

ABSTRACT

PLASMA GLUCOSE AND FRUCTOSE CONCENTRATIONS IN NEONATAL FOALS IN THE 24 HOURS IMMEDIATELY FOLLOWING PARTURITION

Fourteen neonatal foals born at the California State University, Fresno Horse Center were evaluated for plasma glucose and fructose concentrations in the first 24 hours following parturition. Blood samples were drawn at the following intervals: initial (30 min after parturition), +1, +2, +3, +5, +12 and +24 hours. Neonatal foals were found to have low glucose concentrations at birth that increased over 24 hours. Fructose concentrations were elevated at birth and declined to undetectable levels at 24 hours. The trends in glucose and fructose changes over time were negatively correlated. Heart rates decreased significantly by two hours and respiration rates did not change significantly over time. Foals born in a cold environment showed a significant decrease in rectal temperature by three hours, whereas warmer conditions did not decrease temperature to the same extent. These same trends in glucose and fructose are similar to what has been reported in other species.

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