

Immunoglobulin Assessment in Foals

Immunoglobulins are commonly assessed in foals to ensure that transference of passive immunity is sufficient for protection until the foal develops its own antibodies.

Immunoglobulin concentrations peak around the time of colostrum intake and then decline over the ensuing weeks so that by one month of age IgG levels are about half what they were initially. Endogenous antibody production reaching protective concentrations occurs by about 8 to 12 weeks of age. Consequently, foals that have minimally adequate IgG concentrations at 24 hours potentially have a period when passive antibody concentration has waned and endogenous antibody production is inadequate, putting them at risk of infectious disease at one to two months of age.

The higher the IgG concentration, the better the protection, with good colostrum transfer capable of increasing IgG concentrations to over 2000 mg/dL. While concentrations around 800 mg/dL are adequate for protection during the first couple of weeks of life, aiming for a concentration of > 1200 mg/dL is more likely to protect the foal until endogenous antibody production is satisfactory.

