce protective immunoglobulins in response to antigens) but immunologically naive (born without protective immunoglobulins). This is due to the inability of immunoglobulins to transfer across the placenta from mare to foal. **Passive immunity** (protective immunoglobulins absorbed from the mare’s colostrum) provides virtually all of the foal’s antibody protection for the first 9-12 weeks of age. Foals begin to produce protective immunoglobulins (**active immunity**) immediately after birth when they are first exposed to antigens. However, a protective concentration of these immunoglobulins (active immunity) may not be reached until the foal is 2 months of age. To maximize the foal’s protection to the common pathogens, mares should be vaccinated 4-6 weeks prior to foaling. Vaccination of the foal usually should not start until 6 months of age. Foal vaccination is delayed until 6 months of age when maternal antibody concentrations are waning and less likely to interfere with the foal’s ability to produce active immunity to vaccines. For tetanus (tetanus toxoid), Eastern Equine Encephalitis (EEE) and West Nile virus (WNV);

- Foals from non-vaccinated mares should receive their first vaccination between 3 and 4 months of age; the second between 4 and 5 months of age; a third between 5 and 6 months of age.
- Foals from vaccinated mares should receive their first vaccination at 6 months of age, followed by boosters at 4 to 6-week intervals, e.g., booster vaccinations at 7 and 8 to 9 months of age.

*All foals should be vaccinated annually thereafter.*  
(AAEP. Guidelines for Vaccination of Horses)

For further information contact Dr. Bob Wright (519) 846-3412 or visit our website: <http://www.gov.on.ca/omaf/english/livestock>



**Ontario**  
Ministry of Agriculture  
and Food

**Ontario Association  
of  
Equine Practitioners**

**UNIVERSITY  
of GUELPH**

*Horse News and Views is prepared by*  
Dr. Bob Wright, Veterinary Science,  
Ontario Ministry of Agriculture and Food,  
Wellington Place, R.R. #1, Fergus, Ontario N1M 2W3  
Telephone: 519-846-3412 Fax: 519-846-8101  
Email: [robert.wright@omaf.gov.on.ca](mailto:robert.wright@omaf.gov.on.ca)

This version is available for distribution after March 1, 2004.

*Please retain original format of article.*