

Public Abstract

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An elevated body temperature (pyrexia) often accompanies disease. Body temperature measurement is one of the vital parameters in medicine. This thesis contains a literature review of the pathophysiology of temperature regulation, hyperthermia, fever, and treatments for hyperthermia and fever. Additionally, the thesis describes studies conducted to compare accuracy and precision of several methods of body temperature measurement in dogs.

The core body temperature can be difficult to measure and invasive techniques are required to make this measurement. In our original studies an auricular, subcutaneous, and rectal method of temperature measurement were compared to true core body temperature as measured by a thermister-tipped pulmonary artery catheter. Our results indicate that within the range of clinical application, predictive rectal thermometers in healthy dogs approximated core body temperature very well. At this time there is no other method of temperature measurement in routine use in veterinary medicine that approximates the core body temperature as well as rectal thermometers.