Evaluation of a hand-held lactate analyzer in dogs.

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A hand-held lactate test device and a blood gas auto analyzer were compared. The objective of the study was to evaluate the performance of the hand-held device in dogs in a clinical setting. Blood lactate levels were evaluated on 30 samples from healthy client-owned dogs and 48 samples from client-owned dogs with various diseases. A blood sample was collected from each healthy dog by either jugular or cephalic venipuncture and from each sick dog from the jugular, cephalic, or saphenous vein, or from an arterial catheter if applicable. One and a half milliliters of the blood sample was immediately transferred to a heparinized vacutainer tube. Enough blood was then drawn from the heparinized tube to allow split sample simultaneous analysis with both machines. Samples from the sick dogs represented a wide range of clinically relevant lactate values. Good agreement between lactate values from both devices was obtained in both sick and healthy dogs. Lactate values in the healthy group (< 2.9 mmol/L with the hand-held device, < 2.6 mmol/L with the blood gas analyzer) were similar to those previously reported (< 2.5 mmol/L). The results of this study support the use of the hand-held device in dogs in a clinical setting.

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