

Cholesterol, glucose and triglycerides role in the prevalence of hyperlipemia in dogs at higher elevations

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Hyperlipidemia is a metabolic disorder that is characterized by a fat concentration increase in blood serum and it is known to be common in dogs. However, there is no information about how this disorder behaves in different environmental conditions related to metabolic changes, such as elevation, which may reduce metabolic efficiency. It was determined the clinic variables involved in hyperlipidemia prevalence in dogs dwelling at >3000 m elevation. Blood samples were taken from 80 dogs in La Paz, Bolivia; a city located at 3600 m.a.s.l. Cholesterol (total, HDL, and LDL), triglycerides and glucose concentrations were determined. Data was analyzed using an Akaike information Criterion (AIC) model selection approach. Hyperlipidemia prevalence was estimated in 12.5%, which is lower than expected for the sea level. Hyperlipidemia was present in five-year or older dogs, irrespective of gender, breed, and diet. Competing models obtained showed that, besides the main role of cholesterol, a si